

TOWARDS OBESITY PREVENTION IN BRITISH  
COLUMBIA: A CRITICAL DISCOURSE ANALYSIS OF  
KEY POLICY REPORTS

by

Karen Chinaleong-Brooks  
Bachelor of Science (Honours);  
Nutrition and Dietetics  
University of the West Indies, 2005

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# APPROVAL

**Name:** Karen Chinaleong-Brooks  
**Degree:** Master of Public Health  
**Title of Thesis:** Towards Obesity Prevention in British Columbia:  
A Critical Discourse Analysis of Key Policy  
Reports

**Examining Committee:**

**Chair:** John Calvert  
Associate Professor

---

**Dr. Lorraine Halinka Malcoe**  
Senior Supervisor  
Associate Professor

---

**Dr. Marina Morrow**  
Supervisor  
Associate Professor

---

**Dr. Kitty Corbett**  
External Examiner  
Professor

**Date Defended/Approved:** September 1, 2009



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## **ABSTRACT**

The government of British Columbia has made a commitment to applying population health and inequalities lenses to intervention strategies to ensure that vulnerable populations are of high priority. This study uses critical discourse analysis to examine two key policy reports to determine the types of public health frameworks used to guide obesity prevention and intervention strategies in British Columbia. The study found that a number of public health frameworks were being applied to obesity prevention and intervention strategies; however, risk factor epidemiology emerged as the dominant approach. The dominant use of this approach in public health intervention strategies can have negative consequences for vulnerable populations as it may overlook underlying social and structural determinants of health. The study discusses the repercussions of using this approach and makes recommendations to the provincial government for strategies that can be used to reduce inequalities experienced by vulnerable populations in British Columbia.

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## **GLOSSARY**

APPLES	Active Programme Promoting Lifestyle Education in School
BC	British Columbia
BMI	Body Mass Index
CDA	Critical Discourse Analysis
CIHI	Canadian Institute of Health Information
CPHI	Canadian Population Health Initiative
NIHI	National Institute of Health Information
PHAC	Public Health Agency of Canada
PHSA	Provincial Health Services Authority
SSCH	Select Standing Committee on Health
SSDoH	Social and Structural Determinants of Health
Stats Can	Statistics Canada
WHO	World Health Organization
WHR	Waist to Hip Ratio
WHRN	Women's Health Research Network

# 1: INTRODUCTION

The World Health Organization (WHO) (2003), has identified obesity as a “global epidemic” with several adverse health-related consequences (World Health Organization [WHO], 2003). In Canada, adult obesity rates have risen from 14% in 1978/79 to 23% in 2004 (Public Health Agency Canada [PHAC], 2008a; Statistics Canada [Stats Can], 2008). Likewise, the obesity/overweight rates of Canadian children and adolescents 12-17 years old doubled over this same period (PHAC, 2008a).

The rise in obesity rates in Canada has spurred public concern (PHAC, 2008a) and prompted the reevaluation of the roles that public health policies and institutions should play in combating obesity. Attention is now being focused on the role of public health on guiding obesity prevention and intervention strategies. Studies suggest that public health concepts, such as risk factor epidemiology and the population health approach, may serve either to assist, or further isolate, populations vulnerable to obesity (Frohlich & Potvin, 2008; Raphael, 2009).

Obesity is an identifiable health problem that has serious consequences for individuals and society (PHAC, 2008a; WHO, 2000). However, the manner in which obesity has been framed by biomedicine in the past has failed to take into account that people are differentially stratified in society and that this stratification is tied to gender, social class, ethnicity and all their subsequent effects. Some features of poverty – food insecurity, access to lower quality foods, lack of time

and money for physical activity –directly contribute to obesity (PHAC, 2008a) while others create the environmental and sociocultural contexts that limit the resources and choices of persons living under these circumstances (Raine, 2004). Not everyone has the same ability to change their lifestyle or diet to combat obesity. Evidence suggests that comprehensive public health action that includes multidisciplinary, multi-sectoral, multilevel approaches and applies population and inequalities lenses are the most effective prevention and intervention strategies to apply (Ministry of Health, Wellington, New Zealand, 2004; PHAC, 2001).

This paper will report the results of a critical discourse analysis conducted on two key reports (one at the federal level and one at the provincial level) that public health practitioners in British Columbia (BC) are using to guide obesity prevention and intervention strategies and policies in the province.

The purpose of this paper is to, a) examine the language being used in these reports to determine which epidemiological and public health concepts are being promoted, and b) examine the theoretical frameworks that are being used to frame the issue of obesity and, specifically, whether these reports are promoting the use of population health and inequality lenses to inform obesity intervention strategies. This analysis will be useful in helping planners and policy makers understand the issues that contribute to obesity and provide them with a better understanding of the problem.

Raine (2004) in her review of overweight and obesity in Canada emphasized the impact of social policies, income and social inequalities on the

health and obesity levels of persons lower on the socioeconomic hierarchy. Likewise, the discussion paper on *Health Inequities in British Columbia* highlighted the need for population health approaches to health that address the structural roots of health inequalities (The Legislative Assembly of British Columbia, 2004). These papers suggest that the failure to adopt population health and inequality lenses perpetuates existing social, political and economic structures that promote the differential vulnerability of marginalized population groups to obesity (Raine, 2004; The Legislative Assembly of British Columbia, 2004). Interventions focused on behaviour modification and medical interventions address the health problems of persons who have the autonomy to make the recommended changes whereas persons who are limited by the unequal distribution of power, money and access to material goods and services are further marginalized (Raphael, 2009). It is my hope that this analysis will aid in highlighting key issues in current obesity discourse and contribute to the evolution of public health intervention strategies at the population level that will effectively reduce social inequalities in obesity in BC.

## **1.1 Research goal**

The overarching goal of my research is to understand the types of evidence and frameworks used to guide obesity prevention and intervention policies in BC through an analysis of key documents currently used by BC policymakers and public health professionals responsible for designing obesity prevention and intervention strategies.

## **1.2 Specific research questions**

1. What key documents do BC policymakers and public health professionals currently use to guide obesity prevention and intervention strategies in BC?
2. What public health approaches are guiding obesity prevention and intervention policies in BC?
3. What are the social implications of using this/these approaches for the prevention of obesity at the population level in BC?

## **1.3 Background**

The term “population health” has been used to refer to a variety of different activities directed towards improving the health of populations; because of this, there is a considerable level of confusion regarding the meaning of the term (Dunn & Hayes, 1999). According to PHAC (2001) “population health is an approach to health that aims to improve the health of the entire population and to reduce health inequities among population groups” (Introduction section, ¶ 1). For the purposes of this paper, I will focus on the population health approach defined by Dunn and Hayes (1999) in *Toward a Lexicon of Population Health*. This approach to population health identifies four major components of population health that need to be addressed to produce effective intervention strategies: 1) the social and structural determinants of health (SSDoH) that

shape health experiences; 2) an emphasis on reducing health inequities/inequalities in society; 3) the effects of SDoH on health experiences over the life course; as well as 4) the need to improve the overall health and well-being of the population. The latter is a component common to all public health approaches to population health. The population health approach moves the focus of prevention and intervention strategies away from individual biology and/or personal choice to social structures and relationships – such as global capitalism, gender, identity and power – that shape health (Dunn & Hayes, 1999).

In addition to the use of the population health approach, Frohlich and Potvin (2008) advocate for a ‘vulnerable populations approach’ to public health interventions and policy. The vulnerable population approach promotes intersectoral, participatory interventions that include members of the vulnerable population (groups within a population that have increased chance of developing unsatisfactory health conditions due to exposure to adverse social, environmental, or economic conditions or policies) in the articulation, development and evaluation of programs developed to address population health issues (Frohlich & Potvin, 2008). The approach takes into account the effects of consistent exposure to adverse risk factors throughout the lifecourse on a populations’ overall health outcome (Frohlich & Potvin, 2008).

Despite the strengths of the two perspectives described above, other public health approaches also inform population health interventions. One such approach is the Ottawa Charter for Health Promotion (The Ottawa Charter). The

Ottawa Charter focuses on the use of health promotion within five action areas – building healthy public policy, creating supportive environments, strengthening community actions, developing personal skills and reorienting health services – where physical and psychosocial support are provided to empower individuals to develop good health and thus have an opportunity to lead a good life (Eriksson & Lindström, 2008; National Institute of Health, 2005; PHAC, 2008a; WHO, 1986). The Ottawa Charter provides a framework through which health is no longer viewed as the absence of disease but as the result of social and personal resources and physical capabilities (WHO, 1986). In this approach health promotion moves beyond the control of the health sector to the realm of population well-being where fundamental conditions such as peace, shelter, education, food, income, sustainable resources, a stable eco-system, social justice and equity are required to achieve good health (WHO, 1986).

Users of the Ottawa Charter employ three basic strategies for health promotion (WHO, 1986). They advocate for changes to political, economic, social, cultural, environmental, behavioural and biological factors that can favour or be harmful to health. They mediate between different sectors of government as well as independent organizations (media, industry, community, etc.) for the pursuit of health. In addition, they enable all persons to achieve their full health potential by providing supportive environments, access to life skills, equal opportunities, and resources for making healthy choices (WHO, 1986).

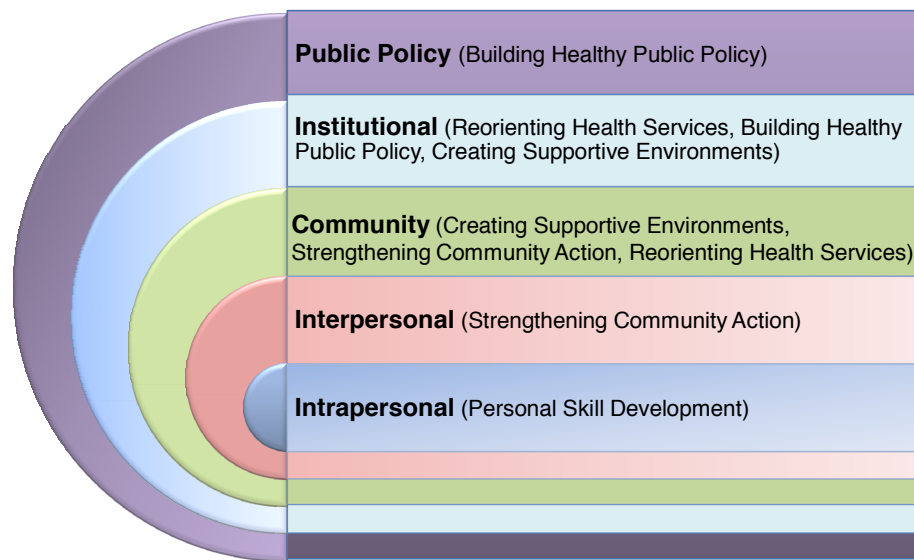
The Ottawa Charter further promotes the use of the socio-ecological model to health prevention (PHAC, 2008a). The socio-ecological model focuses



on mutual interactions between individuals and their environment (PHAC, 2008a) and identifies five levels- intrapersonal, interpersonal, community, institutional and public policy – in which the tenets of the Ottawa Charter are nested – (Figure 2) (National Institute of Health, 2005; PHAC, 2008a).

Critics of the Ottawa Charter approach believe that though this approach expands the focus of health from individuals and groups to the concept of living conditions over the lifecourse, it lacks a clear theoretical foundation (Eriksson & Lindström, 2008). Further critics argue that there is a lack of emphasis on the use of evaluation in intervention strategies (Eriksson & Lindström, 2008). According to Nutbeam (2008) although the Ottawa Charter has been a catalyst for the manner in which public health problems are now conceptualized and addressed, substantial social and economic changes have occurred to the profiles of diseases necessitating the modification of health promotion strategies to suit the evolving needs of populations who may be at risk for developing diseases.

**Figure 1. The Socio-Ecological Model and the Ottawa Charter.**



Socio-ecological Model in bold print & Tenets of the Ottawa Charter in parenthesis

Another commonly used approach to public health is risk factor epidemiology (Krieger & Zierler, 1996). Risk factor epidemiology is heavily influenced by the life-style theory of disease. Krieger and Zierler (1996) argue that this theory “explains determinants of population disease occurrence as behavioural clusters or cultural factors that are shared among individuals” (p. 108). This approach to public health focuses on independent risk factors of disease that are considered intrinsic to the individuals who exhibit the disease, where risk factors are defined as individual behaviours or biomarkers of the disease (Krieger & Zierler, 1996). Thus, this approach presupposes that individuals have autonomy over their lives and can freely alter the choices they make given adequate education or motivation (Krieger & Zierler, 1996). Despite the obvious strengths of the risk factor epidemiology approach of identifying

proximal causes of disease, assisting in defining “high risk’ individuals and motivating individuals to change risky behaviours, this approach discounts the intricacies and multi-dimensionality of health problems, disregards the social contexts in which risk factors emerge, fails to recognize that the same social sub-groups continually develop adverse health conditions, and continues to make behaviour modification central to interventions despite mounting evidence that shows the ineffectiveness of behavioural approaches in disease prevention (Krieger & Zierler, 1996; Raphael, 2009).

The government of BC has made a commitment to use population and inequalities lenses to inform their public health strategies. According to *The Framework for Core Functions in Public Health*, the system “... ensures that populations of concern are of high priority by the use of population and inequalities lenses” (Ministry of Health Services, 2005, p1). These lenses allow for the preferential delivery of some core programs to selected populations that are at higher risk or are more vulnerable due to biological, social, environmental, economic, cultural, or other factors within which inequities are rooted (Ministry of Health Services, 2005). Although public health has no direct control over inequalities in society, BC public health practitioners are tasked with reducing inequalities in society through: documenting, reporting and analyzing factors that contribute to inequalities and by advocating for healthier public policies that can change the inequitable underlying determinants of health (Ministry of Health Services, 2005).

**Table 1 – Defining features of common population approaches to health.**

Public Health Approach to Population Health	Defining Features
Population Health Approach (Dunn & Hayes, 1999)	Focus on social and structural determinants of health Reduction in health inequities among population groups Life course approach
Vulnerable Populations (Frolic & Potvin, 2008)	Concentrated risks throughout the life course Participation of vulnerable population in the design, implementation & evaluation of interventions Intersectoral approaches
Ottawa Charter (WHO 1986)	Building healthy public policy Create supportive environments Develop personal skills Strengthen community actions Reorient health services
Risk Factor Epidemiology (Krieger & Zierler, 1996)	Determinants of population disease as behavioural/cultural factors shared among individuals Risk factors = behaviours or biomarkers Assumes individuals make free choices among options Choices can be altered given sufficient education or incentive

### 1.3.1 Obesity as a Public Health Problem

Obesity is a multifactorial condition with psychological, physiological and emotional characteristics (Fabricatore & Wadden, 2004); however, the most commonly used definitions of obesity are based on its physiological characteristics. WHO (2007) defines obesity as an accumulation of excess fat to an extent that may impair health. In essence, obesity is considered to be the result of an energy imbalance between calories consumed and calories expended (WHO, 2009a). Although several proxy measures for obesity exist, body mass index (BMI) is the most commonly used measure. Adult obesity is defined as a BMI of 30 kg/m<sup>2</sup> or higher and childhood obesity as a BMI – for – age ≥ 95<sup>th</sup> percentile of the relevant growth chart (Katzmarzyk & Janssen, 2004; WHO, 2009a). BMI values act as benchmarks for individual and population level assessments of weight and are often used to evaluate a person’s increased risk

for developing a variety of diseases (WHO, 2000; WHO, 2009a). BMI is a crude measure of adiposity and is often criticized as a measure of obesity as it fails to account for the wide variation in body fat throughout the body and does not discriminate between weight contributed by fat, muscle or bones (PHAC, 2008a; WHO, 2000). Many argue that more appropriate measures of adiposity, such as waist circumference, skin-fold measurements and waist to hip ratio (WHR), can be used to determine a person's increased risk for disease (PHAC, 2008a; WHO, 2000). These measures all provide a better measure of android obesity (abdominal obesity) which has been recognized as a more accurate predictor for the development of obesity related diseases (PHAC, 2008a; WHO, 2000).

Many factors external to individuals contribute to obesity. Factors such as income, education, time constraints, obesogenic environments (environments that promote obesity), geographic location, the built environment, ethnicity, culture, mealtime structure (for example, families eating together, eating in front of the TV) and the source of food being eaten have all been identified as determinants of obesity (Ministry of Health, Wellington, New Zealand, 2004; Patrick & Nicklas, 2005). In addition, biological and social constructs such as sex, gender and poverty also influence obesity (Borders, Rohrer, & Cardarelli, 2006).

Sex and gender contribute to the differences in obesity rates between males and females (Borders et al., 2006). Research has shown that eating behaviours differ between the genders (Johnson, Greaves, & Repta, 2006; Kiefer, Rathmanner, & Kunze, 2005). Gender has been linked to eating

disorders, disordered eating, dieting and stress or emotional eating (behaviours all exhibited more in females) (Kiefer et al., 2005). Furthermore, stress and emotions have been positively associated with the over-consumption of high fat and high sugar foods (Laitinen, Ek, & Sovio, 2002). Evidence gathered from independent studies suggests that females are more likely to experience stress and depression based on their gender ascribed roles in society (Johnson et al., 2006). Conversely, biological sex has been credited for the tendency of the sexes to gain weight in different areas of their bodies. The female and male bodies metabolize and stores energy from food differently (Johnson et al., 2006; Kiefer et al., 2005). There is the tendency for males to develop android obesity while females tend to develop gynoid obesity (fat distributed uniformly and peripherally around the body) and these differences in the distribution of body fat affect a person's predisposition to develop certain diseases such as diabetes mellitus which has been positively associated with android obesity (Kiefer et al., 2005).

Studies have revealed a strong association between poverty, food insecurity and obesity as the weights of individuals economically restrained rise as their ability to purchase nutritionally dense foods (for example fruits and vegetables) decreases (Drewnowski & Specter, 2004; Tanumihardjo et al., 2007). According to Tanumihardjo et al. (2007) the relationship between poverty and food insecurity is not so much about access to food but about the types of foods individuals are able to access as their economic autonomy decreases. Chronic hunger and wasting only become apparent in extreme and prolonged

cases of economic and nutritional deprivation therefore it is not unusual that food insecure households have higher BMIs (Tanumihardjo et al., 2007). From a life course perspective it appears that poverty has physiological, psychological, emotional and social influences on obesity, however, some of these influences and their resultant effects are difficult to quantify due to the lack of standardized tools that can be used to account for all aspects of these phenomena (Tanumihardjo et al., 2007).

Compared to non-obese persons, obese persons have been found to experience higher levels of stress, anxiety and depression, all of which are associated with the development of physical and mental diseases (Brennan, 2003). Obesity has been identified as a risk factor for several chronic diseases such as diabetes mellitus, stroke, some cancers (endometrial, breast, and colon), cardiovascular disease, endocrine and metabolic disturbances and musculoskeletal diseases such as osteoarthritis (Monteiro, Conde, & Popkin, 2007; WHO, 2007). Obesity has also been negatively associated with many physiological diseases and psychosocial experiences such as social isolation, low self-esteem and psychopathology (Brennan, 2003). Together these physiological and psychosocial conditions result in the increased use of medical resources for the treatment, care and rehabilitation of obesity-related diseases and the loss of productivity due to illness. The direct and indirect costs of obesity to the Canadian economy was calculated to be approximately \$4.3 billion dollars in 2001, an estimated 2.2% of total healthcare costs (Katzmarzyk & Janssen, 2004).

With the exception of the obvious cost to the economy, little is said about the cost of obesity to the weight-challenged individual. Obese people face many forms of discrimination, which lead to social insecurities, low rates of social interaction, negative body image, emotional suffering, disordered eating, and the devaluation of their ability and potential (Benson, Severs, Tatgenhorst, & Loddengaard, 1980; Canadian Institute for Health Information [CIHI], 2004). Studies suggest that these negative effects may contribute to the high levels of depression and thoughts of suicide in the obese, reduced access to social education, loss of professional opportunities and rob them of many quality years of life (CIHI, 2004; Carpenter, Hasin, Allison, & Faith, 2000; Pompili et al., 2007).

Biomedicine has governed obesity discourse for approximately forty years; because of this, individualistic approaches to its management have predominated (Beller, 1977). Biomedicine is premised on the ideology of individualism as opposed to the social constructs that produce disease (Dziegielewsk & Green, 2003). As a result of biomedical dominance, individuals' physiological, genetic or behavioural characteristics became the focus in understanding obesity and have shaped the prevention and treatment strategies which are largely targeted at the individual (Beller, 1977). The application of the biomedical framework in the early development of obesity discourse resulted in biomedicine shaping society's perceptions of this condition (Beller, 1977). Although public health practitioners use a variety of theoretical models to explain the interacting factors that produce obesity, many interventions remain focused on the weight-challenged individual as opposed to the social situations that



promote their condition (Braveman, 2009; Raine, 2004; Raphael, 2009; Shiell, 2004).

Although obesity is not solely the product of social and economic inequities, a fair proportion of this condition seems to be attributable to inequalities in society (Braveman, 2009; Raine, 2004; Shiell, 2004). Contributors to obesity such as poor diet and physical inactivity are behaviours influenced by the social, economic, political, cultural or physical environments of individuals (Shiell, 2004). These behaviours are rooted in circumstance and therefore it is important for policy makers and planners to understand the effect that social and economic inequities have on individuals and the ways they constrain their autonomy (Braveman, 2009; Raine, 2004; Shiell, 2004). Several interventions employ eating and physical activity as prevention strategies for obesity in BC (Act Now BC, 2008; Heart and Stroke Foundation of B.C. & Yukon, 2005); however, there continues to be a lack of interventions that address the economic, political and social inequities in society (Braveman, 2009; Raine, 2004; Raphael, 2009; Shiell, 2004). Failing to address these inequalities creates greater disparity between socially advantaged and disadvantaged groups in society and can further shift the burden of obesity onto the socially challenged (Braveman, 2009; Frohlich, Ross, & Richmond, 2006).

## **2: RESEARCH APPROACH**

### **2.1 Critical discourse analysis as a tool of inquiry**

In order to gain an understanding of how public health approaches to population health influence policies and strategies being used in obesity intervention I draw from the sociological tradition of critical discourse analysis (CDA). CDA can be used to detect philosophies that lie beneath a discourse. It uses a “strong social constructivist view of the social world” (Gergen, 1999 as cited in Phillips & Hardy, 2002, p 5; Phillips & Hardy, 2002) to document the way speech and language represent and maintain certain beliefs in society which result in unequal power distribution (Hammersley, 2002; Phillips, Lawrence, & Hardy, 2006). Phillips, et al. (2006) articulated that the social world and the processes that create this world are iterative and inseparable from one another. Discourses can create standards of accountability and responsibility that become the normal way of viewing the world and these norms give social dominance and power to select groups in society (Johnston, 2008). Unless one understands the relevant macro-societal context of discourses, it is difficult to understand how discourses can shape social agents’ responses to social and ecological issues (Johnston, 2008). CDA brings the underlying beliefs of the dominant group to the forefront and allows a better understanding of the underlying issues that fuel discourses.

## **2.2 Methods**

An extensive search of library databases, government websites and discussions with seven public health practitioners working at senior managerial positions in various sectors of public health both provincially and federally revealed that there is no formalized single governmental policy document (at the federal or provincial level) used to inform obesity prevention strategies in BC. For my analysis, I examined two key Canadian reports that BC public health practitioners maybe using to frame obesity prevention/intervention strategies in BC. The senior public health managers I consulted assisted me in locating the two reports reviewed – *A Strategy for Combatting Childhood Obesity and Physical Inactivity in British Columbia* and *Improving the Health of Canadians: Promoting Health Weights* – through networking with other public health practitioners within various segments of the public health sector (at both the federal and provincial levels). The Executive Director of Population Health Surveillance and Disease Control, Provincial Health Services Authority (PHSA) in Vancouver identified the two reports as documents that may potentially guide provincial obesity prevention strategies. This Director is presently spearheading a committee commissioned to produce a provincial strategy for obesity prevention and management.

## **2.3 Analytic approach to data**

CDA employs a variety of methodological approaches to analyze social discourses (Fairclough & Wodak, 1997; Pêcheux & Nagpal, 1982; Wodak &

Meyer, 2001). Each approach differs in its underlying theory and the research issues to which it is best suited (Fairclough, 2005). My analytic approach to the data borrowed from the works of Fairclough (2005), Huckin (1997) McGregor (2003) and Tonkiss (2004). Like Fairclough (2005), I examined the data across three different levels: 1) professional discourses, 2) language and, 3) the ordering of discourse.

For the purposes of this research, I defined professional discourses as the professional ways of understanding the problem of obesity. These discourses generate a set of beliefs, meanings and values around the issue of obesity and this ideology guides the approaches employed in obesity interventions. Although professional discourses may be influenced by a variety of factors – such as societal attitudes, evidence or best practices – they are authoritative influences reproduced by the adherence to norms that validate which concepts should be dominant in a discourse (Fairclough, 2005; Mc Gregor, 2003). This dominance gives social, cultural, ideological or economic power to certain dominant groups in society (hegemonic power), leading to social inequities and other injustices (Fairclough, 2005; Mc Gregor, 2003). According to Van Dijk (2001) “the power of dominant groups may be integrated into the laws, rules, norms, habits and even a quite general consensus” (p 355) of society producing the truths that we live in – normalization – and these truths provide the mental contexts through which a discourse is understood or produced.

The language used in the production of societal truths promotes the beliefs, identity and knowledge of those in power, and has the ability to negate

power relations and make issues of class, gender, culture, ethnicity and inappropriate portrayals of certain social groups seem trivial or concocted (Mc Gregor, 2003). Language can provide a cloak under which prejudice, injustice and inequities are harboured and made to seem normal or commonsense in society (Mc Gregor, 2003). The simple use of “acceptable language” can mislead us into embracing the dominant views in society (Mc Gregor, 2003).

Dominant groups in society control the social and professional contexts of a discourse and influence the content and language used in the discourse (Van Dijk, 2001). The power structures promoted by these dominant groups not only fashion the possible discourse genre(s) or schemas but also filter the content of information and knowledge that enter the discourse, thereby ordering the discourse (Van Dijk, 2001). This ordering renders hegemonic power to the use of ideologies that favour the interest of dominant groups (Mc Gregor, 2003). An example of hegemonic power can be found in the directive to use scientific/best evidence to inform practice in the public health (Hankivsky, 2007, p. 3). Scientific approaches favour the use of evidence “based on the epistemologies of positivist realism that sees ‘best’ evidence as objective, quantifiable, and replicable” (Hankivsky, 2007, p.3) as opposed to the use of qualitative evidence that, though more likely to include an analysis of inequities, is fundamentally interpretative in nature (Creswell, 2009). The absence of qualitative evidence means that there is the likelihood that accounts of inequities faced by vulnerable populations remain hidden as the voices of these groups remain silent and this serves to preserve the power relations of dominant groups.

## 2.4 Data Analysis

The analysis consisted of identifying professional discourses and then ordering them to determine which ones predominated in the key reports.

Step 1: I first read the reports in an uncritical manner, that is, without questioning or analyzing the content of the reports (Huckin, 1997).

Step 2: I then reread the reports with a discerning eye, examining their structural compositions and the authors' perspectives to determine the framing of the text (Mc Gregor, 2003). At this stage, I looked for the presence of features of the two a priori public health approaches – population health approach and the vulnerable population approach- expected to be utilized in the reports (see Table 1) and assigned a priori codes to the sections of the reports that highlighted defining features of the two approaches.

During my readings of the reports, I noticed features of two other public health approaches – the Ottawa Charter and risk factor epidemiology. I created emergent codes for the two emergent public health approaches. I reread the reports and coded them for the presence of the emergent public health approaches. I took note of the location of each public health approach in the document, the elements of the approach that were addressed and the manner in which these elements were addressed. I extracted key passages that provided the richest sources of analytic material from the document for further analysis.

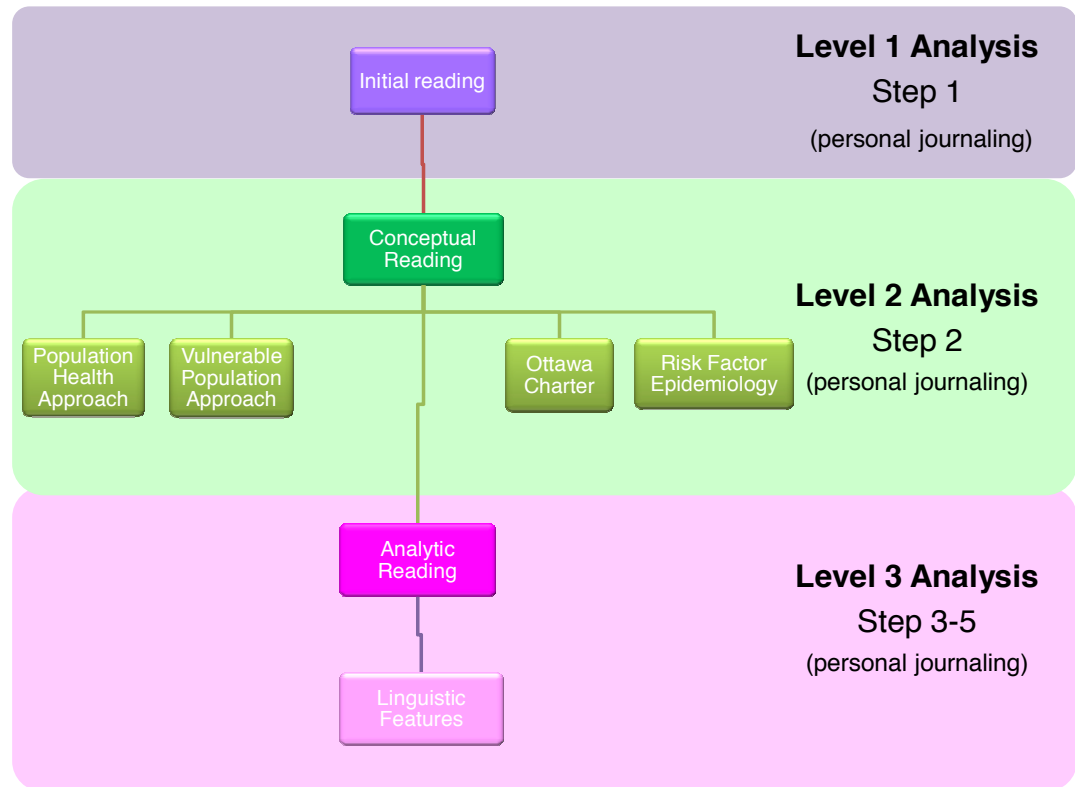
Step 3: At this stage, I examined linguistic features of extracted passages. I looked at the use of linguistic tools such as the foregrounding or back-grounding of certain concepts and text; use of headings, keywords and language – such as

intertextuality (presence of quotations, presuppositions or assumptions from the public health approaches outlined in Table1); and identification and interpretation of tone (the use of selective voices to convey certain messages) (Huckin, 1997; Mc Gregor, 2003).

Step 4: I analyzed the passages sentence by sentence for topicalization (a viewpoint or pitch meant to influence the reader's perception) (Mc Gregor, 2003), patterns of variation (differences within the text that show an attempt to cope with contradictions or counter alternatives), and omissions (silences/issues/topics that are excluded and remain unsaid in the organization of the discourse) (Tonkiss, 2004). At this level literary devices such as insinuations, connotations and the tone of the texts were assessed (Mc Gregor, 2003). I used the overall metaphoric effect of the text as an interpretive framework in which inconsistencies, internal workings and strategies of constructing meaning were identified (Tonkiss, 2004). This level of analysis served to elucidate the relationship between the obesity prevention/intervention strategies recommended and the more durable professional discourses that lie beneath (Fairclough, 2005).

Step 5: During my analysis of the texts, I kept a journal of my own assumptions, underlying beliefs and processes of inquiry (Tonkiss, 2004). At the end of my analysis, I critically reflected on the effect of these influences on my research findings and interpretation of the results.

**Figure 2- Conceptual Map of Critical Discourse Analysis Process**



## 2.5 Ethical Considerations

The data for this study were collected from publicly available documents. There are no foreseen ethical issues for the use and dissemination of these data.

## 2.6 Issues of Validity

I employed several strategies to ensure study validity. The primary strategy was the extraction of quotes from the reports that demonstrated use of



specific public health approaches to obesity prevention in BC. In addition, I used triangulation, that is, I looked at two separate reports and used a staged approach (mentioned above) to check for the consistency of information within the different data sources. I also kept a journal of my influences on the analysis and interpretation of the data, held debriefing sessions with a supervisory committee and used an external auditor to review the findings of the research (Creswell, 2009; Denzin & Lincoln, 2005).

### **3: RESULTS**

After consulting with the Executive Director of Population Health Surveillance and Disease Control planning, Provincial Health Services Authority (PHSA), BC I decided to review two reports- *A Strategy for Combatting Childhood Obesity and Physical Inactivity in British Columbia* and *Improving the Health of Canadians: Promoting Healthy Weights* – which the PHSA is using to inform their obesity strategy. Both reports provide information on obesity intervention strategies that are being used or recommended nationally and internationally. The reports are targeted to two different audiences (one to the Legislative Assembly of BC and the other to policy planners and members of the general population) and as such, there are marked differences in the presentation of data and the tone of the writing.

The first report I examined – *A Strategy for Combatting Childhood Obesity and Physical Inactivity in British Columbia* - was produced by the *Select Standing Committee on Health* (SSCH) in response to a request from the Legislative Assembly of British Columbia to identify effective strategies that could be used in BC to reduce childhood obesity rates. This report is comprised of recommendations made by the committee to the province for strategies that it could use to:

...change behaviour and encourage children and youth to adopt lifelong health habits that will improve their health and curb the growing rate of obesity to achieve the great goal of leading the way

in North America in healthy living and physical fitness. (Select Standing Committee on Health [SSCH], 2006, Terms of Reference p.ii)

The committee was comprised of 10 members who were selected from the Legislative Assembly of British Columbia and though many of the members had previous experience in producing similar legislative reports it must be noted that none of the members had public health credentials. The committee held hearings with experts in the field – such as physicians, academics and officials from the Office of the Provincial Health Officer – and reviewed research presented to them by their team of researchers (the credentials of the individuals on the team were not specified). The committee produced a report comprised of 36 recommendations to the Legislative Assembly of BC that reflected the views of the experts and research data the committee members were exposed to. Although the committee’s recommendations are not government policy, the government is under some obligation to consider the committee’s recommendations when formulating decisions on health and health care issues.

The second report reviewed, *Improving the Health of Canadians: Promoting Healthy Weights*, was designed to be used by policy planners and members of the general population. The Canadian Institute for Health Information (CIHI) produced this report. The goal of the CIHI is to:

provide timely, accurate and comparable information. CIHI’s data and reports inform health policies, support the effective delivery of health services and raise awareness among Canadians of the factors that contribute to good health.(CIHI, 2006, About the CIHI ¶ 1)

This report presents intervention programs and policies that have been used nationally and internationally to address the issue of obesity. The report was organized to highlight features of the population health approach. A project team of 18 Canadian Population Health Initiative (CPHI) – a part of the CIHI – staff members produced the report. The project team relied on the expertise of an Expert Advisory Group, comprised of senior members of public health agencies across Canada, to guide the development of the report. The report was also peer-reviewed before publication.

Despite the distinct differences in the origins and purposes of the two reports, I felt that collectively they offered a good representation of obesity discourse in BC. The SSCH report reflected the views of the public (persons without a public health background) while the CIHI report featured obesity from the perspective of public health practitioners. These combined views enhanced my analysis of obesity in BC.

The overarching goal of my research was to understand the types of evidence and public health frameworks that are guiding obesity prevention and intervention strategies in BC. The provincial government's call for the use of population health and inequalities lenses in provincial intervention strategies influenced my decision to look for the presence of the population health and vulnerable population approach in the reports as these two approaches provide population health and inequalities lenses. However, four public health approaches emerged in my analysis (population health approach, vulnerable

population approach, the Ottawa Charter for health promotion and risk factor epidemiology). I report these approaches in the following section.

### **3.1 The population health approach to obesity prevention**

The population health approach facilitates the examination of interactions among a range of social and structural determinants of population health over the lifecourse (Dunn & Hayes, 1999). Using an inequalities lens, this approach highlights factors in society that produce health differentials within the population and uses the knowledge of these factors to develop and implement policies and actions that will alleviate the identified inequalities and their resultant health effects (Dunn & Hayes, 1999). According to PHAC (2008) obesity is a multi-layered, multi-faceted condition that is driven by social, structural and individual level factors. As such, a comprehensive approach that accounts for the influences and interactions of these multiple factors is needed to understand obesity and guide obesity intervention strategies. Two distinctive features of the population health approach that address these concerns are its foci on the social and structural determinants of health (SSDoH) and the need to address inequities in society. The manner in which these features are addressed by the authors of the two reports are highlighted below.

#### **3.1.1 Was there a focus on social and structural determinants of obesity?**

According to published research, biomedical and behavioural factors play a relatively minor role in predicting negative health outcomes when compared to

the social and structural determinants of health (Davey, Smith & Gordon, 2000; Johnson et al., 2003; Lawlor, Ebrahim & Davey Smith, 2002 as cited in Raphael, 2009, p 21). Benzeval et al, 1995 (as cited in Raphael, 2009) presented a model of SSDoH which elucidates the relationship between SSDoH and health status. Benzeval et al, 1995 (as cited in Raphael, 2009) argue that SSDoH are linked to health on three levels: living conditions, psychosocial stress, and the adoption of unhealthy behaviours and that all these mechanisms interact to produce health. Obesity, like other health threatening conditions, is mediated by both material and psychosocial factors that are structured by an individual's access to and quality of SSDoH (Braveman, 2009; Raphael, 2009; Swinburn & Egger, 2004). Several studies have shown that persons who live in disadvantageous conditions associated with poor SSDoH adopt unhealthy behaviours such as excessive alcohol consumption, increased fat and sugar uptake, lack of physical activity, and weight gain as a means of coping with their adverse circumstances and these responses all contribute to the development of obesity (Health Canada, 1999; Pomerleau, Pederson, Østbye, Speechley & Speechley, 1997; Potvin, Richard & Edwards, 2000; Wilkinson, 1996 & Williamson, 2000 as cited in Raphael, 2009).

Although social and structural determinants of obesity were mentioned by the authors of both reports, the significance of these determinants to obesity was not fully explored. For example, although the CIHI document presented data on the social and structural determinants of obesity, the authors failed to apply a “determinants of health” framework to understanding of the effects of SSDoH on

the development of obesity. As a result, their interpretation of obesity remained focused on the intermediary, proximal factors that influence obesity. The following example is indicative of their approach.

Treating obesity is a complicated issue that involves both our *genetic make-up and the choices that we make as individuals about what to eat and how physically active we are* [italics added]. It also involves our social, cultural, physical and economic environments. (CIHI, 2006, p. 4)

Their casual mention of other determinants of obesity, after singling out genetic and behavioural risk factors, draws attention to genetic and behavioural risk factors, thus averting the readers' attention from other underlying determinants of obesity. Focusing on behavioural and genetic risk factors encourages the application of an individualistic analysis to the problem of obesity and promotes the use of behavioural or biomedical approaches in the management of obesity. In contrast, a determinants of health framework would focus on improving the underlying SDoH that produce the adverse conditions that promote obesity and structure intervention strategies around advocating for changes in these conditions (Raphael, 2009). The application of an individualistic approach to obesity may result in further marginalization of vulnerable groups as exemplified by the following statement cited in the SSCH document:

"Type 2 Diabetes with *obesity tends to have a predilection amongst Asian-Pacific and aboriginals* [italics added]. We have a large Chinese and Indo-Canadian population here in British Columbia as well as a large aboriginal population. ... This is going to be very, very costly (Warshawski, 2006 as cited in SSCH, 2006, p. 26)

There seems to be an apparent misconception that the burden of obesity borne by these populations is within their control, which misdirects the

responsibility for the condition onto these vulnerable groups. This tendency to make such unfounded assumptions about ethnic and cultural disparities in health is a reflection of ignorance towards underlying political and psychosocial factors that affect the autonomy of these social groups (Braveman, 2009).

The SSCH document similarly failed to capture the relationship between SSDoH and obesity. They used behaviours influenced by the structural and social determinants of obesity to identify populations at risk as opposed to using these constructs to explore why certain groups in society are differentially predisposed to obesity. For example, they stated, “It is widely believed that excessive screen time in children causes obesity.... This sedentary behaviour competes with the time that children are physically active and creates a caloric imbalance”. While this statement may be true there was no exploration of the underlying factors that bring about this behaviour. No mention was given to the cost of enrolling children in extracurricular activities, the work-home dilemma faced by two-job families (where either both parents work full-time or one parent works two jobs) or the fact that some of these children may be “latch-key kids” (children in self-care) and electronic media provide the safest and most affordable alternative to childcare for their families (Marshall, 2001).

### **3.1.2 Were there any attempts to reduce inequalities in society?**

One of the underlying assumptions of the population health approach is the belief that the reduction in material and social inequalities in society will lead to a reduction in health inequities between population groups (PHAC, 2001). Inequalities in society differentially distribute access to resources and exposure



to adverse or beneficial determinants of health by class, ethnicity, geography, gender and culture (Frohlich & Potvin, 2008; Raphael, 2009; WHO, 2009b).

Research has shown that the distribution of obesity in society runs along the lines of inequalities with more vulnerable populations showing higher levels of obesity (Braveman, 2009; Drewnowski & Specter, 2004).

Drewnowski and Specter in their 2004 study on the cost of unhealthy (energy-dense obesity causing) and healthy (fruit, vegetables and lean meats) foods found that selection of healthy foods is limited by price, finances and geography, and that the burden of these limitations disproportionately falls on ethnic/racial minorities, persons of limited education, and those who are financially and geographically marginalized. In addition, Drewnowski and Specter (2004) showed that food insecure individuals, in an effort to meet their daily energy requirements, often select foods that are energy-dense and low cost, as unhealthy foods provide dietary energy at lower costs when compared to healthier foods. Drewnowski and Specter (2004) argue that consumer costs are the most limiting factor in the selection of foods by marginalized individuals and although policies may be put in place to address the role that industry plays in providing energy-dense foods to uninformed consumers, these actions will do little to change the food selection behaviour of marginalized individuals.

While both reports recognized the limitations in the purchasing power of marginalized groups in the community, the overriding focus on intermediary factors of obesity – such as the adoption of a healthy diet – superseded the importance of addressing the underlying structures in society that create

differential access to healthy foods. Observations made by the CIHI such as “...nutritious perishable foods that were of poor quality and high price tended to discourage northern residents from purchasing and consuming these foods” (CIHI, 2006, p. 64 ) and “in some Canadian neighbourhoods, the cost of food is as much as 11% higher in inner-city grocery stores compared to suburban grocery stores” (CIHI, 2006, p. 64) were not explored beyond their initial observations. The CIHI made no effort to advocate for changes to policies that affect the equitable pricing of foods or the distribution of high quality nutritious foods to northern residents. Similarly, though the authors of the SSCH (2006) document recognized that “... low-income families require special attention initiatives that support British Columbians in achieving a healthy diet...” (p19) they opted to provide meals at schools and community kitchens as opposed to advocating for changes to economic and social policies in other sectors that bring about these inequalities in access to resources. According to Shaw et al, 1999 (as cited in Raphael, 2009, p 27)

If we are to tackle inequalities in health we need an approach which deals with the fundamental causes of such inequalities, not one which focuses mainly on those processes which mediate between social disadvantage and poor health.

Focusing on intermediary factors that affect obesity hides the underlying inequalities in social, economic, and political policies that promote social inequalities (Braveman, 2009 & Muntaner, 2004 as cited in Raphael, 2009). To alleviate the negative health outcomes associated with social inequalities, inequitable social factors need to be addressed directly; failing to do so results in development of interventions that fail to provide homogeneous outcomes for all

members of the population (Braveman, 2009; Frohlich & Potvin, 2008; Raphael, 2009).

### **3.1.3 Was a life course approach to health applied and were concentrated risks throughout the life course accounted for?**

The life course approach to health is a feature that is common to both the population health approach and the vulnerable population approach. A life course perspective to obesity examines the differential exposure to latent, cumulative and pathway effects of adverse or protective factors of obesity over a person's lifetime (Hertzman, 2000 as cited in Raphael, 2006; Raphael, Bryant, & Rioux, 2006). Research on the determinants of obesity has shown that these differential exposures may promote or hinder a person's ability to manage their weight throughout their life (Braveman, 2009; Novak, Ahlgren, & Hammarström, 2006). Furthermore, longitudinal studies of obesity have revealed a positive association between adverse long-term life experiences and increased levels of obesity (Novak et al., 2006). Factors such as the social class and health-related behaviours of parents, parental neglect, social inclusion, and the psychosocial effects of living in deprivation were all found to be associated with the increased risk of developing obesity (French, Perry, Leon & Fulkerson, 1996; Kuh & Hardy, 2002; Lissau & Sorensen, 1994; Parsons, Power, Logan & Summerbell, 1999 & Power & Moynihan, 1988 as cited in Novak et al., 2006).

Both reports discussed relationships among early childhood nutrition, education and the development of obesity. For example, they both mentioned the latent effects of disadvantage on obesity; the CIHI document quoted that "a

number of systematic reviews indicate that breastfeeding can be a protective factor against latent childhood obesity” (National Institutes of Health [NIH], 1998; Swinburn et al., 2004 & Arenez et al., 2004 as cited in CIHI, 2006, p 83) whilst the SSCH document acknowledged that “parents and caregivers are uniquely positioned to model healthy eating, thereby helping to establish positive nutritional habits early in life”(SSCH, 2006, 63). What was missing from their life course analysis of obesity was a discussion of how cumulative and pathway effects of disadvantage influence the development of obesity (Hertzman, 2000 as cited in Raphael et al., 2006). There was no mention of the effects that social class early in life, or cumulatively throughout the life course, has in positioning individuals on particular trajectories with respect to their exposure to protective or non-protective factors of obesity or to the cumulative effect that extended exposure to negative risks factors has on the development of obesity (Raphael, 2009). As Braveman (2009) pointed out, time affects exposure to negative risk factors of obesity on two dimensions, depth and duration; when these two factors are discounted in obesity evaluation, social disparities in obesity are underestimated. Increased exposure to negative risk factors for obesity increases the incidence, severity and subsequent negative consequences of this condition (Braveman, 2009).

### **3.2 The vulnerable population approach to public health**

To effectively account for the inequalities experienced by vulnerable groups in society, public health practitioners need to evaluate how concentrated

risks throughout the life course affect individuals' health (Braveman, 2009; Frohlich & Potvin, 2008; Raphael, 2009). Vulnerable populations are populations that share social characteristics that expose them to significantly higher levels of negative risk factors for disease when compared to the general population (Frohlich & Potvin, 2008). In Canada, children, persons of Aboriginal descent, immigrants and those living in poverty have been identified as populations vulnerable to obesity (Oliver & Hayes, 2008; Tremblay, Pérez, Ardern, Bryan, & Katzmarzyk, 2005). According to Kelly (1995) forming partnerships with vulnerable populations is an effective strategy for applying to public health interventions. This approach not only ensures that vulnerable groups are not exploited but provides a means through which the community can become engaged in the intervention and assert a sense of ownership thus increasing the success rates of interventions targeted to these communities (Kelly, 1999).

### **3.2.1 Were vulnerable populations invited to participate in interventions?**

The vulnerable population approach recommends that members of vulnerable populations groups be included in the planning, implementation and evaluation stages of interventions targeted to them (Kelly, 1999). This approach ensures that planners gain an understanding of the manner in which underlying structures in society limit vulnerable populations' adoption and maintenance of targeted behaviours (Kelly, 1999). Both the CIHI and the SSCH highlighted interventions designed to account for vulnerable populations; what was unclear was the extent to which these populations would be/were involved in creating interventions targeted to them.

The SSCH entertained inputs from school-aged children and two members of the South Asian community in the planning stages of their recommendations (SSCH, 2006 p 3 – 6 & p 25 – 26) while the CIHI highlighted two interventions, *The Kahnawake School Diabetes Prevention Project*– which was designed to reduce the incidence of diabetes in Aboriginal children (CIHI, 2006, p. 50 ) and *The Active Programme Promoting Lifestyle Education in School (APPLES)* “aimed to reduce risk factors for obesity among 7 – to 11 – year olds” (CIHI,2006, p. 49), which both failed to produce expected results in the targeted communities. Beyond being considered in the planning stages of the interventions, both reports failed to illustrate how targeted communities would be/were incorporated into the interventions. The lack of visibility with regard to the involvement of the vulnerable population in the planning, implementation and evaluation stages of the interventions raises the question of whether the needs, concerns and challenges of these members of society are/were in fact understood and accounted for at all levels of the interventions (Kelly, 1999).

### **3.2.2 Were intersectoral approaches applied?**

Although the use of intersectoral approaches is not unique to any one public health approach, it is important to identifying and alleviating the effects of SSDoH experienced by marginalized groups (Frohlich & Potvin, 2008; PHAC, 2008a). Policies controlled by sectors external to health mediate many structural and social determinants of obesity (Braveman, 2009; Frohlich & Potvin, 2008; Nutbeam, 2008). A comprehensive approach to obesity management would

recognize the views of a variety of stakeholders and incorporate evidence from various interest positions (Lobstein, 2005).

Examination of the approaches taken in the reports showed that the authors understood the concept of intersectoral approaches. The SSCH's approach incorporated the views of different sectors of government (health, education and agriculture), professional agencies, corporate citizens and one non-governmental organization. However, there was an absence of community organizations and advocacy groups.

In carrying out its mandate, the Committee conducted eight public hearings from late April to early June listening to physicians, academics, health and wellness practitioners, representatives from various ministries, officials from the Office of the Provincial Health Officer, and experts in the field of social marketing.... The Committee also heard from officials representing associations such as the Concerned Children's Advertisers [members are private companies e.g. M<sup>c</sup>Donald's, Kelloggs, Nestles], Food and Consumer Products of Canada, Refreshments Canada, and the Canadian Food and Restaurant Association.(SSCH, 2006, p. 3)

Likewise, the CIHI demonstrated their awareness for the need to use intersectoral approaches. The CIHI highlighted an intervention, *Canada Food Mail Program*, which is "a subsidy for the transportation of nutritious foods [to] isolated communities (those that do not have year-round road or rail access)" (CIHI, 2006, p. 64). The *Canada Food Mail Program* is a partnership between Canada Post, Indian and Northern Affairs and Health Canada (CIHI, 2006). This program is a good example of the type of interventions that are required to alleviate structural inequalities of obesity. Although the CIHI (2006) states that "long-term effectiveness of this program on body weights is presently unknown"

(p 64) they report that four provinces and three territories out of the six provinces and three territories eligible for the program were using the program.

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

According to the Ottawa Charter, health promotion is a process through which people are empowered to take control over the social determinants of their health through the development of social capital and the creation of health-supportive environments (Lobstein, 2005; WHO, 1986). The Ottawa Charter views health as the product of a number of interconnected biological, psychological and behavioural factors that are influenced by physical, economic, sociocultural and political environments (PHAC, 2008a; WHO, 1986). Because health is seen as being shaped by different processes at different societal levels the Ottawa Charter calls for the use of multidisciplinary and intersectoral approaches to health interventions that are based on an in-depth understanding of the factors that contribute to health (PHAC, 2008a; Raine, 2004).

The authors of the reports addressed three areas of the Ottawa Charter well – the development of personal skills, the need to create supportive (physical) environments and the building of healthy public policy. However, the authors paid little attention to reorienting health services and strengthening community action. While their strategies have potential to change obesogenic behaviour at the population level, their failure to properly address all areas of the Ottawa Charter may reduce the overall effectiveness of their proposed obesity prevention/intervention strategies.



### 3.3.1 Was the development of personal skills addressed in the reports?

One area of the Ottawa Charter that the SSCH addressed well was the development of personal skills; many SSCH recommendations focused on personal skill development such as

... the Ministry of Education continue to develop and promote *programs that educate children on healthy eating habits* [italics added] and encourage school-aged children to choose healthy meal options (SSCH, 2006, p. 73)  
...the government continue [sic] to invest in community kitchen projects in order to assist young families in *improving their skills in food preparation and healthy eating* [italics added] (SSCH, 2006, p. 71)

However, while the recommendations emphasized development of physical skills individuals need to support behaviour changes, they failed to recognize the need for psychosocial supports necessary for sustainable behaviour change (The Australian Psychological Society, 2008). According to the Australian Psychological Society (2008), evidence suggests that behaviour change is more likely when psychosocial support is provided. The failure of the SSCH to account for psychological and social factors that influence behaviour may result in relapses in behaviour and the subsequent failure of proposed intervention programs (The Australian Psychological Society, 2008).

In contrast, the CIHI presented data that highlighted the need for interpersonal support networks. For example the document stated that “building, strengthening and maintaining social networks that support behaviour change *may help* [italics added] increase physical activity” (CIHI, 2006, p. 80) and that “youth reporting high levels of peer connectedness also *tended* [italics added] to report higher levels of participation in unorganized sports (CIHI, 2006, p72).

Exposing readers to this type of data enhances their evaluation of behavioural modification programs and may serve to improve the designs of future obesity prevention and intervention strategies.

According to the Ottawa Charter, it is important that stakeholders from a wide variety of disciplines and sectors be involved in the planning, implementation and evaluation of interventions (Lobstein, 2005; Raine, 2004). Although the approaches of both the CIHI and the SSCH were intersectoral in nature the SSCH's approach failed to incorporate data from a wide variety of disciplines and this may have accounted for their oversight in providing psychosocial support for their proposed interventions.

### **3.3.2 Was creation of supportive environments *addressed in the reports?***

The Ottawa Charter promotes the view that society is complex and interrelated, as such, individuals' health cannot be separated from their social, physical, economic, political and psychological environments (WHO, 1986). The lens provided by the Ottawa Charter shows obesity as the product of complex interconnected relationships that restrict opportunities for persons to engage in healthy behaviours. Accounting for these complex relationships is important to understanding the needed response (PHAC, 2008b).

The CIHI and the SSCH suggested many strategies to create supportive physical environments. For example, the CIHI presented evidence of a strategy utilized in a Canadian corporation:

The Canadian-based Husky Injection Molding [sic] Systems also provide healthy cafeteria food, incentives for staff that meet fitness level criteria and reward employees who walk, bike, car pool or use

public transit to get to work... Husky estimates a savings of \$8 million dollars in reduced absenteeism... compared to the Canadian average. (CIHI, 2006, p. 38)

The SSCH advocated for “local governments, the Ministry of Agriculture and lands, and local farmers’ markets [to] continue to support and expand farmers’ markets to ensure their accessibility to a broad range of consumers” (SSCH, 2006, p. 21) and for the government to

order the mandatory removal of all products classified as “Not Recommended” under the *Guidelines for Food and Beverage Sales in BC Schools* from vending machines and other food outlets on property owned or managed by the provincial government by 2009. (SSCH, 2006, p 72)

While these efforts would create healthy physical environments, they still will not guarantee the adoption or maintenance of the preferred behaviours in the general population. For example, while encouraging companies to adopt healthy policies is beneficial to company employees it does nothing to improve the health or reduce the obesity level of the general population. In addition, providing healthy cafeteria foods and incentives for physical fitness does not benefit persons who are limited by time or are food insecure (unless the company pays for the meals). An approach such as advocating for changes to income structure (for example increasing the minimum wage) would have been more appropriate as it is more consistent with the Ottawa Charter and has the potential to benefit a larger proportion of the population by reducing economic inequalities (Raphael, 2009).

The SSCH recommendations to improve access to farmers’ markets and remove not recommended foods from vending machines on provincially

managed properties also has the potential to further marginalize vulnerable populations. Making farmers markets more locally accessible is great if one has the economic capacity to purchase foods from these markets. According to Drewnowski and Specter (2004), the cost – per – calorie of unhealthy foods is exceptionally lower than the cost – per – calorie of fruits and vegetables making high fat, high sugar foods the affordable choice for low-income groups. Likewise, the removal of “not recommended” foods from vending machines while a great strategy to limit access to unhealthy foods for middle to high-income groups may serve to tip the scales of malnutrition from obesity to wasting for individuals/children who depend on these foods to meet their daily energy requirements (Drewnowski & Specter, 2004). A more equitable approach to creating a supportive food environment would be to advocate for government subsidies to fruits and vegetables to make them more economically accessible to all members of the population (Drewnowski & Specter, 2004).

### **3.3.3 Was building healthy public policies addressed in the reports?**

The Ottawa Charter proposes that health promotion facilitate the creation of health, income and social policies through the modification of fiscal, taxation and organizational laws to foster greater equity among social groups WHO, 1986). The CIHI document explored the possibility of changing organizational policies to support healthy eating and physical activity. For example, it stated, “from a policy perspective, relatively few companies in Canada have formal policies encouraging physical activity and healthy eating” (CIHI, 2006, p. 36). The SSCH, in contrast, advocated for the removal of *Social Services Tax* exemptions

given to unhealthy foods and beverages such as candies, soft drinks and snack foods. The committee recommended that “the government, using the *Guidelines for Food and Beverage Sales* in BC as a template, remove the Social Services Tax exemption provided to all unhealthy foods and beverages meeting the definitions of ‘Not Recommended’” (SSCH, 2006, p. 39).

While both reports facilitated the building of healthy public policy, their approaches were narrow in scope. Neither document addressed the need to advocate for changes to economic policies such as the gendered, ethno cultural and racialized distribution of income (Galabuzi & Labonté, 2004; PHAC, 2008b), nor for changes to other social policies such as social welfare that are instrumental to fostering greater equity between social groups (Raphael, 2004 as cited in Raphael, 2009). The Ottawa Charter considers the social and political empowerment of people an indicator of societal health gain (Lobstein, 2005). To disregard the need to address these disparities contradicts the underlying principles of the Ottawa Charter.

Undoubtedly supportive physical environments, the development of personal skills and building healthy public policy are important to the adoption and maintenance of new behaviours; the Ottawa Charter supports such activities. However, evidence shows that focusing on SSDoH and the structural drivers of inequalities in society has a greater potential to reduce unsatisfactory health outcomes in marginalized populations (Raphael, Anstice & Raine, 2003; Raphael & Farrell, 2002 as cited in Raphael, 2009; WHO, 2008).

### 3.4 Risk Factor epidemiology

Risk factor epidemiology promotes the ideology that biomedical and behavioural factors that manifest themselves in individuals mediate health and disease (Raphael, 2009). Risk factor epidemiology generally discounts the social, economic, political and psychological contexts in which people live and assumes that given sufficient education and support all individuals can make choices among options (Krieger & Zierler, 1996; Travers, 1996 as cited in Raphael, 2009). In risk factor epidemiology the complexity and multi-dimensionality of the “diseased” condition is minimized and this predisposes it to the use of biomedical and behavioural approaches in its intervention strategies (Krieger & Zierler, 1996).

The following example in the *Recommendations for Prevention of Childhood Obesity* provides an illustration of a clinicians’ use of risk factor epidemiology (Journal of the American Academy of Pediatrics, 2007). In these recommendations, a clinician presented with an individual challenged by weight would follow prescribed steps to identify the cause of obesity and the necessary treatment of the obese individual. The prescribed steps for intervention are as follows: 1) review behavioural history of the patient, discuss the advantages and disadvantages of behaviour change, and identify the behaviours that can be addressed; 2) guide patient towards a behavioural decision; 3) set goals, formulate an action plan and assist patient in solving behavioural intervention problems (Davis et al., 2007). In this example, the patient is central to the intervention process; the clinician assumes obesity is the result of the individual’s

behavioural choices and changes to these behaviours are the prescription to rectify obesity. This model for diagnosis and treatment is similar to the approach risk factor epidemiology takes when applied at the population level with the exception of the intervention being focused on changing high risk behaviours of individuals to effectuate population-level changes. While risk factor epidemiology provides a good framework for the diagnosis and treatment of individuals at the population level it may serve to marginalize population groups prone to adverse health conditions by appropriating negative behavioural patterns to consequent adverse conditions without accounting for social and structural factors that promote the negative behaviours.

Risk factor epidemiology emerged as the dominant public health approach featured in the two key reports. Lifestyle theory was the dominant discourse used to frame physical inactivity and inappropriate dietary consumption of foods as the major determinants of obesity and as intervention points for proposed obesity prevention strategies. For example according to the SSCH:

Childhood obesity is a problem our province can no longer afford to ignore. The health costs to our children and the financial costs to our health system are reaching a crisis point and all leaders need to act. The problem of *poor eating habits and physical inactivity in children* [italics added] requires bold leadership and strong action to turn the tide. (SSCH, 2006, p. 1)

The SSCH and CIHI consistently emphasized physical inactivity and inappropriate dietary consumption as the major risk factors for obesity that required action. Although the SSCH and CIHI acknowledged other SSDoH such as ethnicity, food security and early childhood experiences as potential contributors to obesity, these determinants were either unexplored or were

overshadowed by the need to change inappropriate physical activity or food consumption behaviours. For example, the CIHI document stated

... Canadian households with lower incomes spent less money on food at both restaurants and stores than households with higher incomes. Compared to higher income households, *lower-income households also purchased fewer servings of both fruit and vegetables and milk products* [italics added] (CIHI, 2006, p. 64)

Although the document acknowledges differential food expenditures by persons of lower versus higher incomes, it fails to offer insight into how these inequalities could be addressed or their impact on low-income households' ability to obtain and maintain healthy diets. The use of descriptive language, which some may interpret as purely 'objective', easily fosters the interpretation that lower-income households *selected* inappropriate foods as a *personal choice*.

#### **3.4.1 Were cultural and behavioural risk factors for disease used to identify persons at risk?**

On a larger scale, sub-populations that exhibited similar cultural, behavioural or genetic risk factors for obesity were stratified and treated according to their commonalities as exhibited in the passage below:

The government has endeavored to close this unsatisfactory gap between the healths [*sic*] of these two populations [aboriginal and non-aboriginal] through accelerated investments in public health, infrastructure, and *education* [italics added]. However, progress has been unacceptably slow. It would be irresponsible for this committee to *ignore such a concentration of obesity and inactivity* [italics added]. (SSCH, 2006, p. 24)

Implicit in this excerpt is the notion that some intrinsic property of Aboriginal peoples is the cause of their obesity. The manner in which the document contrasts the message of physical inactivity (an individually controlled



choice) against other underlying determinants of health (such as investments in public health that are slow to produce results) effectively accentuates the need for urgency in addressing the problem of obesity and points a finger towards modifying physical inactivity. This statement appears to promote the use of risk factor epidemiology as a quick solution to addressing obesity levels in Aboriginal populations.

Of even greater importance is the fact that obesity is pathologized earlier in the SSCH report as a disease, “obesity is also an environmental *disease* [italics added] formed by the interaction of a multitude of factors” (SSCH, 2006, p. 13). Pathologizing obesity as a disease allows it to be fitted into contemporary medical discourse giving hegemonic power to the use of biomedical and behavioural risk factor approaches in proposed prevention and intervention strategies. Placing obesity within the medical frame results in it being defined and categorized in terms of acceptable, measurable, scientific constructs such as BMI which - though acknowledged as an inaccurate measure of adiposity (Deurenberg, Deurenberg-Yap, & Guricci, 2002; WHO Expert Consultation, 2004) - still remains the dominant means of identifying persons “at risk” for the disease and ascribing persons to different classes of obesity (PHAC, 2008a; WHO, 2000). Additionally, by using a medical frame that constructs individuals as at risk and in need of behavioural reform, the authors present individuals as agents responsible for their disorder and position them as central to the prevention/intervention approach to be adopted.

### **3.4.2 Is there the assumption that individuals make free choices among options?**

The lack of regular physical activity and the consumption of inappropriate diets are a reality for persons who are members of an ethnic minority, low income, work long hours at sedentary jobs or are otherwise challenged by time and resources (Drewnowski & Specter, 2004 Vertinsky, 1998 as cited in Jette, 2006, p. 21). However, within the pages of the SSCH report the systemic and social barriers that prevent individuals from selecting to live healthier lifestyles are camouflaged by their proposed freedom to choose health. This ideology not only perpetuates the stereotyping of certain classes of individuals in society but also gives the illusion that we all have the same level of control over our lives. The following excerpt gives an example of this: “Overweight and obesity in the general child population emerges as a result of the individual consumption and physical activity decisions made by parents and children” (SSCH, 2006, p. 13). While the information contains some truth, the statement is devoid of context. The statement does not account for underlying conditions that limit the ability of some population groups to select certain foods or choose to be physically active. The authors leave the reader with the impression that all individuals have the same level of autonomy over their lives and are all presented with equal opportunities to select healthy foods and engage in physical activity.

### **3.4.3 Is there the assumption that individuals could change their behaviours given sufficient education or incentive?**

Based on the premise that we all have autonomy over our lives, it is fair to assume that given sufficient education or incentive anyone can be motivated to

change their behaviour. This line of thinking was evident in the SSCH document as demonstrated in the following passage.

There is some evidence to indicate that, unfortunately, new-immigrant populations tend to adopt our western ways more aggressively than is likely in their best interests – for example, more likely to *choose the unhealthy food choices* [italics added] that they associate with western society. We really do need to focus, when we're dealing with new immigrant populations, for example, on ensuring that *healthy food choices are promoted* [italics added] just as much, or more, as unhealthy food choices that tend to be associated with the western style of eating. (BC Healthy Living Alliance as cited in SSCH, 2006, p. 26)

This statement may have been well intended; however, the underlying assumption is that new immigrants are ignorant of healthy “western style” foods and need to be educated to make healthier choices. Given the omission of the social, economic, cultural, political and psychological contexts surrounding immigrant eating behaviour, the document promotes the idea that it is fair to assume that education is sufficient to change behaviour. The evidence that remains hidden in this scenario is the fact that immigrant groups, who have higher levels of education compared with average Canadian-born citizens, have a two to three times higher than average risk of facing income discrimination, pay inequities, gender-based wage discrimination (for female immigrants) and under-utilization of their skills. These inequities make it more likely that they will work at menial jobs that require longer, irregular hours of work (Galabuzi & Labonté, 2004; Justice Institute of British Columbia, 2007). According to Galabuzi & Labonté (2004) the poverty rate for immigrant families is 19% compared to 10.4% for other families in Canada, a fact that cannot be overlooked in the assessment of their ability to change their behaviour to *select* healthier foods.

Given the economic, time, social, psychological and political constraints under which immigrants live, the excerpt above no longer appears practical. Unhealthy food choices, namely fast foods and other convenient foods, are quick, require little or no preparation time and are low in cost (Drewnowski & Specter, 2004). Placing immigrant eating behaviour in context paints a different picture of the possible root causes of their food behaviour and shows that education alone will not change this behaviour.

Risk factor epidemiology neglects the presence of any social order or inequities in society and blames individuals for their indolence in seizing opportunities presented to them (Travers, 1996 as cited in Raphael, 2009). Despite the inherent flaws of this approach to public health, risk factor epidemiology continues to dominate obesity discourse and shapes public understandings of obesity (Canadian Population Health Initiative & Raphael, 2004 as cited in Raphael, 2009).

This study is not exhaustive. It offers a glance of obesity in BC, and shows how policy shapes the treatment and prevention of obesity in BC. It highlights the need for an intimate examination of the public health approaches that guide our practice. Further investigation is required to understand why risk factor epidemiology continues to dominate obesity discourse in light of the existence of more comprehensive approaches that address underlying inequities in society and produce fairer outcomes at the population level.

## **4: DISCUSSION**

The aims of this paper were to identify key documents that are being used by BC policy makers and public health professionals to guide obesity prevention strategies in BC and to determine which public health approaches to population health are guiding obesity prevention in BC. I found that there is no single formal policy document at either the federal or provincial level that is guiding obesity prevention strategies in BC. However, I identified two key reports – *A Strategy for Combatting Childhood Obesity and Physical Inactivity in British Columbia* and *Improving the Health of Canadians: Promoting Healthy Weights* - that may potentially guide future provincial obesity strategies.

Findings demonstrated a disjunction between the provincial government's stated commitment to apply population health and inequalities lenses to public health intervention strategies and the approaches that are being employed in practice. Although the key reports attempted to employ the strategies of several public health approaches to obesity interventions, risk factor epidemiology emerged as the dominant approach.

### **4.1 What do these results mean for obesity prevention in BC?**

The current prevailing approach to obesity prevention, which is steeped in a risk factor epidemiology paradigm, has been critiqued for its failure to capture

the influence of other, more distal, SSSDoH of obesity or account for inequities in society that shape individuals' adoption of health threatening behaviours (Braveman, 2009; Raphael, 2009). Frohlich and Potvin (2008) argue that public health approaches to population health that presume that the distribution of risk in the population will be equitably reduced by interventions designed to alter societal behaviour through mass environmental control may increase health inequalities in society. Obesity policies and programs that fail to apply population health and inequality lenses support social, political and economic systems that promote differential access to resources that make marginalized groups in society more vulnerable to obesity (The Legislative Assembly of British Columbia, 2004).

Evidence has shown that in Canada Aboriginal peoples, immigrants, ethnic minorities, children and persons limited by finance are more vulnerable to adverse health outcomes such as obesity (Oliver & Hayes, 2008; Tremblay et al., 2005). In 2006, Statistics Canada reported BC as having the second highest number of persons of Aboriginal descent (196,100 persons) and the second highest number of immigrants (27.5%) in Canada. In addition, despite being one of the wealthiest provinces in Canada, BC has the highest poverty rate, the highest rate of income disparity and the second highest child poverty rate and holds the third highest ranking in income inequality (Provincial Health Services Authority, 2008; Stats Can, n.d. as cited in Human Resources and Skills Development Canada, 2009). Given the high proportion of vulnerable populations living in BC there is the likelihood that provincial obesity rates may rise making

the need for effective prevention and intervention strategies even more eminent. Yet analyses of the two key reports suggest that the dominant approach being applied to obesity prevention and intervention strategies will not effectively address the needs of vulnerable groups and may consequently further push the burden of obesity onto these vulnerable populations (Frohlich & Potvin, 2008).

Human rights principles dictate that all individuals regardless of ethnicity, culture, gender or class have the fundamental right to attain the highest level of health possible (United Nations, 1966). The Canadian government has committed itself to protect, respect and fulfil this right to health and this right is the responsibility of all levels of government (Rideout, Riches, Ostry, Buckingham, & MacRae, 2007; United Nations, 1966). In addition, the BC government in *A Framework for Core Functions in Public Health* stated the fundamental tasks of public health are:

to improve the overall health and well-being of the population; to prevent diseases, injuries, or disabilities that may shorten life or impair health, well-being and quality of life; and to reduce inequalities in health between different groups and communities in society (Ministry of Health Services, 2005) p12.

If the directives of the federal and provincial governments are to be met then public health approaches to population health need to bring inequalities in society to the forefront by advocating for the rights of those whose voices are muted because of political, industrial, social and economic powerlessness (Lobstein, 2005 ). A society that structures disadvantage, deprivation, discrimination and social exclusion towards certain population groups breaches the rights of these social groups to attain the highest level of health (Braveman,

2009). If access to the highest possible level of health is truly a human right, then it is our duty to ensure that this right is accessible to all human beings.

#### **4.2 How should the BC government address obesity and social inequalities in obesity?**

Underlying social inequalities and SSDoH that are variables in the development of obesity (for example food and income insecurity and gender) are common to other unsatisfactory health and societal outcomes (Braveman, 2009; Raphael, 2009). The need to advocate for changes to these underlying social and structural conditions and account for inequalities in society has been iterated and emphasized by several experts in the field of public health (Provincial Health Services Authority, 2008; Raine, 2004; Raphael, 2009). A multitude of recommendations regarding policies and interventions that should be put in place to address the SSDoH and the issue of inequalities in society have already been put forward by these public health experts. To reiterate their recommendations will fail to add to the inequalities dialogue, therefore, I will address gaps that I have identified in my exploration of the obesity, SSDoH and inequalities.

Firstly, there is the need to develop a formal strategy for obesity prevention and intervention for the province. Presently, several different agencies have created policies that they use to inform their prevention and intervention strategies. There is need for a truly coordinated, intersectoral, interdisciplinary collaborative approach to the issue of obesity in BC. A wide variety of private, government and corporate sectors and a variety of disciplines (including those



not usually associated with obesity or public health such as finance and economics) are needed to participate in formulating strategies to reduce of the prevalence and incidences of obesity in the province. Of even greater importance is the need to include members of vulnerable populations in the planning, implementation and evaluation of prevention/ intervention strategies and in policy development (Kelly, 1999). The power to develop policy needs to be shifted from bureaucratic frameworks to frameworks, such as the Social Exclusion Framework, that allow for the input of all social groups and facilitates the reassertion of social rights based on the concept of social protection as the responsibility of society and not the individual (Galabuzi, 2002).

Secondly, public health practitioners need to move their focus beyond interventions designed to address the proximal risk factors – physical inactivity and inadequate food consumption – of obesity to creating innovative strategies to prompt changes to food and income insecurity policies. Research has shown that food and income insecurity are underlying determinants of several adverse health outcomes for vulnerable populations (Che & Chen, 2001; McIntyre et al., 2000 & Vozoris & Tarasuk, 2003 as cited in Raphael, 2009). The SSCH (2006) in their recommendations suggested the government amend the Social Services Tax Act (Section 70) to remove the tax exemptions presently given to unhealthy foods under the Act. This recommendation is a step in the right direction; however, it has the potential to reduce the food intake of groups in the population who are food insecure. I propose that a further amendment is needed to this act. Tax exempts need to be given to healthy foods such as whole-grains, fruits,

vegetables, milk and lean meats to ensure that these foods become the affordable choice for low-income households. As Raphael (2009) noted in his exploration of SSDoH in Canada: “ Canada’s marketing board policies protect the supply of staples and the incomes of producers, but not the affordability of food staples for consumers” such practices are unacceptable and it is our duty as public health practitioners to bring such objectionable practices to the forefront and advocate for change.

Likewise, disparities in income between the highest earning and lowest earning groups in BC need to be addressed. According to Human Resources and Skills Development Canada (2009):

The well-being of Canadians depends on both their level of income and the distribution of income within the population. Differences in the distribution of income, or 'income disparities', are often considered a measure of a society's fairness [and] how it treats the disadvantaged... (Relevance, ¶ 1)

In 2005, Statistics Canada reported BC as having the highest income disparity in Canada. The incomes of the top 20% earners in the population were 9.9 times higher than the incomes of the earners in the bottom 20% (Stats Can, n.d. as cited in Human Resources and Skills Development Canada, 2009).

Several public health practitioners have analyzed this topic from a number of different perspectives and have put forward lists of recommendations; however, there has been little or no change in policies. Now that we have documented and reported these inequalities, as public health practitioners, we need to progress in our duty to support changes to social, cultural, economic and environmental policies that create inequalities in society through advocacy,

mediation and empowerment (Ministry of Health Services, 2005). It is time for us to empower vulnerable communities and assist them in finding appropriate avenues for getting these issues into the public arena, government forums and parliamentary debates. We need to ensure that the government delivers on its promise to ensure fair wages that not only provides equal pay for equal work but also provides sufficient economic resources for workers and their dependants to enjoy a decent standard of living (United Nations, 1966, International Covenant on Economic, Social and Cultural Rights, Article 7).

Lastly, it was observed that generally there is an absence of a sex and gender based analysis (genders are not restricted to male or female but lie along a continuum) to the issue of obesity in Canada. While public health practitioners are addressing the issues of sex and gender in publications and frameworks, the application of these concepts to practice is deficient. Presented and recommended prevention and intervention strategies were not gendered despite observed differences in obesity rates, levels of income and food insecurity, eating behaviours and physical activity levels between genders (CIHI, 2006, p 9, 17, 11, 63, 65, 14) As previously discussed obesity affects males and females in different ways. Therefore, it is impractical to expect that blanket interventions will yield uniform results across genders. In 2000, Health Canada called for the use of a gender based analysis to the analysis of policies, programs and research and this approach fits within the doctrine of the population health approach (Johnson et al., 2006; PHAC, 2001).

### **4.3 CONCLUSION**

As public health professionals, we need to recognize that the health sector has an important role to play creating equal access to health for all. As partners with other policy-makers, the health sector can act as a knowledge broker and advocate for changes in areas such as food insecurity, income and inequity. Public health professionals need to broaden their perspective of their role in population health and shift from solely focusing on health conditions that result from inequities in society to the socioeconomic rules and political powers that create marginalized groups, adverse health conditions, and the social groups that benefit from these inequalities (Labonté, 2002).

### **4.4 CRITICAL REFLECTION**

Despite all the knowledge acquired and the advances that Canada has made in leading research on inequalities and SSDoH it is disappointing to see that these principles are poorly represented in practice. The challenges faced by Aboriginal peoples, immigrants and the socially and economically marginalized in this country is a clear indication that Canada has not been effectively applying established theoretical concepts that address the issues of inequalities and SSDoH to improve real life. To be a nation of such cultural and ethnic diversity and have such an affinity for social issues, Canada is far from being an example to the world.

As a public health practitioner, I believe my role is to be an advocate and ethnicity, immigrant status, gender or class should not blur this role. The process of researching, writing and presenting on this topic has taught me how complex the issue of obesity is and made me aware of the biases and presuppositions I held towards the obese. I have learnt that in my practice I need to remain open-minded and tolerant. My greatest revelations came in the consultation sessions with my supervisors who, though from different academic backgrounds, shared the same passion and were able to bring different perspectives to the understanding of the issue. It is important for us all to learn to incorporate and respect knowledge from all disciplines. I will try to keep this experience in my mind as I move forward in my career and as I work to bring the issues of social inequalities and SSDoH into the forefront, in the public health sector and society at-large.

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