

**Food and Beverage Marketing
on Television During Children's Preferred Viewing: The Influence
of Regulatory and Self-regulatory Policies**

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Abstract

Objective: Childhood obesity is associated with children's exposure to food/beverage marketing, and policy options to limit this marketing are being sought. To examine the influence of advertising self regulation by industry in Ontario and the child-directed advertising ban in Quebec, we assessed the differences in exposure to food marketing on television between three groups of children: English children in Ontario, and French and English children in Quebec. Next we examined the differences in the nutritional quality of foods advertised to these groups of children during their preferred television viewing. Lastly, to examine the efficacy of self-regulation of food marketing to children, we compared the differences in food/beverage marketing between two groups of corporations: 17 corporations participating in the *Canadian Children's Food and Beverage Advertising Initiative* (CAI) and 35 corporations not participating in this initiative (non-CAI) during English children's preferred viewing on television.

Method: A 90 hour content analysis consisting of the preferred viewing of English Ontario, French Quebec, and English Quebec children was undertaken. The frequency of food/beverage promotions and related marketing techniques was determined in the first study and the nutritional quality of these foods/beverages was established and compared in the second study. To determine children's preferred viewing, a total of 428 children ages 10-12 completed television viewing diaries for 7 days while 32 television stations were recorded simultaneously between 6 am and 12 am. In the final study, the food/beverage marketing activities of CAI and non-CAI corporations during 99.5 hours of English children's preferred viewing were compared. The preferred television viewing was based on the television viewing journals of 272 English

speaking children. Each food/beverage promotion was classified by corporation type (i.e. CAI or non-CAI) and compared.

Results: In the first study, similar rates of food marketing were seen across all three population groups. French Quebec subjects were exposed to significantly more beverage and fewer grain, candy and snack food promotions. French Quebec children were targeted less frequently, and media characters were used less often than in the English groups. In the second study, food advertisements in the Quebec French sample were significantly higher in total and saturated fat, significantly lower in carbohydrates and sugar per 100 grams, and higher in protein as a percentage of energy than the two English samples. Similar proportions of advertisements were classified as “less healthy” across all three groups. In the final study, the CAI group was responsible for significantly more food/beverage promotions, more candy/snack and restaurant promotions and used media characters more frequently than the non-CAI group. Nutritionally, a significantly greater proportion of the CAI food/beverage promotions were considered “less healthy” compared to the non-CAI promotions.

Conclusion: The Quebec advertising ban does not appear to be limiting the amount of food/beverage advertising seen by children aged 10-12, nor is it having a significant influence on the healthfulness of foods/ beverages in these advertisements. Clearly, the Quebec policy needs to be broadened and strengthened. With regard to the self-regulatory system in Canada, our results indicate that the commitments that have been made in the CAI are not having a significant impact on the food and beverage marketing environment on television which is preferred by 10-12 year olds. The Government of Canada may want to consider alternatives to industry self-regulation in marketing in order to protect the health of our children.

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CHAPTER 1

INTRODUCTION

Childhood obesity is currently viewed as a global health crisis. In developed countries, childhood obesity rates have doubled (and sometimes tripled) since the mid-1970's. Children's food intake has also deteriorated in that the intake of fast foods, snack foods and sugar sweetened beverages has increased significantly over the past 30 years. On a population level, children's current energy intake often exceeds caloric needs.

Although genetic predisposition plays a significant role in the etiology of childhood obesity, the obesity promoting environment is viewed as a catalyst to its development. The marketing of foods and beverages is one element of this obesogenic environment. Systematic reviews of the literature have concluded that commercial food advertising aimed at children directly affects children's food preferences, consumption patterns and food purchase requests (1-3). It has also been concluded that television food advertising most probably contributes to an environment which promotes the development of childhood obesity(1).

In order to reduce the burden of chronic disease in the world, the World Health Organization (WHO) has urged member states to limit the impact on children of the marketing of foods and beverages that are high in fats, sugar and salt(4). Various governments are currently examining the policy levers that are available, however, little research has examined the influence of various marketing policies on children's exposure to food and beverage marketing. Canada is an interesting country in which to conduct such research as, within our borders, two separate advertising policies exist. In all provinces and territories with the exception of Quebec, advertising is primarily self-regulated by industry under the *Children's Food and Beverage*

Advertising Initiative (CAI). In Quebec, there is a complete ban on advertising directed at children under the *Consumer Protection Act*. Little research to date has examined the food advertising environment experienced by Canadian children, and the variations in exposure between children living in different jurisdictions in Canada.

The main objective of this research project was to examine the influence of two methods of regulating advertising to children: self regulation by industry and statutory regulation. To address this issue, we examined differences in children's exposure to food and beverage marketing on television in Ontario where advertising is self regulated by industry, and in Quebec, where there is an advertising ban during children's preferred television viewing. Given that children who watch television in English and French may be exposed to different forms of food and beverage marketing in Ontario and Quebec, we compared the exposure of Ontario English, Quebec French and Quebec English children to such marketing. Next, this research examined whether, given the different advertising policy environments, there were differences in the healthfulness of foods and beverages advertised to English and French speaking children in Ontario and Quebec. Lastly, in order to further evaluate the influence of the CAI, this research compared the food and beverage marketing practices, during English children's preferred television viewing, of corporations participating in the self-regulatory marketing initiative to those corporations that have not joined this initiative.

1.1 Specific Objectives and Hypotheses

The specific objectives of this research were to determine:

- (1) The differences in exposure to food and beverage promotions, and the differences in the target audience and the use of persuasive appeals for such promotions on television between Ontario English, Quebec French and Quebec English subjects;

- (2) The differences in the healthfulness of the foods and beverages advertised on television to Ontario English, Quebec French and Quebec English subjects;
- (3) The differences in the marketing of food and beverages between corporations participating in the CAI and those not participating in the CAI during preferred English language viewing in terms of the frequency and repetition of promotions, the use of media characters, and the nutrition of the foods and beverages featured in their promotions.

It was hypothesized that:

- (1a) The Quebec English subjects would be exposed to significantly more food and beverage promotions than Quebec French subjects during their preferred viewing given that they would be more likely to be watching English language television broadcast from outside of Quebec where the *Consumer Protection Act* does not apply;
- (1b) Food products that are frequently aimed at children including candy, breakfast cereals, and snack foods would predominate in the English Ontario and English Quebec preferred television viewing given that the *Consumer Protection Act* bans the advertisement of child-directed products in Quebec;
- (2) The food and beverage products featured in advertisements during the French Quebec preferred television viewing would be lower in sugar and healthier overall compared to the Ontario English, and Quebec English given that the *Consumer Protection Act* bans the advertising of child directed products in Quebec;
- (3) As a group, the corporations participating in the CAI would be advertising less frequently, using media characters less regularly and feature foods and beverages with a superior nutritional profile compared to the foods and beverages featured in the non-CAI promotions.

1.2 Contributions to the Field of Population Health

1.2.1 Definition of Population Health

According to Kindig and Stoddart population health is “the health outcomes of a group of individuals, including the distribution of such outcomes within the group” (p. 381) (5). A population health approach recognizes that health is influenced by a range of broad determinants that interact at the societal, community, family and individual levels including personal health practices, income, social support, education, genetics, working conditions, the physical environment, healthy child development and health services (6). The primary goals of the population health approach are to improve the health of a population and to decrease health inequities that exist between population groups through policy and program development. To achieve these goals, a population health approach stresses upstream investments that focus on economic, political and environmental determinants rather than individually-based downstream determinants (7). Here, it is frequently held that national level policy making is the most effective means of increasing the range of choices available to individuals and of having an impact on the health of the entire population (7). Lastly, a population health approach is evidenced based, applies multiple strategies in order to impact on the determinants of health and involves the collaboration of multiple sectors in order to increase accountability for health outcomes (8).

1.2.2 Childhood Obesity

Childhood obesity is a population health issue in Canada and in many other countries as childhood overweight/obesity rates have increased significantly over the past 25 years. A comparison of data from 34 countries has revealed that overweight/obesity rates are particularly alarming in North America, the U.K. and in South East Asia (9). Within Canada, significant spikes in overweight/obesity levels have recently been described. Between 1978/1979 and 2004, overweight/obesity was stable for 2 to 5 year olds, however, prevalence rates increased from 13% to 26% in children ages 6 to 11, and increased from 14% to 29% in 12 to 17 year olds (10). Currently, 26% of Canadian children aged 2 to 17 meet the criteria for overweight or obesity (11). These data are particularly worrisome given the extensive co-morbid complications including cardiovascular, respiratory, endocrine, gynecological, metabolic, orthopedic and psychosocial difficulties which can accompany childhood obesity (12). There is also evidence that 60-85% of overweight children will likely suffer from overweight into adulthood and that children who suffer from overweight at a young age are more severely obese as adults (13). Economically, obesity is estimated to cost Canadians \$4.3 Billion annually and represents up to 7.5% of each province's health care budget (14). These costs are stressing provincial health care systems that are already overburdened. In the United States, it is estimated that 9.1% of the total U.S. healthcare expenditures are related to overweight or obesity totaling \$92.6 billion in 2002 dollars (15).

Current research also demonstrates inequalities in the population prevalence of childhood obesity, in that childhood obesity disproportionately affects some sub groups of Canadian children more than others. In particular, results from the 2004 Canadian Community Health Survey (CCHS) indicate that childhood overweight/obesity is significantly more prevalent in off-

reserve Aboriginal children (41%), children in mid- income households (28%), and children in households where the highest level of education within the household is secondary graduation or less (31%) (10) Other data have highlighted that low income children from urban, multi-ethnic communities are particularly at risk (16). Regional differences are also prevalent within Canada with the highest child overweight/obesity rates found in Newfoundland and Labrador (36%), New Brunswick (34%), Nova Scotia (32%) and Manitoba (31%) and the lowest found in Quebec (23%) and Alberta (22%) (17). There does not appear to be any published data on whether differences in overweight/obesity exist between English and French speaking children in Canada, however, some research has pointed to differences in child obesity across metropolitan centres in Canada with different linguistic profiles. For instance, the rate of obesity in Gatineau, Quebec is significantly higher than in Ottawa, Ontario (18).

1.2.3 Children's Food Intake

One of the factors which causes childhood overweight/obesity is poor food intake. Currently, the food intake of Canadian children frequently does not meet current government recommended nutritional guidelines. For instance, the population based CCHS Cycle 2.2 Nutrition (2004) indicates that 71% of 4 to 8 year olds, and 62% of male and 68% of female 9 to 13 year olds do not eat the minimum recommended five servings of vegetables and fruit on a daily basis (19). Also, 37% of children aged 4 to 9, and 61% of male and 83% of female 10 to 16 year olds do not meet the daily recommended two servings of milk and alternatives(19). In addition, while Canada's Food Guide recommends moderate consumption of the "other foods" category (i.e. foods not from one of the four recommended food groups of grain products, milk and alternatives, meat and alternatives, and vegetables and fruit), 18% of calories consumed by 4 to 18 year old children comes from the "other foods" category(19). The foods and drinks

accounting for most calories from “other foods” include soft drinks, fruit drinks, chocolate bars and potato chips among others (19). This survey also reveals that just over 25% of calories for children ages 4 through 13 are derived from between meal consumption and that 25% of children aged 4 to 18 ate some fast food in the 24 hour food recall period (19). The data from the CCHS Cycle 2.2 Nutrition (2004) therefore reveal that a significant proportion of Canadian children are not meeting government established nutritional guidelines.

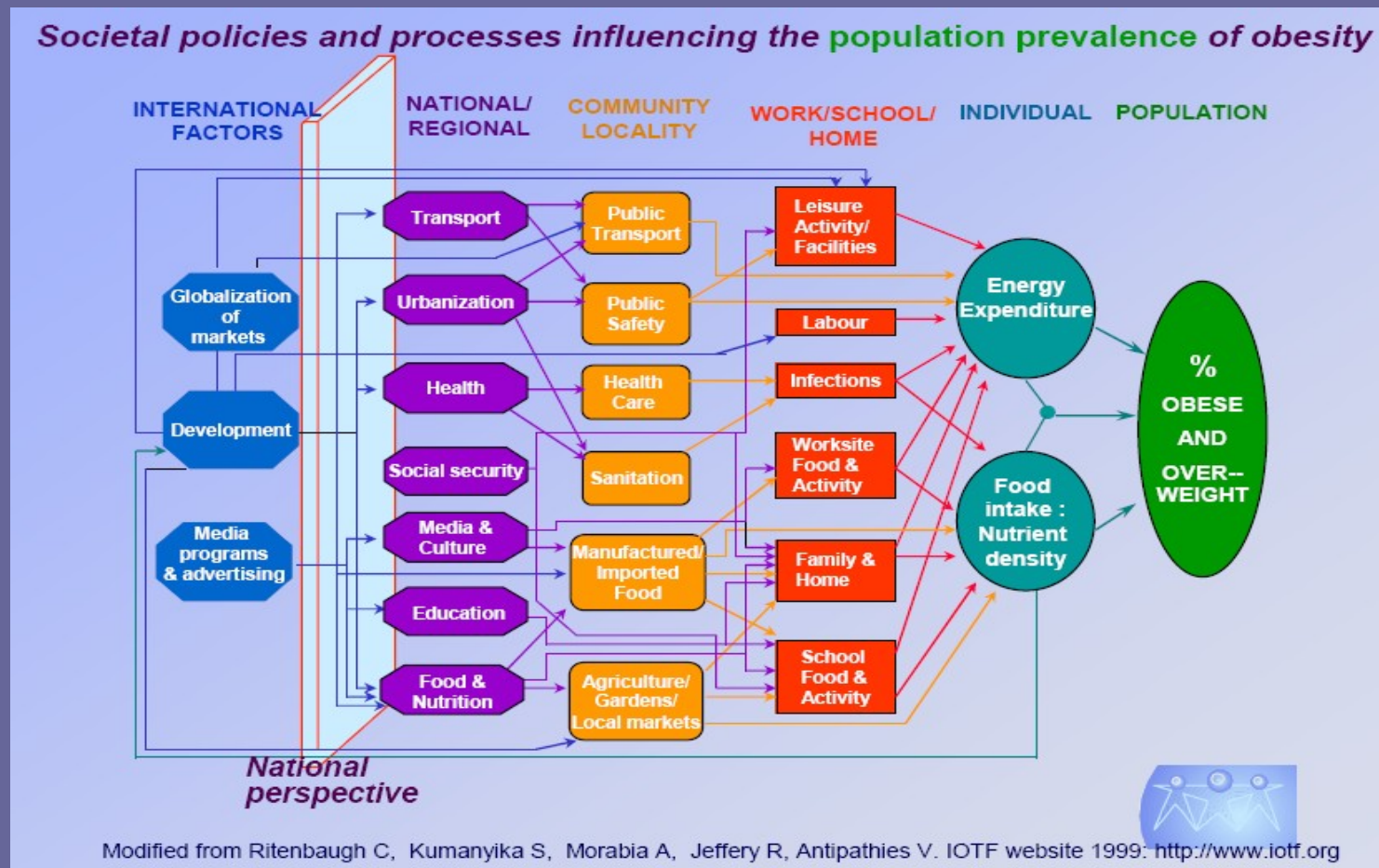
Regional differences in food intake have also been recently observed in Canada. For instance, the CCHS 2.2 Nutrition (2004) has shown significant regional differences in the consumption of vegetables and fruit across Canada. More precisely, vegetable and fruit consumption is poorest in the Atlantic provinces and the Prairies and best in Quebec for 4 to 18 year old children (19). There is some indication that high income Canadian children ages 4 to 18 year olds consume more fat than upper middle income Canadian children (19). High income children are however significantly more likely to meet the recommended minimum number of servings of milk and alternatives than lower middle, middle and upper middle income children. Also, they consume a greater percentage of their calories from protein than low, lower middle, middle and upper middle income children. Upper and lower middle income Canadian children take in a greater percentage of calories from carbohydrates than high income Canadian children. Lastly, low, low-middle and middle income Canadian children are significantly less likely to eat fast food on any given day than high income Canadian children. However, consumption of vegetables and fruit, meat and alternatives and grain products across income groups is similar (19). As per the overweight/obesity data, there does not appear to be any published data on whether differences in food intake exist between English and French speaking children in Canada.

1.2.4 A Population Health Framework that Addresses Obesity

In 1999, the International Obesity Task Force (IOTF), the advocacy arm and think tank of the International Association for the Study of Obesity, proposed a population health framework that outlines the societal policies and processes at international, national, community, work/school/home and individual levels that directly and indirectly lead to the population prevalence of obesity (see Figure 1) (20). Although more complex population health obesity frameworks have been developed since the late 1990's (for instance the Foresight framework (21)), the IOTF framework, though lacking feedback loops, clearly demonstrates the various environmental influences that lead to obesity and their interactions from the international to the individual level. Also, by using linear horizontal arrows that proceed from left to right, this framework demonstrates that change at one level has an impact on lower levels which emphasizes the importance of upstream interventions in obesity prevention strategies. This framework also provides flexibility in that the vertical and horizontal links are said to vary between different populations and societies.

One of the factors identified by the IOTF framework as influencing the population prevalence of obesity is media and advertising. In the framework, advertising and media are considered to be processes occurring mostly at the international and national levels with impact on the community level, work/school/home environments, on individual food intake and energy expenditure, and resulting in the population prevalence of obesity. Marketing to children is the focus of the current thesis.

Figure 1. Societal policies and processes influencing the population prevalence of obesity



1.2.5 The Importance of Marketing Directed at Children

In May 2010, the World Health Assembly endorsed the draft WHO recommendations that identified that there is a clear rationale for member states to reduce the marketing directed at children of foods and non-alcoholic beverages high in fats, sugar and salt as a measure to help reduce the burden of chronic disease (4). Worldwide, many countries are currently examining policy options in this area. By 2009, 44% of 59 countries examined by Hawkes and Lobstein had included marketing to children in strategy documents and 34% had developed or were in the process of developing policy with regard to the marketing of foods and beverage to children (22). Even in the United States, where freedom of speech is closely guarded, there has been movement on this issue. In September 2010, the Federal Trade Commission (FTC) subpoenaed 48 food corporations that market heavily to children in order to determine current levels of expenditures and marketing activities (23). During the Spring of 2009, by order of Congress, the FTC, Food and Drug Administration (FDA) and United States Department of Agriculture (USDA) formed the *Interagency Working Group on Food Marketed to Children* and have proposed draft nutrition standards for marketing foods and beverages to children aged 2-17 years (24). With few exceptions (i.e. the United Kingdom), the majority of western governments are currently relying on the food, beverage and restaurant industries to self-regulate in the area of food and beverage marketing directed at children (25) despite evidence that self-regulation in food and beverage marketing is reducing children's exposure to such marketing (26).

In Canada, the attention garnered by this issue has been growing. In September 2010, the federal, provincial and territorial (F/P/T) ministers of health identified the reduction of the marketing of foods and beverages high in fats, sugar and/or sodium to

children as one of three policy priorities that necessitate collective action in their report entitled *Curbing Childhood Obesity: An F/P/T Framework for Action to Promote Healthy Weights* (27). Previously, in 2009, the Public Health Agency of Canada (PHAC) identified restricting commercial advertising to children as one of four key areas that could contribute to reducing the rate of childhood obesity in Canada (28). Policy regarding marketing directed at children is on the agenda of multiple stakeholders including the Chronic Disease Prevention Alliance of Canada, the Canadian Diabetes Association, the Canadian Cancer Society, the Canadian Teacher's Federation and the Center for Science in the Public Interest among others. However research data regarding the influence of advertising self-regulation and statutory prohibition is lacking. In March 2007, the House of Commons Standing Committee on Health in their *Healthy Weights for Healthy Kids* report stated:

"The Committee shares the concerns about the potential association between food advertising to children and increased childhood overweight and obesity. It feels that a review is required on the effectiveness of the current self-regulation of such advertising as well as the prohibition in place in some jurisdictions" (29). The Committee then goes on, in its recommendation 9 to request a report of the effectiveness of self-regulation in advertising and prohibition of advertising in Quebec within a one year timeframe (29). The current research project was developed with this recommendation in mind.

1.2.6 Contributions of This Thesis to Population Health

The majority of research that examines children's exposure to food and beverage advertising and that explores the influence of advertising policies has been completed in the United States, Australia and the United Kingdom. As such, little is known about the exposure of Canadian children to obesogenic television food advertising or the influence of advertising policies in Canada. Data in these areas cannot simply be extrapolated from U.S.

sources as the advertising policy environment differs significantly in Canada. Also, research shows that rates of obesogenic advertising vary significantly from one country to another (30).

The current research contributes to population health in Canada in that it exposes significantly different food advertising environments on television within Quebec and Ontario which likely impact on children's food intake and weight. Given the association between food marketing to children, food intake and obesity, the results of the current research have the potential to influence childhood obesity prevention efforts in Canada and beyond. More precisely, by examining children's exposure to food and beverage marketing on television and identifying the influence of both the Quebec advertising ban and self regulation by industry, this research will likely help inform advertising policy development and reform in Canada and abroad. As such, this research has the potential to influence policies that could alter children's obesogenic environments for the better. Lastly, this research contributes to population health in that it examines whether various language groups are exposed to different television advertising environments. For instance, Anglophone Canadians ages 2 to 11 years may be exposed to significantly more obesogenic food advertisement given that 13% of their television viewing is on foreign stations compared to Francophone Canadian children who only spend 3% of their television time viewing foreign stations (31). These viewer patterns may in turn have an impact on overweight/obesity rates in this group.

1.3 Review of the Literature

1.3.1 Marketing to Children

Exposure to obesogenic food and beverage marketing has been identified in the literature as a determinant of both childhood obesity and poor food intake. To be clear, marketing is a broad concept that refers to all the methods of persuasion related to the “4 p’s of marketing”: product (i.e. its features, packaging), price, place (i.e. where its distributed) and promotion (i.e. advertising) of the product (32). The WHO defines marketing as:

“...any form of commercial communication or message that is designed to, or has the effect of, increasing the recognition, appeal and/or consumption of particular products and services. It comprises anything that acts to advertise or otherwise promote a product or service.”(4)

Marketing, therefore, encompasses a whole range of activities designed to promote products. Advertising, on the other hand, is a narrower concept. As described by Kotler and Armstrong, advertising is a sub-set of marketing but its most visible form (1). A television commercial or a billboard is an example of advertising whereas marketing includes such diverse activities as product placements in movies, sports sponsorship and the pricing of items.

Marketers target children for three reasons: children today have significant buying power, they have tremendous influence over family purchases, and as a means of developing brand loyalty that will span their lifetime. In Canada, it is currently estimated that children ages 9 through 14 years spend \$2.9 billion annually on food, entertainment and clothing purchases, and that they influence \$20 billion annually of family purchases (33). This influence, often referred to as “kidfluence” or “pester power”, extends into many product categories from sports equipment to family trips to food products, including the

choice of fast food restaurants, breakfast cereals and snack foods among others. Data comparing kidfluence between 2002 and 2007 has shown that both tweens and parents perceive that children's influence on purchases has increased (33). It is important to note that kidfluence does not begin at age 9. As described by Story and French, data has shown that children's first requests are made at around 2 years of age (34).

1.3.2 How and Where Children Are Targeted By Marketing

From when they are toddlers, children are treated as consumers and marketed to aggressively from multiple media sources including broadcast, digital and cable television, over the Internet, radio, on billboards and in magazines. Children are also targeted by marketers in various settings including their homes, day care centers, schools, grocery stores, and theatres. Methods include traditional advertisements, advergames on the Internet, product placements in movies and in video games and subsequent tie-ins with food products and fast food chains, logos on vending machines, corporate sponsored educational materials, toys and books with brand logos and contests (34;35). Television remains the dominant media in which children are exposed to food and beverage marketing. Research conducted by the Federal Trade Commission (FTC) in the United States, revealed that for the 44 largest food/beverage/restaurant corporations in the United States that target children, 53% of their total child/adolescent marketing expenditures was directed to traditional measured media including television, radio and print advertising (36). Other traditional promotions (product placement, movie theatre and video game advertising, cross-promotion license fees among other) accounted for 15% of their expenditures, in-store packaging and labeling accounted for 12%, in-school advertising accounted for 11%,

new media (Internet, word-of-mouth¹, viral marketing²) accounted for 5%, and premiums accounted for 4% (36).

1.3.3 The Amount Spent on Marketing Food and Beverages to Children

While comparable data are not publically available in Canada, in 2003 in the United States, it was reported by Neilson Monitor Plus that \$1.75 billion was spent on food advertisements directed at children solely on national cable television (32). When other media venues (such as the Internet) and settings (such as schools and grocery stores) are considered, it is currently estimated that more than \$10 billion per year is spent on marketing food, drinks and restaurants to children in the United States (37). Rather than estimate expenditures on marketing directed at children, in 2007 the Federal Trade Commission in the United States issued compulsory process orders to 44 companies including beverage manufacturers and bottlers, packaged food manufacturers, dairy marketers, fruit and vegetable growers and “quick serve restaurants” (36). Corporations were selected based on the fact that they were top advertisers on television programs where 30% of the audience was between the ages of 2 and 17 years and because they accounted for between 60 and 90% of U.S. food sales in the selected food categories. This compulsory order required corporations to declare their 2006 expenditures in 20 categories of marketing-type activities directed at children, teens and “all audiences.” In total, 1.6 billion was spent on these activities by the 44 corporations. Approximately 36% of this marketing was directed to children exclusively, while 44% was directed to teens exclusively. The

¹ Word-of-mouth marketing typically involves the recruitment of a group of consumers whose job it is to share promotional messages with their peers regarding products and brands (36).

² Viral marketing includes the use of “e-cards” and “send-to a friend” messages with branded promotions found on company websites (36).

remainder (20%) was directed at both children and teens. Child or adolescent directed marketing accounted for 17% of companies' total marketing expenditures.

1.3.4 The Amount and Quality of Foods and Beverages Marketed to Children

The vast majority of studies that have examined food and beverage marketing to children have examined marketing on television although a few have examined marketing on the Internet (38-41), in schools (42;43), and in retail establishments (44;45). Most television studies have detailed the frequency of food and beverage advertising to children in countries such as the United States (46-50), the United Kingdom (51), Australia (52), and New Zealand (53). A smaller subset of these studies have detailed the nutritional quality of the foods and beverages featured in these advertisements (54-57). Generally, the conclusion that one can draw from this body of literature is that food and beverage marketing to children on television is extensive and the vast majority of the foods advertised are high in fats, sugar and salt and do not represent healthy food choices. A recent comprehensive analysis from the United States has shown that 2 to 7 year olds view over 29 hours of television food advertising per year, 8 to 12 year old children view just under 51 hours, and 13 to 17 year olds view over 41 hours of television food advertising per year (49). This report also details that the food product categories most frequently advertised to children ages 8 to 12 in order of importance include candy and snacks, fast food, cereal, and dine-in and delivery restaurants.

The recent review conducted by the FTC in the United States revealed that for children and teens, the highest expenditures were on marketing carbonated beverages (\$492 million³), followed by restaurant foods, breakfast cereals, juices, snack foods and candy (36). The least amount of money was spent marketing fruits and vegetables to this age

³ All figures in U.S. dollars.

group (\$11 million). For the youngest age group (ages 2 to under 12), the highest marketing expenditures were for breakfast foods (\$229 million), restaurant foods (\$161 million) and snack food (\$113 million). The FTC also reported that, with the exception of the fruits and vegetables food category, carbonated beverages, and juices/non-carbonated beverages, the majority of marketing expenditures for the remaining food categories (including restaurant foods, breakfast cereals, snack foods, candy/frozen desserts, prepared food and meals, baked goods, and dairy products) was spent in traditionally measured media (television, radio and print advertising) (36).

From a nutrition standpoint, the foods most frequently advertised to children on television have consistently been shown to be poor in quality and contrary to principles of healthy eating. Powell et al. recently concluded that 98% of food advertisements viewed by children and youth on television in the United States were high in fat, sugar or sodium and that 98% of advertised cereals were high in sugar (54). Recently, the Cancer Council of New South Wales (Australia) spearheaded a content analysis of television programming in 11 countries including Australia, Brazil, Canada (Alberta and Ontario), China, Germany, Greece, Italy, Spain, Sweden, the United Kingdom (Liverpool and Teesside) and the United States (58). The three most popular children's channels in each country were taped between October 2007 and March 2008 for a total of 192 hours of programming per country. Food advertising ranged from 11 to 29% of all television advertising in the various countries. Greece had the highest rate of food and beverage advertising at 9 food ads per hour per channel while Brazil had the lowest rate at 2 food ads per hour per channel. Their results show a high frequency (67%) of "non-core/unhealthy food and beverage" advertising across countries. The most frequently advertised food products were fast food meals (12%) followed by confectionary and chocolate (12%), and low fat dairy products (9%).

Children's shows were shown to have the highest percentage of non-core/unhealthy foods (80%) when compared to other programming types such as comedy, sports, reality and movies aired on television.

1.3.5 The Relationship Between Food Advertising, Food Intake and Obesity

Food and beverage marketing directed at children is a significant population health issue in Canada, as well as in other countries, given that it has been repeatedly linked with childhood obesity. In fact, various international organizations have concluded that commercial food advertising directed at children most probably contributes to an environment which promotes the development of childhood obesity (32). This relationship between commercial food and beverage marketing and childhood obesity is particularly salient given the high rates of childhood obesity in Canada today. Three recent systematic reviews of the literature have been conducted on this topic by the American-based Institute of Medicine (IOM) (1), Hastings et al. (2), and Livingstone (3) and their conclusions were similar. All three reviews concluded that food advertising aimed at children directly affects children's food preferences. The IOM also stated that there is strong evidence that advertising leads children to prefer foods and beverages which are high in calories and low in nutritional value. Hastings (2) and Livingstone (3) concluded that there is moderate evidence to support the premise that food advertising influences children's consumption patterns while the IOM stated that the evidence was strong that food advertising affects short-term food intake patterns(1). Livingstone also concluded that there is likely an indirect effect of food advertising on children's food intake and that there is sufficient empirical evidence to support the premise that there is a modest direct effect between television advertising and children's food choices (59). Strong evidence was found to support the association between food purchase requests and food advertising (1;2). In

addition, it has been shown that the relationship between children's food choices and food advertising are not due to chance, that they are independent of other factors that influence diet such as parental eating habits, and that these effects occur both at the food category and food brand level (60).

The Committee on Food Marketing and the Diets of Children and Youth of the National Academy of Sciences also concluded that there was strong evidence that food and beverage marketing is associated with obesity in children 2 to 18 years and that it is a "likely contributor" to unhealthy food intake among children (1). Hastings et al. for their part concluded that there is a probable direct link between exposure to junk food advertising and weight gain in children (2).

Recently, Zimmerman and Bell examined various causal pathways linking television viewing (including DVD watching) and childhood obesity (61). After controlling for many variables including physical activity, eating while watching television, and mother's BMI, the authors concluded that only commercial television viewing (i.e. that infused with advertisements) was associated with increased BMI in children 0 to 13 years "...imply[ing] that it is the viewing of television advertisements for foods of low nutritional quality that leads to obesity, not television watching per se." (p.336) (61).

1.4 The Regulatory Context in Canada

Currently in Canada, there are two primary policies regarding marketing directed at children. In all provinces and territories with the exception of Quebec, advertising to children is mostly self-regulated by industry although the Canadian Radio-television Telecommunications Commission (CRTC) maintains a role with regard to broadcast advertising. The CRTC defines children's advertising as "any paid commercial message

carried during children's programming" and "any commercial message that's directed to children (defined as those under 12 years of age), whether it's during children's programming or not" (62). As a condition of licensure, the CRTC specifies that broadcasters must adhere to the *Broadcast Code for Advertising to Children* (63) everywhere in Canada except Quebec where advertising to children under 13 is prohibited.

1.4.1 *The Broadcast Code for Advertising to Children*

The Broadcast Code for Advertising to Children (see Appendix A) is jointly published by The Canadian Association of Broadcasters and by Advertising Standards Canada (ASC)⁴ who also administers this *Code* (63). This *Code* which is endorsed by the CRTC, restricts advertising directed at children under the age of 12 from using subliminal techniques and direct urging of children to buy a given product. It limits advertising to 4 minutes of half hour shows and indicates that advertisements aired during the school day morning period should be aimed at families or adults, and not preschoolers. It stipulates that all broadcast advertising of food products be pre-cleared for broadcast by the Children's Clearance Committee (65). This Committee, which is chaired by ASC and composed of industry and public representatives, reviews each broadcast message intended for children before it is aired and requests its amendment or withdrawal if the *Code* is violated. Upon the request of advertisers, food advertisements can also be pre-cleared by ASC's Clearance Division to ensure compliance with the *Food and Drugs Act* and the Canadian Food Inspection Agency's *Guide to Food Labeling and Advertising*.

⁴ ASC is a national, not-for-profit, independent self-regulatory body that was founded by the advertising industry in 1957. It currently boasts 160 industry members. Its responsibilities include administering *The Broadcast Code for Advertising to Children* and the *Canadian Code of Advertising Standards*, administering a complaints process, and conducting advertising preclearance (64).

ASC also publishes Interpretation Guidelines (66) (see Appendix B) to help facilitate the application of *The Broadcast Code for Advertising to Children*. Interpretation Guideline #2 specifically relates to advertising to children and sub-section 2.2 outlines guidelines on factual presentation, avoiding undue pressure, and issues relating to safety among others. With regard to food advertising, these guidelines specify that foods must be placed within the context of a balanced diet, that the amount of food depicted must depict a normal serving size and that snack foods cannot be shown as meal replacements. Lastly, foods recommended by *Canada's Food Guide to Healthy Eating*, such as vegetables and fruit, must not be discouraged (66).

1.4.2 *The Canadian Children's Food and Beverage Advertising Initiative*

Within this self-regulatory system, 16 of Canada's largest food and beverage corporations launched *The Canadian Children's Food and Beverage Advertising Initiative* (CAI) in April 2007 in order to help promote children's healthy eating and lifestyles (67). (See Appendix C for the *Canadian Children's Food and Beverage Advertising Initiative* Reference Document.) This initiative was fully implemented by December 2008. Its membership stands currently at 19 corporations however, at the time of our data collection (March 2009), 17 large food and beverage manufacturers were participating as shown in Table 1.1. While Burger King Restaurants of Canada Inc., Campbell Company of Canada, General Mills Canada Corporation, Kellogg Canada Inc., Kraft Canada Inc., McDonald's Restaurants of Canada Ltd., Nestle Canada Inc., Parmalat Canada Inc., and Weston Bakeries Limited pledged to devote 50% of their child-directed advertising on television, radio, print and the Internet to "healthier dietary choices". Cadbury Adams Canada Inc., Coca-Cola Canada, Hershey Canada Inc., Janes Family Foods Ltd., Mars Canada Inc., McCain Foods Canada, PepsiCo Canada, and Unilever Canada Inc., for their part, pledged

to not direct any advertising to children under age 12. The CAI corporations also pledged to reduce their use of third party licensed characters, and eliminate product placement and advertising in elementary schools. Each corporation independently developed its own nutrition criteria and definitions of “advertising directed primarily to children under 12 years of age” (which can be accessed at www.adstandards.com/en/ChildrensInitiative/participantCommitments.html) (67). ASC is charged with auditing corporations on a yearly basis to determine if commitments are being met and to publish yearly compliance reports.

Table 1.1 Corporations participating in the CAI in March 2009

Participating Corporations
Burger King Restaurants of Canada Inc. Cadbury Adams Canada Inc. Campbell Company of Canada Coca-Cola Canada General Mills Canada Corporation Hershey Canada Inc. Janes Family Foods Ltd. Kellogg Canada Inc. Kraft Canada Inc. Mars Canada Inc. McCain Foods Canada McDonald’s Restaurants of Canada Ltd. Nestle Canada Inc. Parmalat Canada Inc. PepsiCo Canada Unilever Canada Inc. Weston Bakeries Limited

To date, two compliance reports have been published by ASC and while some minor infractions have been noted, for the most part compliance has been satisfactory according to ASC (67;68). The CAI however, has been criticized by public health advocates for child viewership thresholds that are too high (69), and for nutritional

standards that are poor (69;70). Limiting the use of licensed characters is viewed as insufficient in a marketing environment where the use of company created mascots is rampant (69). Criticisms have also been advanced that a self regulatory system that comprises a patchwork of independent commitments will not result in any measurable changes in the health of Canadian children (71).

1.4.3 Other Advertising Policies in Canada

The children's advertising policy environment in Canada (outside of Quebec) is further complicated by policies that impact the government affiliated stations such as the CBC, by station specific policies, and by the proliferation of American based television networks that are broadcast in Canada. The Canadian Broadcast Corporation (CBC) (including Radio Canada) is prevented from directing advertising at children under 12 years of age as a condition for broadcast license renewal (72). TV Ontario does not permit on-air-recognition of sponsors or product placement during children's programming (73). The Family Channel, which is categorized as a "pay television" by the CRTC is not permitted to advertise as per all pay television stations (74). The proliferation of American based television networks which are broadcast in Canada through cable and satellite providers also complicates the Canadian advertising environment as Canadian children may be viewing American advertisements on these stations. Such advertising does not fall under the jurisdiction of the ASC and its regulations. However, when Canadians view American television programs that are broadcast simultaneously on U.S. and Canadian networks, Canadian advertisements are often substituted for the American advertisements in a process called signal substitution (75). Under this common scenario, ASC's policies do apply.

1.5 The Regulatory Context in Quebec

In Quebec, the *Consumer Protection Act* (1978 sections 248 and 249; see Appendix D) bans all commercial advertising directed at children under thirteen years of age where children consist of at least 15% of the total audience (76). This legislation applies to commercial advertising originating within Quebec and was upheld by the Supreme Court of Canada in 1989 in *Irwin Toy v. Quebec (A.G., [1989] 1 S.C.R. 927)* (77). The *Consumer Protection Act's* Application Guide (see Appendix E) specifies that products exclusively designed for children cannot be advertised when children make up 15% of the audience (78). A good example of such a product would be a McDonald's Happy Meal. Products that are not specifically intended for children (i.e products aimed at teens, adults or families) can be advertised when children consist of 15% of the audience, if the advertisement is designed not to elicit the interest of children under 13 years. The Application Guide goes on to define that a child's interest is said to be elicited when advertisements use certain themes such as magic, suspense, fantasy, mystery, and adventure, use characters that children identify with including other children, animals, heroes, or use animation, child-voices, music, colours or sounds that appeal to children (78). An example of a product that could be advertised during children's viewing in Quebec is dish soap, so long as it is presented in a way to not elicit a child's interest. When child viewership falls below the 15% threshold, advertising of all products is permitted however, the advertisement must always be designed to not evoke the interest of the child (78). The 15% viewership threshold is based on Bureau of Broadcast Measurement (BBM) data for 2-11 year olds in the Montreal region. The Application Guide details that the 15% percentage should be based on BBM viewership estimates from the preceding television season. In the case of

new shows or shows being aired at new times, the broadcaster needs to consider the nature of the program, the time that the program is being aired and, the viewership of other programs aired at the same time while taking the highest child viewership times into account. These times, based on BBM 1979-1980 data and published in the Application Guide, include Monday to Friday 7-8:30 am, 9-10:30 am, 11-12:30 pm and 4-6 pm. Saturday times include 7-1 pm, 2-4:30 pm and 5-6 pm. Sunday times include 7-10 am, 5-5:30 pm, and 6:30-7 pm (78).

The *Consumer Protection Act* is enforced by the “Office de la protection du consommateur” (OPC) and based on consumer complaint. There is no systematic monitoring of advertising directed at children. While Quebec is often viewed as possessing one of the most stringent advertising regulations with regards to children in the world, groups such as the Quebec Coalition on Weight-Related Problems has described the Quebec advertising ban as insufficient and have stated that children in Quebec remain clear targets for the food and beverage advertising industry (79). The Quebec “Ministère de la santé et des services sociaux” also seems aware of the shortcomings of this legislation. In a government plan published in 2006, it recommends improving the enforcement and monitoring of the *Consumer Protection Act* and informing the public regarding the enforcement and monitoring of this legislation (80).

1.6 Advertising to Children in Canada on Television

Canadian children are watching a significant amount of television. Based on data collected in 2004, Statistics Canada reports that children between the ages of 2 to 11 spend 15.5 hours watching television per week (31). In Ontario, children ages 2-11 watch 14.8 hours of television per week while Quebec Anglophone children watch 15.4 hours per

week and Quebec Francophone children watch slightly more at 16.3 hours per week. In terms of what children are watching on television, in 2004, Anglophone Canadians aged 2 years and over spent 13% of their television viewing time watching Canadian programs and 87 % watching foreign programs whereas Francophone Canadians of the same age spent 97% of their viewing time watching Canadian programs and 3% of their viewing time watching foreign programs (81).

Very little research has examined the food and beverage advertising content of television in Canada. Adams et al. compared food advertisements in Canada on 5 generalist stations and one specialty channel in 1991 to 4 stations in 2006 (82). Two other studies have specifically examined children's exposure to food and beverage advertising in Canada: Adams et al. (83) examined programs of particular appeal to children in 2006 and Kelly et al. (30) examined children's exposure to food and beverage advertising in 11 countries including Canada where two separate studies were conducted in Alberta and Ontario on three children's specialty channels. All three studies are summarized in Table 1.2 below. The first conclusion that can be drawn about this literature is that children in Canada are being exposed to high levels of food and beverage advertising on English-language television stations. Overall, this research indicates that between 15-21% of advertising viewed on television by children in Canada is for foods and beverages, and that children's exposure to this advertising varies between 3 and 7 food and beverage advertisements per hour. This evidence also seems to indicate that rates of food and beverage advertising seem to decline slightly during children's preferred viewing. Lastly, this research indicates that the nutritional quality of the majority of the foods/beverages advertised is poor. Adams et al. also conclude that the type of food, nutrient content and percentage of "unhealthy foods" in food/beverage advertisements aired during children's

preferred times compared to times when adults constitute the majority of viewership are similar (83).

The most recent of these studies (i.e. Kelly et al. (30)), describes that Canada (Alberta) had the third highest rate of food advertising of the 11 countries examined. On weekdays, this rate was 5 food ads per hour per channel whereas on weekends, this rate increased to 8 food ads per hour per channel. On weekdays 76% of foods advertised were non-core while on weekends 87% were non-core. Fast food (26%) was most frequently advertised on weekdays whereas unhealthy breakfast foods (23%) were the most frequently advertised on weekends. The television programs with the highest proportion of non-core food advertisements were reality tv shows (100% non-core), comedy (94% non-core), children's shows (92% non-core), movies (86% non-core) and game shows (71% non-core). During children's peak viewing times, a total of 4% of all food advertisements in Alberta had premium offers and the majority of these were linked with confectionary (69%). Lastly, 33% of food advertisements used promotional characters particularly unhealthy breakfast cereals (37%), and snack foods (22%) and 64% of these appearances occurred during children's peak viewing.

The Kelly et al.(30) study in Ontario revealed that comedy programs had the highest rates of non-core food and beverage advertising (81%) followed by children's shows (80%), reality (75%), and drama (70%). As was the case in Alberta, food and beverage advertisements were more common on weekends (5 food ads per hour per channel) than on weekdays (3 food ads per hour per channel) in Ontario. The three top food categories advertised on weekends and weekdays was the same: fast food, unhealthy breakfast cereals and snack foods. There were no premium offers in food and beverage advertisements in Ontario, however, promotional characters appeared in 36% of food and beverage ads and

were associated with 52% of unhealthy breakfast cereals advertisements, 20% of snack food advertisements, 17% of spreads/sauces ads and 11% of fast food advertisements.

It is important to note that all the data that has been collected in Canada regarding the frequency and nutritional quality of foods and beverages advertised on television to children was collected before the *Children's Food and Beverage Advertising Initiative* was fully implemented. No independently collected information currently exists on the influence of this self-regulatory policy.

1.7 Content Analyses of Children's Viewing in Quebec

Two studies to our knowledge have examined the food and beverage advertising environment in Quebec: Lebel et al. (84) and Laperrière (85). Both are summarized in Table 1.3. The first conclusion that can be drawn from this scant literature is that children in Quebec are viewing significant amounts of food and beverage advertising on television, despite the existence of the *Consumer Protection Act*. Food and beverage advertisements on television seem to be occurring at a rate of 4 to 4.7 advertisements per hour of programming per station. Secondly, the children's specialty channels broadcast in Quebec boast a higher frequency of food and beverage advertisements than the generalist stations. More precisely, Lebel et al. reports that Télétoon had the highest percentage of food advertisements (36%) compared to the other stations examined (84). Laperrière concluded similarly that child specialty channels (Télétoon, VRAK, Musique Plus and YTV) were more likely to advertise food and beverages than the generalist stations (SRC, TVA, CTV, CBC) (85). Télétoon was responsible for airing 60% of the food advertisements aired on stations viewed by an audience made of at least 15% of children, while VRAK was responsible for 15%, YTV for 11% and Musique Plus for 7%. Finally, the existing

literature indicates that the nutritional quality of the majority of the food and beverage products advertised on television in Quebec is poor and may be worse on children's specialty channels given 83% of the food and beverage advertisements viewed by children ages 2 to 10 years were classified as unhealthy by Laperrière. Lebel et al. also point to this trend when they conclude that, sugary and salty snacks represented 41% of the food advertisements on the children's specialty channels (Musimax, Musique Plus, and Télétoon), a higher rate than seen on the generalist stations.

This literature, although sparse, makes us question whether the concept of "child directed advertising" in the *Consumer Protection Act* is sufficiently stringent and whether this *Act* requires supplementary monitoring and enforcement procedures. This literature is silent on whether English and French television in Quebec is similar with regards to food and beverage advertising.

Table 1.2 Summary of television advertising content analyses in Canada

Authors	Year of data collection	Number of hours analyzed	Stations analyzed	% of food ads	Rate of food related ads (ads/hour)	Nutritional quality of food ads	Most frequently advertised food categories
Adams et al. (82)	1991	140 hrs.	CBC CBC* CTV CFPL Much Music	28%	4.9	low fat low fiber high alcohol	-beverages (22%) -meals (16%) -grain products (11%)
	2006	112 hrs.	CBC SRC* CTV A-Channel	15%	5.1	high fat high sodium low fiber	-meals (30%) -restaurants (16%) -milk product (14%) -grain products (14%) -beverages (11%)
Adams et al. (83)	2006	n/a Analyzed advertisements in programs with particular appeal to children	CBC SRC * CTV A-Channel	n/a	n/a	60% “less healthy food”	For 2-11 year olds: -meals (33%) -restaurants (18%) -grain (11%) -beverages (11%) For 2-17 year olds: -meals (39%) -restaurants (13%) -grain (13%) -beverages (13%)

Table 1.2 Summary of television advertising content analyses in Canada (cont'd)

Authors	Year of data collection	Number of hours analyzed	Stations analyzed	% of food ads	Rate of food related ads (ads/hour)	Nutritional quality of food ads	Most frequently advertised food categories
Kelly et al.(30)	2007-2008	Alberta: 190 hrs.	CTV Teletoon YTV	21%	6.5	82% non-core	-fast food (22%) -unhealthy breakfast cereal (19%) -spreads and sauces (16%)
		Alberta: Peak children's viewing 79.5 hrs.	CTV Teletoon YTV	19%	5.0	86% non-core	-unhealthy breakfast cereals (21%) - fast food (20%) -snack food (19%)
		Ontario: 168 hrs.	Teletoon YTV Treehouse	20%	3.9	80% non-core	-unhealthy breakfast cereals (26%) - fast food (25%) -snack foods (25%)
		Ontario: Peak children's viewing 79.5 hrs.	Teletoon YTV Treehouse	18%	3.0	85% non-core	-unhealthy breakfast cereals (26%) - fast food (25%) -snack foods (25%)

*Denotes a French language television station

Table 1.3 Summary of television advertising content analyses in Quebec

Authors	Year of data collection	Number of hours analyzed	Stations analyzed	% of food ads	Rate of food ads per hour	Nutritional quality of ads	Most frequently advertised food categories
Lebel et al.(84)	March 2002	483 hrs.	SRC* Télé Quebec* TVA* TQS* Musimax* Musique Plus* Télétoon*	23%	4.7	73% not recommended by Canada's Food Guide 89% low in fiber 56% high fat 36% high sodium 33% high sugar	-meals/restaurants (38%) -sweet/fatty snacks (27%) -recommended foods (27%) -beverages (9%)
		11 popular children's shows		32%	n/a	n/a	-sugary and salty snacks (30%) - fast food (18%) -beverages (12%)
Laperrière(85)	January 2008	512 hrs.	CBC CTV YTV SRC* TVA* Télétoon* Vrak* Musique Plus*	15%	4.0	64% unhealthy	n/a
		Advertisements that children ages 2- 10 yrs viewed		15%	n/a	83% unhealthy	-restaurants (27%) -snacks (25%) -healthy foods (16%)

*Denotes a French language station

1.8 The Influence of Self Regulation in Advertising on Children's Exposure to Food/Beverage Advertising

Hawkes has noted that many governments are currently relying on industry to self-regulate with regard to marketing directed at children despite evidence that such an approach is effective at influencing child rates of obesity (26). Most of the data examining self regulation in marketing has been collected in Australia (86) and the United States(46;87;88). Given that a self regulatory program similar to the Canadian CAI exists in the United States, and given that similar corporations are participating in this initiative, it is reasonable to examine these results. Powell et al. (46) compared children's exposure to food advertisements on television in 2003 and 2007 and reported that exposure to such advertisements fell for 2 to 5 year olds by 13.7% and for 6 to 11 year olds, it fell by 3.7%. During this same period, adolescents' exposure increased by 3.7%. Powell et al. also note that, for children 2 through 17 years, beverage, cereal, snack and sweet advertisements have decreased but that fast food and full service restaurant advertising has increased. Harris et al (87) came to similar conclusions when they recently compared children's exposure to food and beverage marketing from 2002 to 2008 on television. Their results indicate that for children 2 to 11 years, their exposure to food marketing declined by 4% (from 12.9 food/beverage advertisements per day in 2002 to 12.3 in 2008). For teens ages 12-17 years, exposure increased by 9% from 2002 levels. For 2 to 11 year olds, beverage, cereal, sweet snacks and candy advertisements decreased between 2004 and 2008 but fast food, full service restaurants and prepared meals advertisements increased. For teens, decreases were seen in candy, sweet snacks and cereals and increases were found in fast food, full service restaurants and prepared meals advertisements. More recent research on fast food

advertising (again collected after the implementation of stricter self-regulatory policies) has shown that, between 2007 and 2009, children 6 to 11 years viewed 26% more McDonald's ads, 10% more Burger King ads and 59% more Subway ads on television in the United States (89). Kunkel et al. examined the nutritional quality of foods and beverages advertised to children on 7 stations over 70.5 hours in 2009, after the American *Children's Food and Beverage Advertising Initiative* was initiated (88). Results showed that 69% of advertising from companies participating in the initiative fell into the "Whoa"⁵ category, and 31% fell into the "Slow" category. Licensed character use increased from 9% of food and beverage advertisements in 2005 to 15% in 2009, and 49% of licensed characters use occurred during advertisements for foods and beverages classified in the "Whoa" category.

Overall, in the United States, marketing to children appears to have decreased slightly since the advent of more stringent self-regulatory measures, however, children remain clear targets of unhealthy food and beverage advertising. The current study will shed some light on children's exposure to food and beverage marketing under the Canadian CAI.

1.9 The Influence of Statutory Regulations on Children's Exposure to Food/Beverage Advertising

Sweden, Norway and Quebec are typically identified as having the most stringent statutory broadcast advertising regulations directed at children (91). In Sweden, *The Radio and Television Act* (1996) states that commercial advertising cannot be designed to appeal to children under 12 years of age or feature individuals or characters that star in children's

⁵ The nutritional categorization was based on the U.S. Department of Health and Human Services "Go-Slow-Whoa" food rating system. "Go" foods can be consumed "almost anytime" and are low in calories, fat and sugar. "Slow" foods should not be consumed more than a few times per week. They are higher in calories, fat and sugar. "Whoa" foods are low in nutrients, high in calories, highest in fat and sugar and should only be consumed "once in a while" (90).

programs. All commercial advertisements also cannot be broadcast before, during or after programs aimed at children under 12 years (92). Despite these limitations, Swedish children remain targets of marketing. Marketing which is broadcast from other countries and outside of Sweden's jurisdiction is viewed by children. Kelly et al. have reported that Swedish children view 6 food ads per hour per channel, that food and entertainment are the most frequently advertised products and that fast food and confectionary represent the two most heavily advertised food categories (30).

In the United Kingdom, statutory guidelines which ban the marketing of foods high in fats, sugars and salt (HFSS) on television were implemented during programming for children in April 2007 for 4 to 9 year olds, and in January 2008 for 9 to 16 year olds. By January 2009, the restrictions were also applied to children's stations. The restrictions prohibit HFSS advertising in children's programs, on dedicated children's stations and in programs that appeal to those under 16. Nutrition claims are disallowed and celebrities and licensed characters cannot be used in HFSS advertisements which are aimed at primary school aged children. HFSS foods are identified by the Nutrient Profiling Model which allocates points to foods and beverages for energy, saturated fat, total sugar and sodium and subtracts points for fruit, vegetable, nut, fiber and protein. To date little data has examined the influence of this advertisement ban however, one study compared 2005 television advertisements to 2007/2008 and found that there has been a 34% drop in HFSS child impacts for 4 to 15 year olds (93). A 63% decrease in these impacts has been described during children's air time, a 20% decrease during adult air time and a 29% decrease has been seen between the hours of 6 and 9 pm. The use of licensed and brand equity characters has also fallen but celebrity endorsements during television advertisements has increased (93). Despite these changes, the U.K. is criticized for child audience thresholds that are too

high, not limiting the use of company created mascots, and focusing exclusively on broadcast advertising (94).

The influence of marketing restrictions on children's food intake and rates of obesity has been studied theoretically by both Magnus et al. (95), and Veerman et al. (96) who engaged in mathematical modeling to evaluate the influence of marketing policy restrictions. Veerman et al. concluded that children's total food consumption would decrease by 4.5%, children's body weight would decrease by 2.1% and obesity prevalence would decrease by 2.7% for males and 2.4% for females if children 6-12 years' exposure to unhealthy food advertising on television was eliminated. Magnus et al. concluded that restricting food advertising to children ages 5 through 14 years was a cost-effective approach to reduce unhealthy weight gain at the population level and would result in cost savings. Chou et al. (97) looked specifically at the impact of banning fast food advertising on television. They concluded that a fast food advertising ban on television would lead to 18% and 14% reductions in overweight in children 3 to 11 years and adolescents 12 to 18 years respectively.

CHAPTER 2

METHODOLOGICAL OVERVIEW

2.1 Method Summary and Justification

This thesis presents the results of three interrelated studies. The first study entitled *Food Marketing on Children's Television in Two Different Advertising Policy Environments* was conducted to determine the differences in the frequency of food and beverage advertisements, and in the target audience and the use of persuasive appeals in these advertisements, during the preferred television viewing of English Ontario, French Quebec, and English Quebec children. The differences in the frequency of food and beverage contests and sponsorship announcements was also determined between these three groups. Lastly, this study examined the differences in the frequency of all food and beverage promotions (advertisements, contests and sponsorship announcements) by food category (ie. beverages, restaurants, grain products) and sub-category (i.e. fruit juice, cold cereal) during the preferred television viewing of English Ontario, French Quebec, and English Quebec children. To examine these group differences, a 90 hour content analysis consisting of the preferred television viewing of 428 English Ontario, French Quebec, and English Quebec children ages 10 to 12 years was undertaken. To determine each group's preferred viewing, subjects completed television viewing diaries for 7 days while 32 television stations were recorded simultaneously between 6 am and 12 am. Each group's preferred viewing consisted of the 60 30-minute programs with the highest viewership.

In the second study entitled *A Nutritional Comparison of Foods and Beverages Marketed to Children in Two Advertising Policy Environments* the nutritional quality of the foods and beverages featured in the promotions culled from the above 90 hour content

analysis was established and compared in order to determine the differences in the healthfulness of the foods and beverages advertised on television to Ontario English, Quebec French and Quebec English subjects during their preferred viewing. Macronutrients per 100 grams of each featured food/beverage products, macronutrients as a percentage of energy, macronutrients according to nutrient recommendations and the classification of each featured product by the U.K. Nutrient Profile Model were all computed and compared statistically. Nutrient information for all advertised food and beverage products was drawn from company websites, direct contact with the corporation, nutrient labeling on products and the Canadian Nutrient File.

In the third study entitled *Self Regulation by Industry in Food Marketing is Having Little Impact During Children's Preferred Television Viewing* the food/beverage marketing activities of CAI and non-CAI corporations during 99.5 hours of English children's preferred viewing were compared. The preferred television viewing was based on the television viewing journals of 272 10 to 12 year old English speaking children. Each food/beverage promotion was classified by corporation type (i.e. CAI or non-CAI) and comparisons were made regarding the total frequency, the frequency by food category and sub-category, the length, and repetition of promotions. Comparisons were also made between the CAI and non-CAI regarding the use of media characters, and the nutritional content of the foods and beverages featured in their promotions including macronutrients per 100 grams of food and beverages, macronutrients as a percentage of energy, and the classification of each featured product by the U.K. Nutrient Profile Model.

In 2007-2008 when this thesis was being developed, the literature examining children's exposure to obesogenic food advertisement was not based on what children are actually watching on television. Instead, the vast majority of research studies selected two

to three stations to analyze based on what was considered to be “child viewing”. Methodologically, the three studies described above were designed to address this shortcoming in the literature by (a) directly measuring what children were actually watching on television, (b) simultaneously taping multiple stations with potential appeal to children while children were completing their television viewing diaries, and (c) conducting a content analysis of the television programs the children actually viewed.

A second shortcoming in the literature this study was designed to address was how advertising on television was defined. In the majority of research studies, only actual advertisements (defined in the narrow sense) 30 seconds in length or more were counted. Based on some pre-testing that was conducted, it was concluded that such a definition neglects a significant amount of food and beverage marketing directed at children on television. A broad definition of advertising that included advertisements, contests and sponsorship announcements 5 seconds in length or more was therefore used.

The inclusion of both French and English Quebec children in this sample for the first two studies was also a strength of this design. This inclusion permitted the evaluation of whether different population groups in Quebec were receiving the same protection from the *Consumer Protection Act*.

Although each article thoroughly describes and justifies the methods used, further methodological details will be offered in the following pages. Specifically, information regarding the research sequence, supplementary details regarding subject recruitment, the data collection of demographic information and television viewing data, and television data coding will be given. Lastly, school and subject participation rates, subject demographic characteristics and television viewing patterns, methodological difficulties, and knowledge translation strategy will be provided.

2.2 Research Sequence

On October 1, 2007, Lise Dubois (as Principal Investigator) and myself (as Co-Applicant and Trainee) applied for a 3 year Operations Grant from the Canadian Institutes of Health Research (CHIR). In the spring of 2008, we received funding from CIHR in the amount of \$280,588. My thesis proposal was successfully defended on April 29, 2008 and then ethics approval was sought from the Ottawa Hospital Research Ethics Board (OHREB) in the spring of 2008 and received on July 27, 2008 (see Appendix F).

School board approval and recruitment, and school recruitment occurred from August to January 2009, and subject recruitment occurred in January and February 2009 within the schools. Data collection with the children was undertaken from February to April 2009. Subjects completed their television viewing diaries and television taping occurred from March 26 to April 1, 2009. Next, analysis of the television viewing journal was carried out in May 2009 followed by the content analysis of the television viewing which occurred from June 2009 through September 2009. Analysis and the writing up of results for *Food Marketing on Children's Television in Two Different Advertising Policy Environments* was completed between October and January 2010. The collection and input of the nutritional data, its analysis, and the writing up of results for the article entitled *A Comparison of Foods and Beverages Marketed to Children in Two Advertising Policy Environments* was completed between November and April 2010. Additional data was collected for the final article *Self Regulation by Industry in Food Marketing is Having Little Impact During Children's Preferred Television Viewing* during the spring and summer of 2010 and analyses were completed in August. The results were written up and submitted for publication in September 2011.

2.3 Supplementary Detail Regarding the Data Collection

2.3.1 Subject Recruitment

First, school boards were recruited, followed by the recruitment of schools, and then the recruitment of subjects within the schools. Applications were submitted to three school boards in Ottawa, Ontario (two English language and one French language) and three school boards in Gatineau, Quebec (two French language and one English language). Once four school boards accepted, school principals were contacted regarding their school's potential participation. In the first instance, a cover letter describing the study (see Appendix G), the consent form (see Appendix H), and the three questionnaires that children and/or their parents would be required to complete if they chose to participate in the study (see Appendices I-K) were sent to them. Follow-up telephone calls were then made to school principals. During these conversations, the research study was described and we ascertained whether school principals were interested in having their schools participate. School principals were also queried about the number of children in grades 5 and 6 in their school, the number of classes at this level, and the socio-economic mix of their school. Follow-up appointments were then set up for our first visit at the school with the children in grades 5 and 6. This was the process in all school boards except in one of the English language school boards in Ontario where school board policy dictated that the school board Research Officer contact all school principals by e-mail regarding our research study. The Research Officer then forwarded the names of interested schools.

During our first visit to the school, a 20 minute presentation regarding marketing directed at children was given to children that described the research study and their role in simple terms. Students were each given a cover letter and consent form to bring home to

their parents (see Appendices L and H). Those interested in participating in the study were asked to return the consent form signed to school. In some instances, many visits to the school were required given that students were absent during the initial presentation. Two weeks after our initial visit to the schools, consent forms were collected that had been returned to the teachers. At this time, teachers were asked to send a reminder home to parents regarding the study. In some instances, principals encouraged us to go to the grade 5 and 6 classrooms to remind the students to return the consent forms. Two weeks later, the remaining consent forms were picked up.

2.3.2 Demographic Information

Questionnaires regarding demographic information were distributed during a second visit to each school. During this visit, the requirements of study participation were reviewed with the participating students and two questionnaires (the *Questionnaire for Child* (Appendix J), the *Questionnaire for Parent* (Appendix I) were handed out and explained. Instructions were given to students to complete these questionnaires at home and to return them in the postage paid and pre-addressed envelope. The questionnaires were also accompanied by an explanatory letter to parents with similar instructions (see Appendix M). Lastly, subjects were asked to give oral assent regarding their participation in the study during this meeting.

The *Questionnaire for Child* was based on the *Questionnaire for Children: Nutrition*, a validated questionnaire from the Health and Social Survey of Quebec Children and Youth 1999 (98). Children were asked to complete this questionnaire at home with the help of a parent. For the purposes of this study, we were interested in the results to questions on children's age (Q1), sex (Q2) grade level (Q3), language (Q4) and usual television habits on weekdays (Q17) and on weekends (Q18). The *Questionnaire for Parent*

was based on the Questionnaire for Parents from the Health and Social Survey of Quebec Children and Youth 1999 (98). In particular, we were interested in Q7 and Q8 regarding language first learned and spoken at home and Q10 regarding parents' highest level of education. A reminder letter was sent home via classroom teachers to parents who failed to return these two questionnaires (see Appendix N).

2.3.3 Television Viewing Data Collection and Data Coding

During a third visit to schools, the *Media Diary* (also referred to as the television viewing diary; Appendix K) was fully explained. Children were instructed to complete this television viewing diary from March 26 to April 1, 2009 and detailed instructions were provided orally at school, and in a written letter to children who missed the presentation (Appendix O), and to parents (Appendix P). These questionnaires were to be returned in a postage paid and pre-addressed envelope. Reminder letters were sent home to parents, via classroom teachers, who failed to return the television viewing diary (see Appendix Q). Debriefing forms for children (Appendix R) and parents (Appendix S) were dropped at each school following the return of the television viewing diaries. These were distributed by class room teachers.

When entering data from the television viewing diaries, the *Media Diary* entries were compared to the actual television taping to ensure that the *Media Diary* entries were accurate. The following Table 2.1 describes how we handled the television viewing data.

Once all the data from the television viewing diaries was entered into the database, we were able to tabulate the 30 preferred hours of viewing for each of the three groups: Ontario English, Quebec French and Quebec English. The 30 preferred hours for each group was defined as the sixty 30-minute programs that had the highest percentage of children per group watching. Appendix T provides a list of these shows for each of the

groups. Five shows (or 2.5 hours) on stations that were not taped (Omni and Family West) were in the top 90 hours. These shows were replaced with the next most popular show on the list.

Table 2.1 The handling of the television viewing data

Subject action	Coding decision
Subject wrote the correct show name at the right time	The TV show was coded in that time slot
Subject wrote a channel number only	The TV show was coded in that time slot
Subject wrote down a show name at the incorrect time (i.e. the show was not aired at that time), however that show aired during a four hour period around the time the child selected	The show was entered at the correct time
Subject wrote down a show name that was not aired at that time or day	Coded as 888 as the child definitely made a data entry error

2.4 School and Subject Participation Rates

As indicated in Table 2.2 below, a total of 125 principals were contacted regarding potential participation. Eighteen schools accepted to participate in the research study, 11 from English Ontario schools boards, 4 from a French Quebec school board and 3 from an English Quebec school board. Regarding subject participation, on average, 33% ($n = 645$) of the 1939 students in grades 5 and 6 accepted to participate in the study. Of these 645, 66% ($n = 428$) returned completed questionnaires. Table 2.3 below shows the number of subjects by province, language and school that consented to participate and returned completed questionnaires.

Table 2.2 Number of schools that participated per school board and grade 5/6 enrollment

School board	Total no. of schools contacted	Schools that accepted	Number of children in grades 5 and 6 in these schools
Ontario- ENG A	39	8	716
Ontario - ENG B	62	3	335
Quebec - FR	18	4	627
Quebec - ENG	6	3	283
Total	125	18	1939

Table 2.3 Subjects per province/language/school that consented to participate and returned completed questionnaires

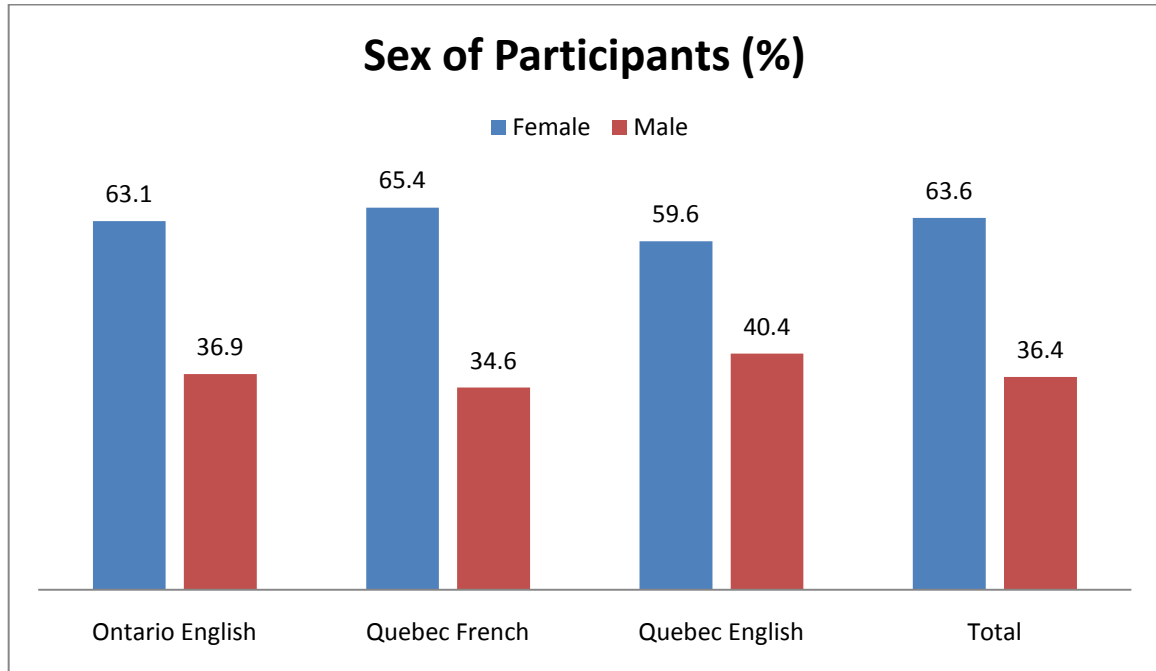
Province/language	No. of participating schools	Participants that consented No. (%)	Returned completed questionnaires No. (%)
Ontario English	11 schools	340 (52.7)	225 (52.4)
	A	13 (2)	8 (1.9)
	B	39 (6)	33 (7.7)
	C	16 (2.5)	7 (1.6)
	D	33 (5.1)	25 (5.8)
	E	12 (1.9)	10 (2.3)
	F	79 (12.2)	48 (11.2)
	G	21 (3.3)	13 (3)
	H	34 (5.3)	21 (4.9)
	I	32 (5)	18 (4.2)
	J	43 (6.7)	29 (6.8)
	K	18 (2.8)	13 (3)
Quebec French	4 schools	210 (32.6)	156 (36.4)
	L	32 (5)	25 (5.8)
	M	76 (11.8)	59 (13.8)
	N	66 (10.2)	48 (11.2)
	O	36 (5.6)	24 (5.6)
Quebec English	3 schools	95 (14.7)	47 (10.9)
	P	25 (3.9)	10 (2.3)
	Q	39 (6)	13 (3)
	R	31 (4.8)	24 (5.6)
Total	18 schools	645 (100)	428 (100) ^a

^a Percentages may not equal 100 due to rounding

2.5 Subject Demographic Characteristics and Television Viewing Patterns

Overall, more girls (64%) participated in the study than boys (36%). The sex breakdown by province and language is provided in Figure 2.1.

Figure 2.1 Sex of participants by province/language



The average age of the participants was 10.8 years and the Ontario English children ($\bar{\chi} = 10.6$, $SD = 0.7$) were statistically younger on average than the Quebec French children ($\bar{\chi} = 10.9$, $SD = 0.7$; $F = 7.6$, $p < .001$). There were no age differences between the Quebec children. Figure 2.2 provides the age of subjects by province and language.

As a whole, the sample of children had parents that were more educated than the norm in Canada. In total, 74% of the sample had a university degree while 26% has less than a university degree (see Figure 2.3). The English Quebec subjects had parents that

were less educated than the French Quebec and English Ontario groups ($\chi^2 = 43.3$, $p < .001$).

Figure 2.2 Age of participants by province/language

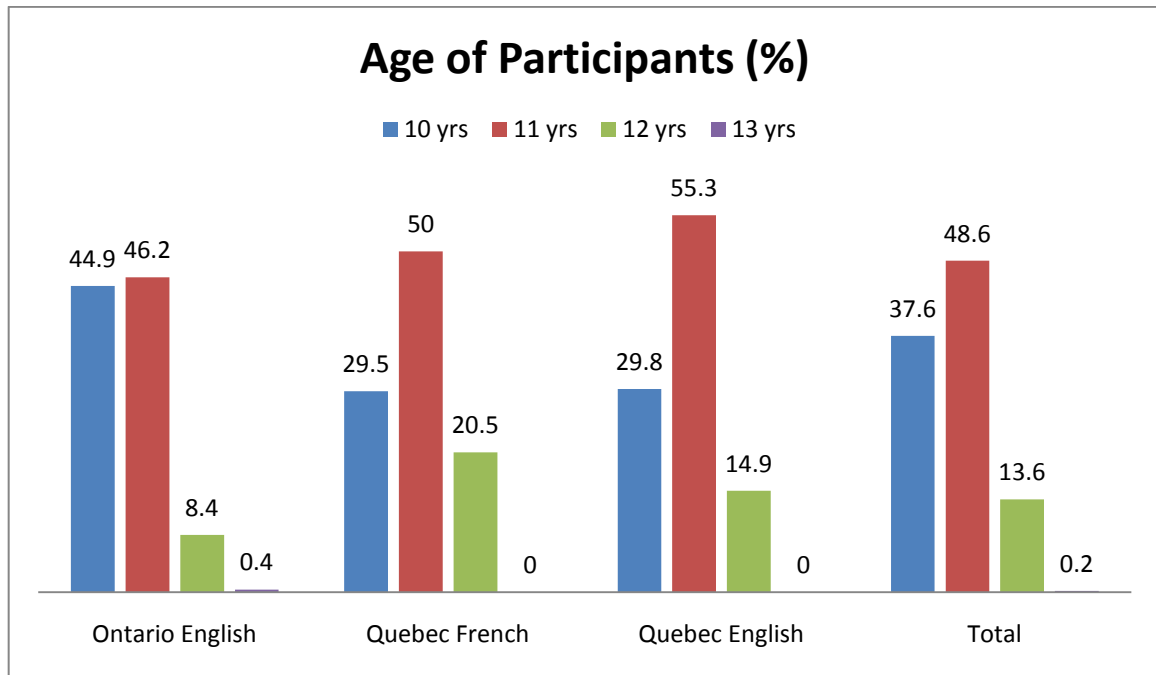
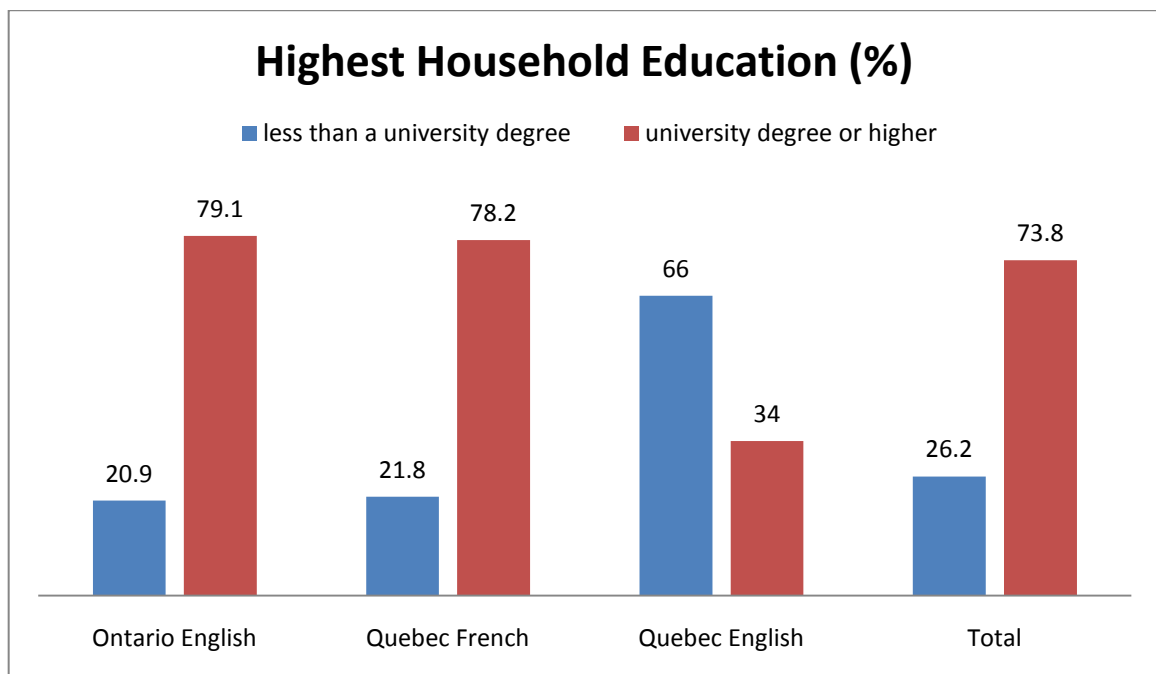
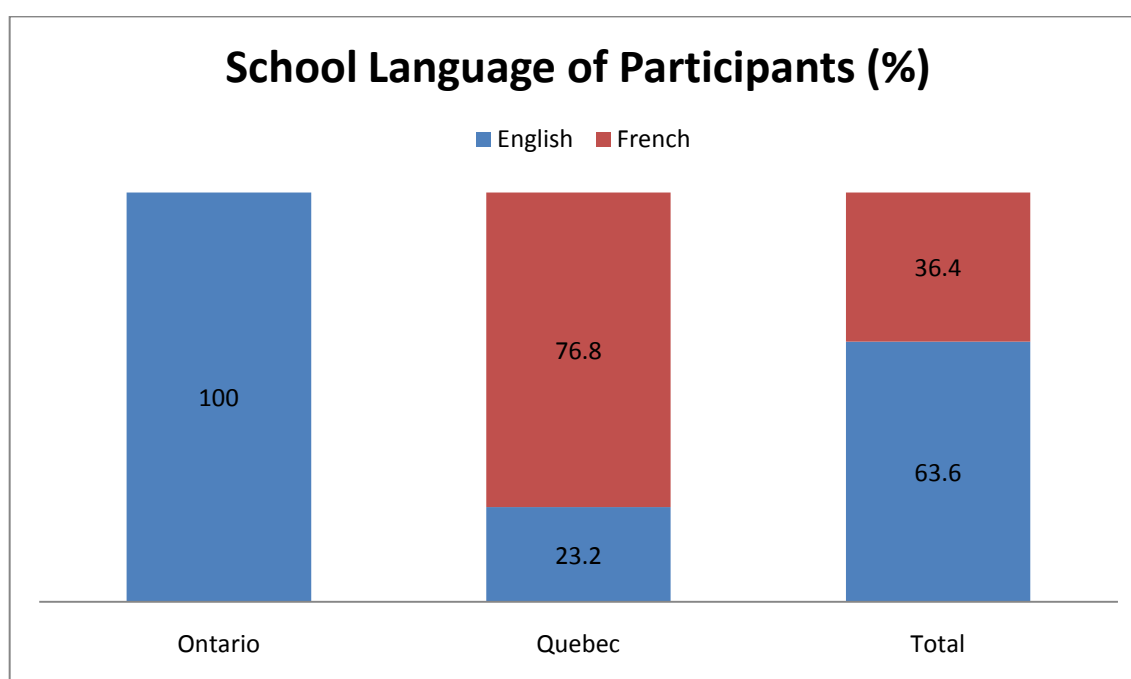


Figure 2.3 Highest household education by province/language



The school language of 64% of the total sample was English while 36% attended school in French (see Figure 2.4). Forty eight percent identified English as the language they first learned, while 36% identified French, 12% identified another language and 3% identified that they first learned a combination of English and/or French and another language. For those attending school in English in Ontario, English was identified by 77% as the first language they learned. For those attending French school in Quebec, 88% identified French as the language they first learned. For those attending English school in Quebec, 55% identified English as the first language learned.

Figure 2.4 School language of participants by province



Children's television viewing patterns according to their television viewing journals for each day of the week are presented in Figures 2.5 to 2.11. Please note that these data exclude DVD and video watching time.

Figure 2.5 Percentage of children watching television on Thursday March 26, 2009

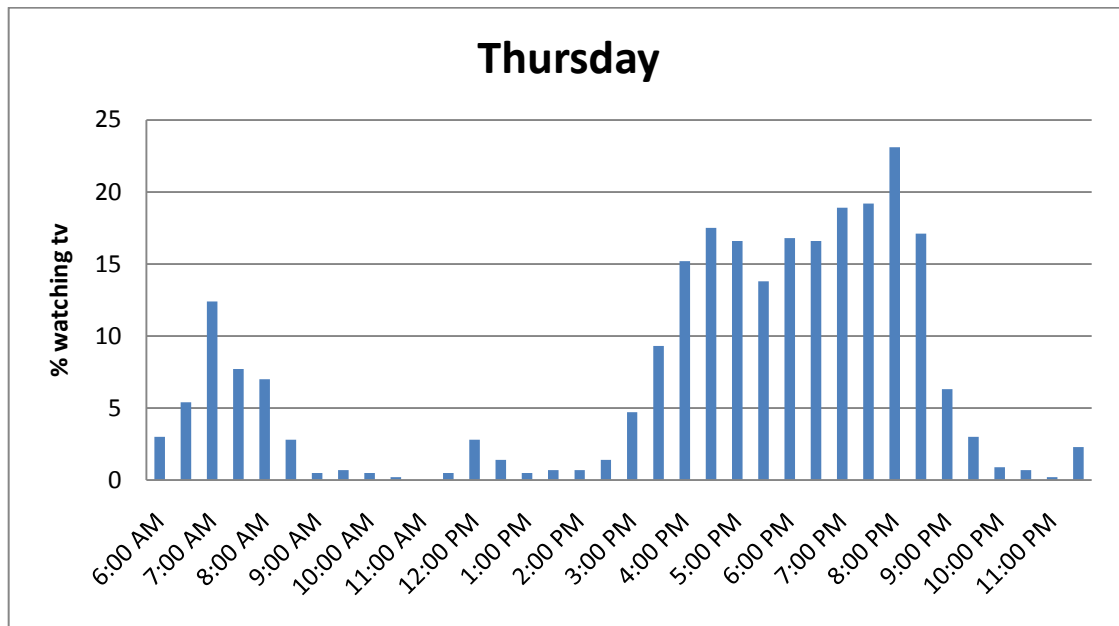


Figure 2.6 Percentage of children watching television on Friday March 27, 2009

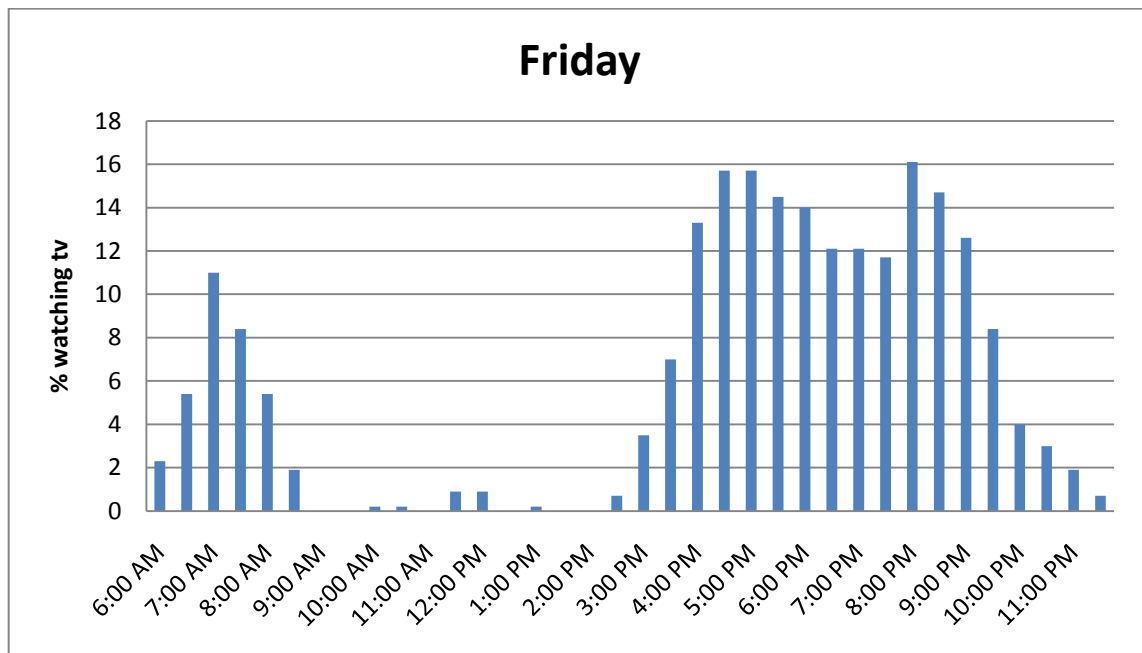


Figure 2.7 Percentage of children watching television on Saturday March 28, 2009

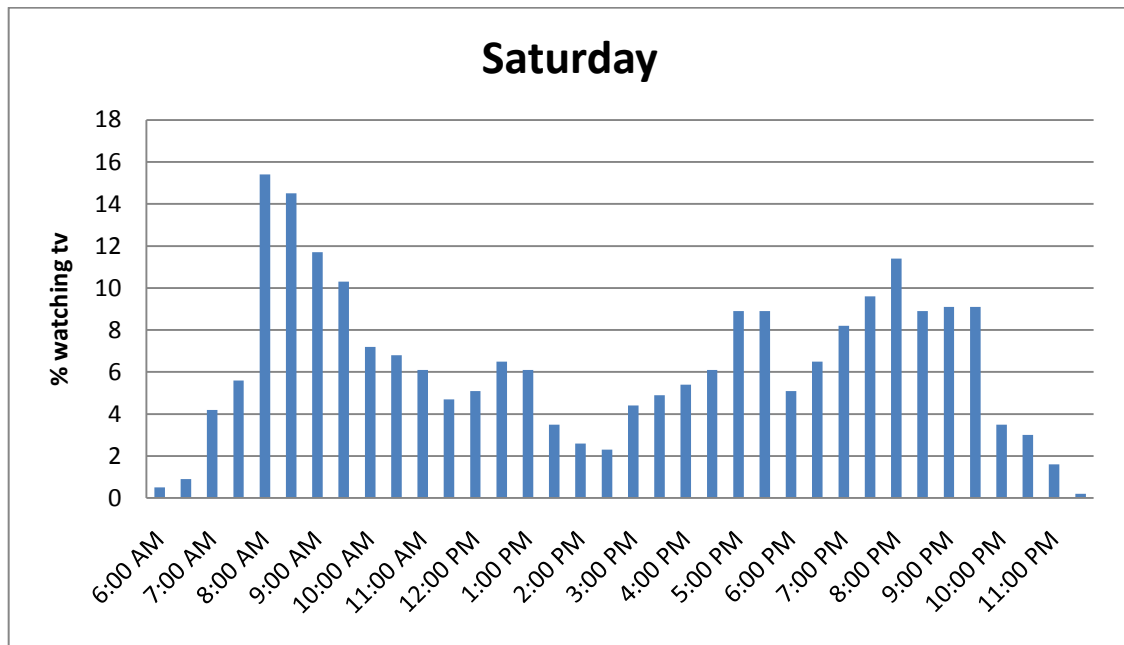


Figure 2.8 Percentage of children watching television on Sunday March 29, 2009

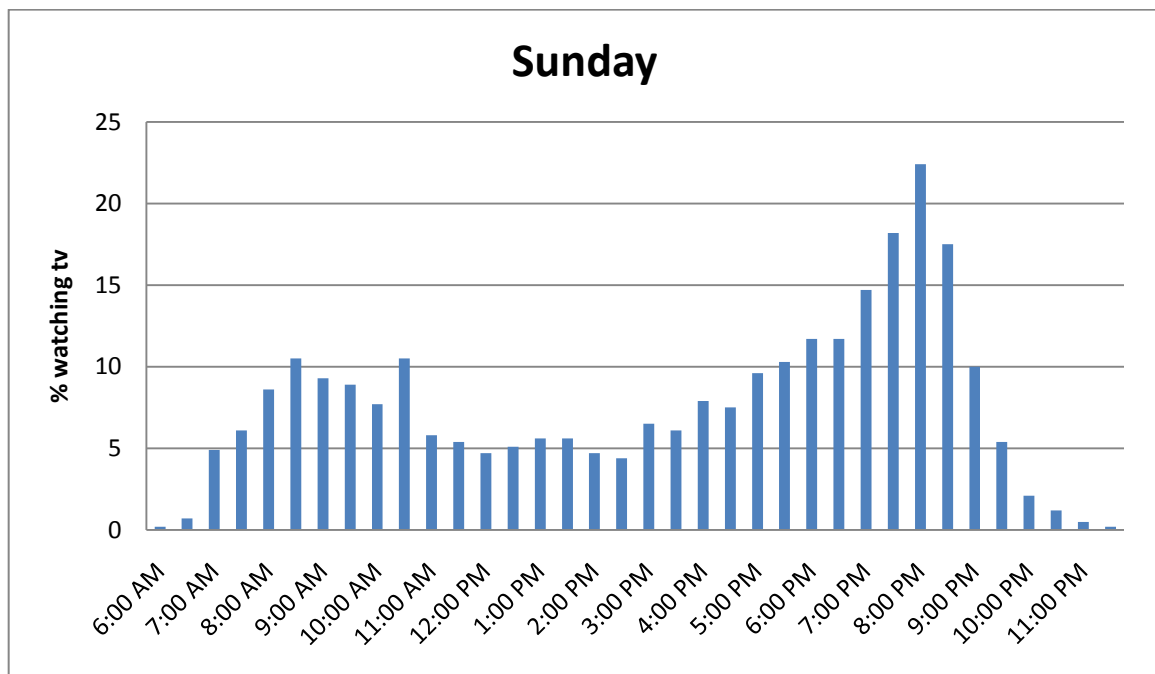


Figure 2.9 Percentage of children watching television on Monday March 30, 2009

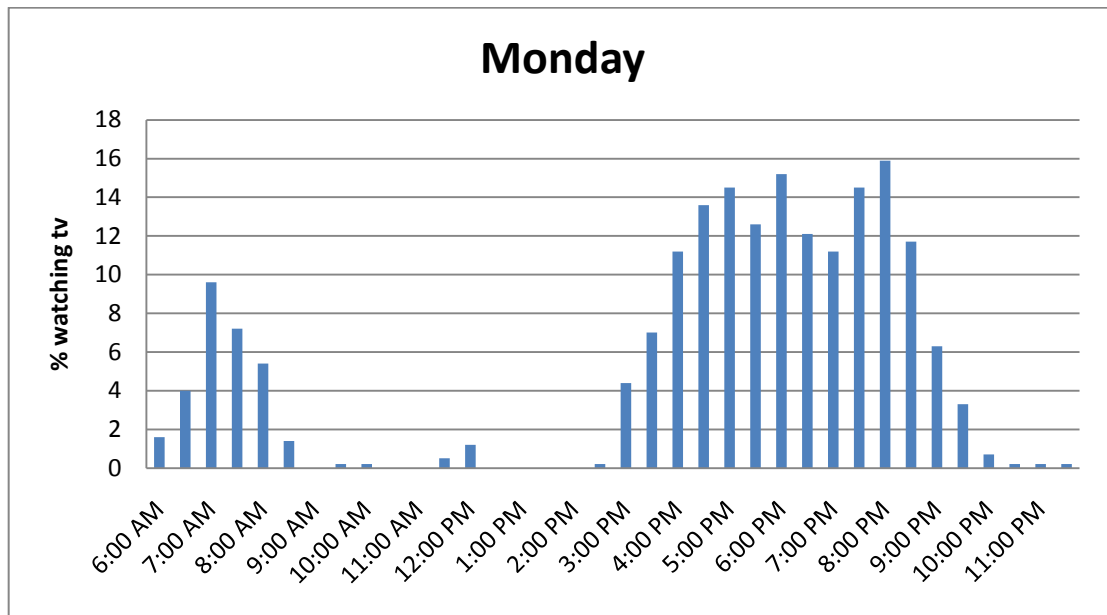


Figure 2.10 Percentage of children watching television on Tuesday March 31, 2009

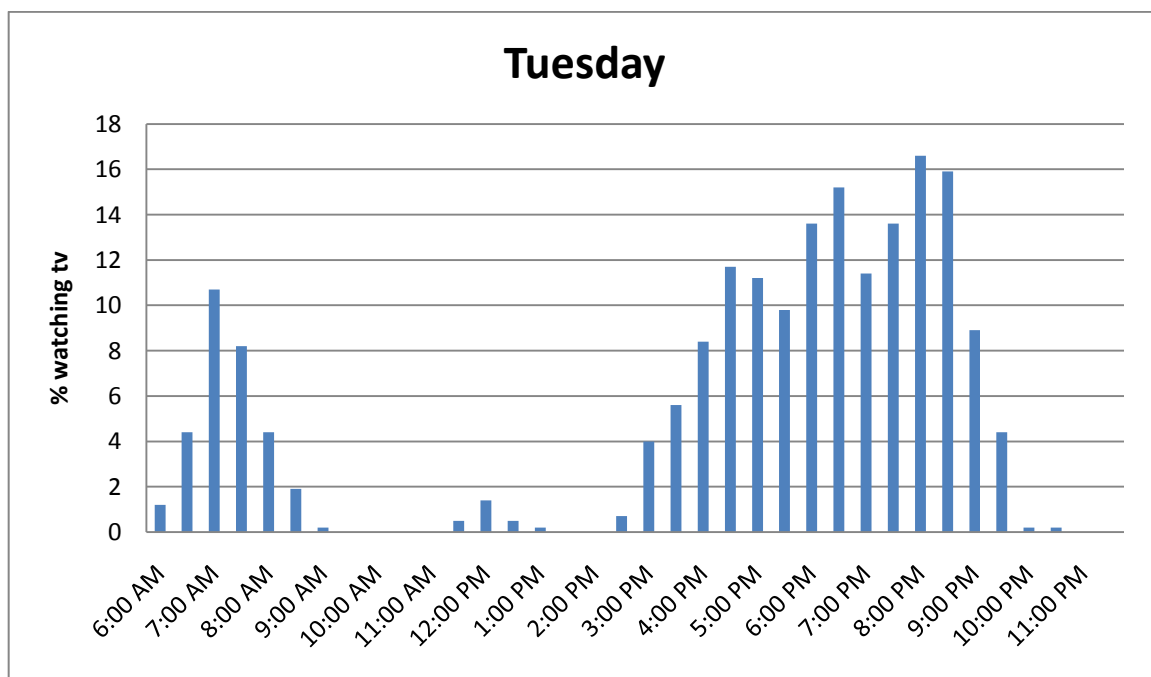
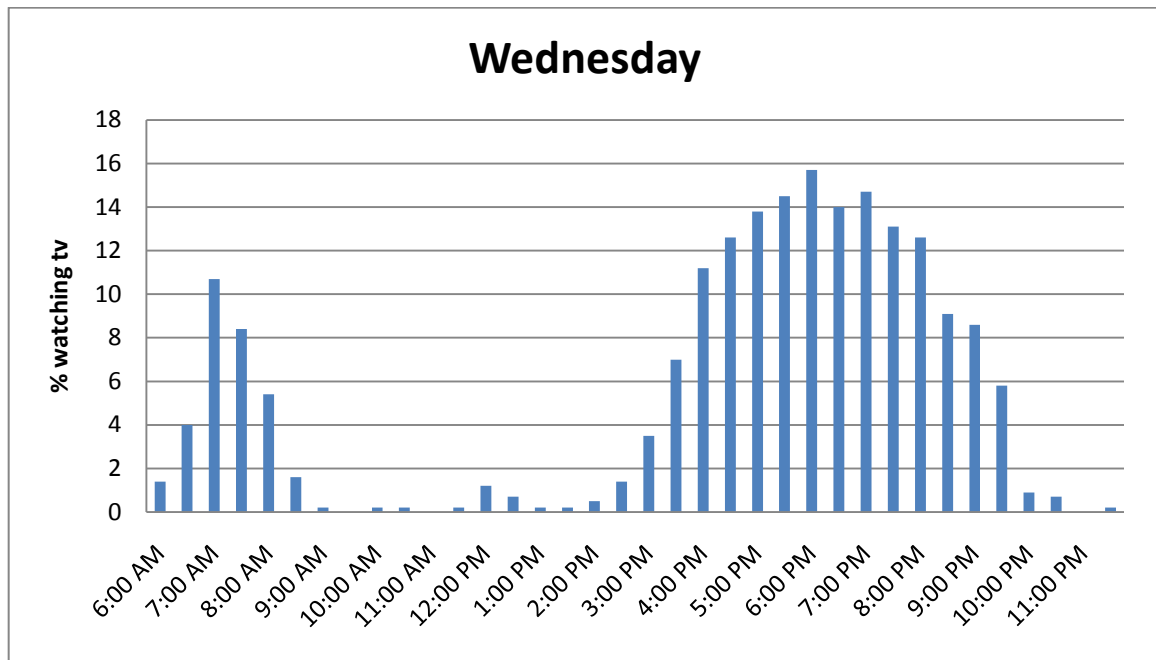


Figure 2.11 Percentage of children watching television on Wednesday April 1, 2009



Children's estimated number of television viewing hours per week (see Figure 2.12)

was based on the following two questions in the *Questionnaire for Child*:

Q 17. During weekdays (Monday to Friday) about how many hours per day do you usually watch television or videos (DVD's) in your free time?

Q 18. During weekends (Saturday and Sunday) about how many hours per day do you usually watch television or videos (DVD's) in your free time?

To obtain the weekly estimate, the following formula was used: (weekday average X 5) + (weekend average X 2). Children's television viewing (excluding DVD and video watching) as recorded in the *Media Diaries* is reported in Figure 2.13. It is likely that the *Media Diary* either underestimated television viewing (i.e. the subjects failed to enter all the programs they watched) or the *Questionnaire for Child* overestimated the amount of television viewed by subjects given the discrepancy between the two measures. Children's time spent watching DVD's and videos may also account for some of this difference.

Figure 2.12 Children's estimated number of television viewing hours per week

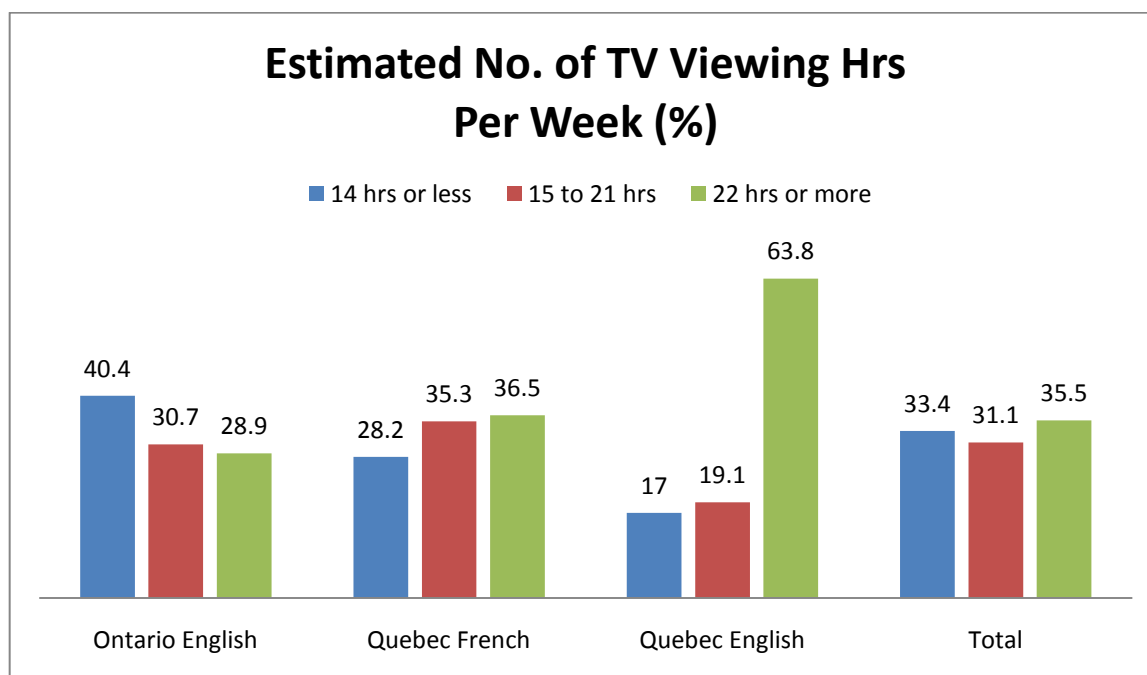
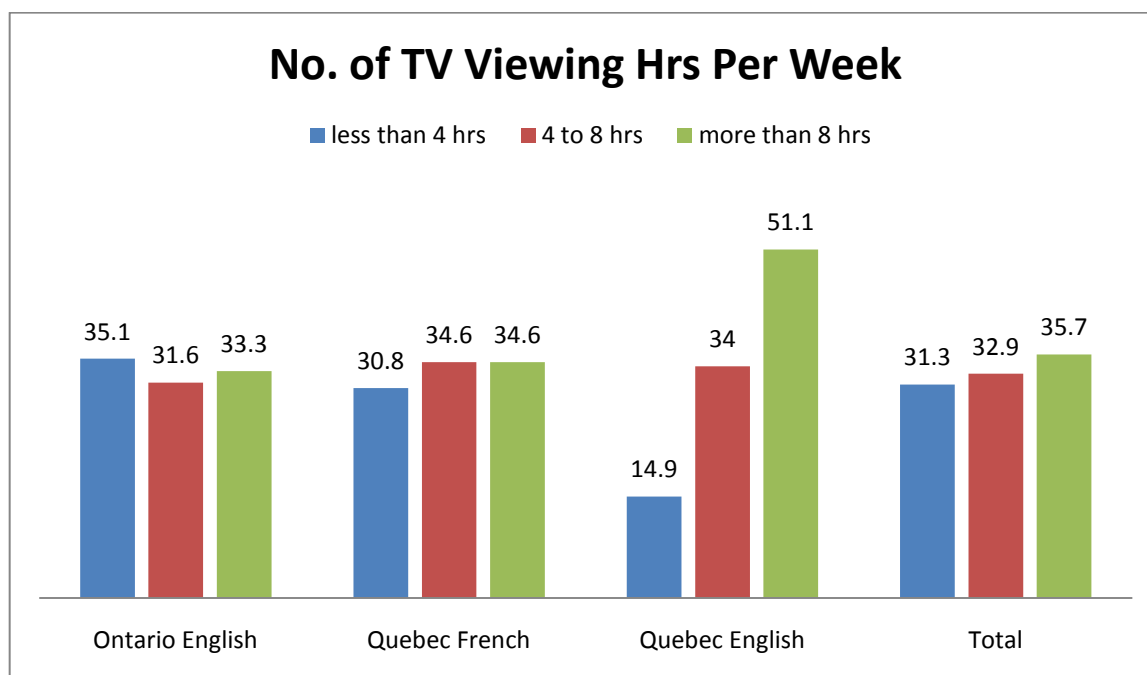


Figure 2.13 Children's television viewing per week as per the *Media Diary*



2.6 Methodological Difficulties

Methodologically, multiple difficulties were encountered when conducting this research. Our initial problem was getting school board approval to conduct our research within the school setting. Some school boards were not interested in our research since its topic was not related to the curriculum. This view was held by the French language school board in Ontario and resulted in our inability to recruit French speaking children from Ontario, a group that would have formed our forth comparison group. Also, in order to obtain approval from two of the English language school boards in Ottawa, amendments to our initial research protocol had to be made. For example, we were asked to lessen the burden placed on teachers with regard to the collection of questionnaires. Instead, we provided self addressed stamped envelopes to all subjects. An amendment to the compensation of subjects was also requested by two school boards so that entire schools were compensated rather than individual classrooms as was our original plan. Lastly, two school boards asked that we delete the question regarding ethnic background from the questionnaire. These amendments were all made and then approved by the OHREB.

Determining which 32 television stations to tape also proved to be difficult, and once *Media Diaries* were received, it was noted that 5 programs on two stations (Omni and Family West) should have been taped. This error may have been avoided by purchasing television viewing data from the Neilsen Company (an organization that tracks and sells such data) however, the program substitutions that were made, are unlikely to have had an effect on the results of our studies. Technical difficulties while taping the television were also encountered by our contractor. Two stations (YTV and Family Channel) were not taped on Sunday March 30 from 9:00 to 10:00 am. To deal with this situation, these two

stations were taped the following Sunday from 9 to 10 am and we substituted this programming for the missing programming from Sunday March 30. Other methodological difficulties included inaccurate television viewing diaries. This problem was rectified by comparing television viewing diaries to the actual television taping as per above in the section entitled “Television data coding”.

The collection of nutrition information for food products featured in advertisements also proved to be challenging at times. Nutrient information was collected from a variety of sources including, in order of priority, company websites, direct contact with the corporations, and product labels. When all else failed, the generic Canadian Nutrient File and the USDA National Nutrient Database were sought out. This process of gathering nutritional information proved to be extremely time consuming and more difficult than originally anticipated given that such information was often buried on company websites. We also encountered some resistance from corporations to provide this information over the telephone.

2.7 Knowledge Translation Strategy

Food Marketing on Children’s Television in Two Different Policy Environments has been published in the *International Journal of Pediatric Obesity*. This article has been forwarded to various health, child and consumer advocacy groups with an interest in the subject (including the Heart and Stroke Foundation of Canada, the Chronic Disease Prevention Alliance of Canada (CDPAC), The Canadian Cancer Society, the Canadian Pediatric Society, the Center for Science in the Public Interest, the Canadian Teacher’s Federation, the Quebec Coalition on Weight-Related Problems, and “Option Consommateurs”) and to government departments including the Public Health Agency of

Canada and the “Office de la protection du consommateur” in Quebec. Various news reporters (radio and television) whom have expressed an interest in this research and its results were also contacted. Lay summaries of this research will be provided to each school that participated in the study, and to parents of subjects who have requested such summaries. An identical knowledge translation strategy will be employed for each research study once they are published. As of April 2011, the article *A Nutritional Comparison of Foods and Beverages Marketed to Children in Two Advertising Policy Environment* was under revision by the journal Obesity and the article *Self regulation by Industry in Food Marketing is Having Little Impact During Children’s Preferred Television Viewing* was under revision with the International Journal of Paediatric Obesity.

The results from the study entitled *Food Marketing on Children’s Television in Two Different Policy Environments* were presented under the title *Children’s Exposure to Food and Beverage Advertising on Television in Ontario and Quebec* at the Canadian Public Health Association Centennial Conference on June 14, 2010. Results from the study entitled *A Nutritional Comparison of Foods and Beverages Marketed to Children in Two Advertising Policy Environments* were presented on July 9, 2010 in Stockholm Sweden to the 4th Scandinavian Pediatric Obesity Conference (the Pediatric satellite of ICO 2010). Some preliminary data from the article entitled *Self regulation by Industry in Food Marketing is Having Little Impact During Children’s Preferred Television Viewing* was presented to the ICO 2010 Pre-congress meeting, Sociocultural, Behavioral and Economic Factors in Obesity Prevention on July 10, 2010 in Stockholm, Sweden. The complete results from this latter study will be presented at the upcoming Canadian Obesity Conference to be held in April 2011.

In November 2010, I was invited to join the Expert Task Group on Reducing Marketing and Advertising of Foods and Beverages High in Fat, Sugar or Sodium to Children formed under the direction of the Healthy Living Project Steering Committee of the Public Health Network Council. This opportunity will allow me to share my findings with those shaping Canadian policy in marketing directed at children.

CHAPTER 3

RESEARCH RESULTS

3.1 Food Marketing on Children's Television in Two Different Policy Environments

ORIGINAL ARTICLE

Food marketing on children's television in two different policy environments

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Abstract

Objective. To examine the differences in exposure to food marketing on television between English children in Ontario, and French and English children in Quebec as each group is influenced by different advertising policies. **Methods.** In total, 428 children aged 10–12 completed television viewing diaries for 7 days. During the same week, 32 television stations were recorded between 6 am and 12 am. A content analysis of advertisements, contests and sponsorship announcements that aired during children's 90 hours of preferred programming was then undertaken. **Results.** Twenty-six percent of advertisements, 18% of contests and 22% of sponsorships were food/beverage related. Similar rates of food marketing were seen across all three population groups. French Quebec subjects were exposed to significantly more beverage promotions and fewer grain products, candy and snack food promotions. French Quebec children were targeted less frequently, and media characters/celebrities were used less often than in the English groups. **Conclusion.** The Quebec advertising ban does not appear to be limiting the amount of food/beverage advertising seen by children aged 10–12. However, food categories and marketing techniques used differ in the preferred viewing of French Quebec children.

Key Words: Child, obesity, public policy, television, prevention, marketing, food

Introduction

Childhood obesity rates have increased significantly in the developed world over the past 25 years (1). This trend is worrisome given that cardiovascular, respiratory, endocrine, gynecological, metabolic, orthopedic and psychosocial difficulties can accompany childhood obesity (2–4). While the etiology of childhood obesity is multi-faceted, three recent systematic reviews of the literature have concluded that commercial food advertising aimed at children directly affects children's food preferences, short-term consumption patterns and food purchase requests (5–7). In addition, television food advertising most probably contributes to an environment that promotes the development of childhood obesity (7). It is this association with obesity that has particularly troubled governments and advocates concerned with child health.

In 2006, US \$1.6 billion was spent on marketing food, drinks and restaurants to children and teens in the United States by 44 corporations (8). Research

on children's television has shown that in the provinces of Alberta and Ontario in Canada (9), in the US (10,11), the UK (12), New Zealand (13), and Australia (14,15), the food product categories most frequently advertised to children on children's specialty channels include candy and snacks, fast food, cereal, and dine-in and delivery restaurants. Little research has compared children's exposure to food and beverage advertising in different advertising policy environments. Canada is a unique country in which to conduct such research, as advertising policies differ between provinces. Since 1980, in the province of Quebec, where the majority speak French, there has been a ban on commercial advertising directed at children under the age of 13 under the *Consumer Protection Act* (16). This *Act* bans the advertisement of products in Quebec that are exclusively designed for children or particularly appeal to children (such as toys, certain candies etc.) when children consist of 15% of the total audience. Products intended

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for those aged 13 years or over, which may appeal to children, are only authorized when child viewership reaches 15%, if the advertisement is designed not to elicit the interest of children under 13 years. A child's interest is said to be elicited when advertisements use certain themes, such as magic, fantasy, and adventure, use characters that children identify with including other children, or use animation, music, colours or sounds that appeal to children. When child viewership falls below the 15% threshold, advertising of all products is permitted; however, the advertisement must always be designed to not interest the child. In the rest of Canada, advertising is predominantly regulated by industry under Advertising Standards Canada who administers *The Broadcast Code for Advertising to Children* and its accompanying *Code Interpretation Guideline*. In addition to this *Code*, by December 2008, eight large food, beverage and restaurant corporations had pledged to advertise only "better for you" products to children under 12 years, and another eight had committed to eliminate advertising to children under *The Canadian Children's Food and Beverage Advertising Initiative (CAI)* (17).

Recent research in Canada has shown that during children's television programs, 15% of advertisements in Quebec (18), 18% in Ontario and 19% in Alberta feature food and/or beverages (9). No research to our knowledge has compared different populations of children in Canada in terms of their exposure to television food and beverage marketing depending on their advertising policy environment. The current study examined the differences in exposure to food marketing on television between different populations of children in Canada, namely English speaking children in Ontario, and French and English speaking children in Quebec during their preferred television programming. It was important to look at both English and French speaking Quebec children given that French speaking Quebec children likely watch French television broadcast from Quebec where the advertisement ban applies, whereas the English speaking Quebec children likely watch English language television broadcast from outside of Quebec where the advertisement ban does not apply. It was therefore hypothesized that the Quebec advertisement ban would have less influence on the English speaking children of Quebec as they would be exposed to significantly more food promotions than French speaking Quebec children on television. It was also hypothesized that food products that are frequently aimed at children including candy, breakfast cereals and snack foods would predominate in the English Ontario and English Quebec preferred viewing given that the *Consumer Protection Act* bans the advertisement of child-directed products.

Methods

Subjects

A total of 645 subjects aged 10 to 12 (and one 13 year old) were recruited from a pool of 1 939 students drawn from 18 schools in two large metropolitan areas in Ontario and Quebec. Subjects were self-selected in order to maximize study participation and compliance. However, schools were chosen in order to ensure a diverse socio-economic mix of subjects. School boards with participating schools and each school principal approved the study, subjects' parents gave written informed consent, and each child gave verbal assent for their participation. Each participating school was given \$350 for their participation. In total, 428 subjects (or 66% of those recruited) including 225 English speaking children from Ontario, 156 French speaking children from Quebec and 47 English speaking children from Quebec from grades 5 and 6 completed the study. Subjects' language was defined as French if they attended a French language school. The language of all other children (attending English or French immersion schools that cater for an English speaking student body) was defined as English. In sum, 36% of the sample consisted of males while 64% consisted of females and 74% of subjects had at least one parent with a university degree.

Data collection

In order to determine children's preferred television programs, subjects completed a television viewing diary for a one week period from March 26, 2009 to April 1, 2009. The viewing diary was based on that developed by the Bureau of Broadcasting Measurement (BBM), an organization that collects weekly television viewing survey data on Canadians aged 2 and over. For each of the 7 days, subjects were required to indicate their daily television use at 30 minute intervals, and the program and station they were watching.

During the same 7 day period that subjects were completing their viewing diary, 32 television stations of potential interest to English and French speaking children were recorded between 6:00 am and 12:00 am. The television recording was conducted by a third party contractor using a multi-media recording server. The recordings were then downloaded on to a hard drive. Data from the television viewing diaries was analyzed in order to determine the preferred 30 hours of programming for English speaking Ontario subjects, French speaking Quebec subjects, and English speaking Quebec subjects based on the percentage of children within each group watching each 30-minute time slot on each station. The preferred 30 hours of television programming for each group was therefore the sixty 30-minute television spots with the highest

percentage of viewership. Five preferred viewing half hour segments (for a total of 2.5 hours) for the English Quebec subjects were not taped because of technical difficulties and were replaced with the next most popular programs.

Once the 30 preferred hours for each group were determined, a content analysis of the promotions aired was conducted. While there was no overlap in the preferred programming of children within the French Quebec group with either English group, 30% of the Ontario English preferred programming was repeated in the Quebec English programming for a total of 9 hours. Therefore, a content analysis of 81 hours was completed. The content analysis included documenting: (1) the day and time of the non-programming content; (2) the type of program and station on which it aired; (3) the type of promotion; (4) the length of promotion; (5) the type of food product being promoted; (6) the techniques used to promote the brand; and (7) the target audience. The entire 81 hour content analysis was conducted by one reviewer who had undergone two days of training. All food/beverage related promotions were then reviewed a second time in order to ensure reliability. A random 15% of this sample was recoded by the main researcher and intercoder reliability was 97%.

Definitions

Promotion was defined as non-programming content including advertisements, contests and sponsorship announcements. All promotions were included regardless of their length in order to measure each group's total exposure to various forms of marketing. Advertisements were defined as non-programming content that promoted a commercial product while contests exclusively described a contest related to a product, brand, corporation or television station. Sponsorship announcements were non-programming content that announced the corporate sponsor of the program and/or their product and included closed captioning announcements. Food categorization was based on the food categories developed by Gantz et al. (10) and included specific food categories (as shown in Table III) that were then grouped into larger food categories, including candy and snacks, beverages, restaurants, grain products, fruits and vegetables, dairy products, meat, poultry, fish and alternatives, prepared foods, and other foods, to allow for statistical analysis. The techniques used to promote the brand or product included the use of fun, and the appearance of media characters or celebrities. Advertisements were coded as using fun as a marketing tool if the product had a shape, colour, taste or other property that rendered it playful or if the individual or individuals interacting with the product in the advertisement were portrayed as enjoying the

product beyond the normal experience. The appearance of media characters or celebrities included the portrayal of company owned and licensed characters and sports, television, movie, and music celebrities. When coding the target audience for advertisements, multiple targets could be selected including preschoolers, children, teens, and/or adults. Determining the perceived target audience was based on: (1) the product featured, its characteristics and its uses; (2) the age of the intended user of the featured product; (3) the age of the main actors in the advertisement; (4) the setting of the advertisement (i.e., in a playground, an office); (5) the intended audience of the sound and visual features of the advertisement; (6) the intended audience for any media characters, celebrities or other product related incentives featured in the advertisement; and (7) the primary persuasive appeal used (i.e., health benefits, fun).

Analysis

All data was inputted and analyzed using PASW Statistics 17.0 (SPSS, 2009). Descriptive statistics were first tabulated followed by non-parametric chi square analyses to examine group differences.

Results

Children's preferred television viewing

All 90 hours of preferred television viewing were drawn from Canadian television stations. The 30 preferred hours for the English Ontario group included programs aired on two children's specialty stations (50% and 37%), and one broadcast station (13%). The preferred hours for the Quebec French group were exclusively drawn from French stations including one children's specialty station (62%), one public broadcast station (17%), one broadcast station (15%), and one sports specialty station (6.6%), while the English Quebec preferred viewing included a large number of English language stations, namely three children's specialty channels (40%, 33%, and 20%), one broadcast station (5%), and one public broadcast station (1.7%). The majority of the preferred viewing hours for each group occurred between 3:30 pm and 8:00 pm (Ontario English 58%, Quebec French 68%, Quebec English 65%). Prime time hours between 8:00 pm and 10:00 pm accounted for 20% of the Ontario English, 13% of the Quebec French, and 18% of the Quebec English preferred viewing.

Advertisements

Overall, in the 90 hours of programming analyzed, 1 511 advertisements that varied in length from 1 second

to 60 seconds with a mean of 23 seconds (standard deviation [SD] = 10) were coded. As summarized in Table I, for the most frequently viewed 30 hours of programming by English speaking Ontario children, 24% of 497 advertisements were food/beverage related including 73 food advertisements, 24 beverage advertisements and 20 restaurant advertisements for a combined rate of 3.9 food/beverage related advertisements per hour. The most frequently advertised food/beverage sub-categories were cold cereal (14%), milk (11%), fast food restaurants (10%), pasta products (9.4%) and dine-in restaurants (6.8%). For the French Quebec sample, 27% of 447 advertisements were for foods ($n = 80$), beverages ($n = 25$) or restaurants ($n = 14$) for a combined rate of 4.0 food/beverage related advertisements per hour. Yogurt and yogurt drinks were the most frequently advertised (both at 15%), followed by fast food restaurants (9.2%), candy (8.4%), cheese (7.6%), and cookies/cookie dough (6.7%). For the most frequently viewed 30 hours of programming by English speaking Quebec children, 27% of 567 advertisements were for foods ($n = 98$), beverages ($n = 30$) and restaurants ($n = 23$) for a combined rate of 5.0 food/beverage related advertisements per hour. The most frequently advertised foods/beverages included milk (15%), candy and fast food restaurants (both at 9.3%), cereal bars and pasta (both at 7.9%), cookies/cookie dough and cold cereal (both at 6.6%) and gum (5.3%). No significant differences were found between the number of food/beverage related advertisements among the Ontario English, Quebec French or Quebec English.

A significantly greater number of food advertisements were targeted to preschoolers, children, and teens in the English groups' viewing compared with the French Quebec's viewing. The use of fun as a persuasive appeal and the appearance of media characters/celebrities was also significantly more frequent

in both English groups compared with the French Quebec group.

Contests

In the 90 hours of preferred programming, a total of 152 contests were coded and these ranged in length from 7 seconds to 57 seconds with a mean of 30.7 seconds (SD = 14.2). As shown in Table II, overall 18% of these contests featured food/beverages and the Quebec French preferred viewing featured significantly fewer food/beverage contests than the other two groups ($\chi^2 = 6.2$ $p < 0.045$). The 11 Ontario English food/beverage contests featured gum (36%), regular soft drinks (27%), cookies/cookie dough, and cheese (both 18%). The three Quebec French food/beverage contests featured regular soft drinks exclusively and the 13 Quebec English food/beverage contests featured gum (54%), cookies/cookie dough (23%), cheese (15%) and regular soft drinks (7.7%). In the Ontario English food/beverage contests, six were associated with either a toy or DVD/Blue Ray/movie, while in the Quebec French food/beverage contests, none were associated with an accompanying toy or movie product. In the English Quebec food/beverage contests, nine were linked to a toy or movie.

Sponsorship announcements

A total of 143 sponsorships were coded in the 90 hours of programming. These varied in length between 5 and 60 seconds with a mean of 9.8 seconds (SD = 4.6). A total of 22% of these sponsorships were by food and beverage manufacturers (20%) or fast food restaurants (2.8%), and the food/beverage products most frequently featured included fruit flavoured snacks (60%), cheese (16%), and fast food restaurants

Table I. Number, rates, target audience and persuasive appeals of food and beverage advertisements by Province/language.

	Ontario English No. (%)	Quebec French No. (%)	Quebec English No. (%)	Total Sample, No. (%)	χ^2 (df =2)	P*
Number	497 (100)	447 (100)	567 (100)	1 511 (100)	14.4	$p < 0.001$
Rate per hour	16.6	14.9	18.9	16.8		
Number of food/beverage advertisements	117 (23.5)	119 (26.6)	151 (26.7)	387 (25.6)	5.6	$p < 0.06$
Rate of food/beverage advertisements per hour	3.9	4.0	5.0	4.3		
Target audience for food/beverage advertisements						
Preschool	52 (44.4)	21 (17.6)	87 (57.6)	160 (41.3)	44.5	$p < 0.001$
Children	76 (65)	36 (30.3)	115 (76.2)	227 (58.7)	60.6	$p < 0.001$
Teens	38 (32.5)	22 (18.5)	47 (31.1)	107 (27.6)	7.3	$p < 0.03$
Adults	66 (56.4)	105 (88.2)	65 (43)	236 (61)	58.6	$p < 0.001$
Fun	44 (37.6)	18 (15.1)	62 (41.1)	124 (32)	22.9	$p < 0.001$
Appearance of media character or celebrity	28 (23.9)	14 (11.7)	32 (21.2)	74 (19.2)	6.3	$p < 0.04$

*P = a comparison between Ontario English, Quebec French and Quebec English.

Table II. Number and rates of food and beverage contests and sponsorships by Province/language.

	Ontario English No. (%)	Quebec French No. (%)	Quebec English No. (%)	Total Sample No. (%)	χ^2 (df = 2)	P*
Contests						
Number	57 (100)	42 (100)	53 (100)	152 (100)	2.4	p < 0.3
Rate per hour	1.9	1.4	1.8	1.7		
Number of food/beverage contests	11 (19.3)	3 (7.1)	13 (24.5)	27 (17.8)	6.2	p < 0.05
Rate of food/beverage contests per hour	0.4	0.1	0.4	0.3		
Sponsorship Announcements						
Number	66 (100)	28 (100)	49 (100)	143 (100)	15.2	p < 0.001
Rate per hour	2.2	0.9	1.6	1.6		
Number of food/beverage sponsorships	18 (27.2)	0	14 (28.6)	32 (22.4)	0.5	p < 0.48
Rate of food/beverage sponsorships per hour	0.6	0	0.5	0.4		

*P = a comparison between Ontario English, Quebec French and Quebec English.

(13%). As per Table II, there were no food/beverage related sponsorships in the French Quebec sample.

Total promotions

The cumulative frequency and percentages of all food and beverage promotions, including advertisements, contests and sponsorship announcements aired on television during children's preferred viewing, are presented in Table III by province and language. Candy and snacks, and grain products promotions were significantly lower in the French Quebec sample compared with the English samples probably due to the low frequency of candy, gum, fruit rolls and cold cereal promotions aired during children's preferred viewing in French Quebec.

Given the variability in the length of promotions that were viewed during children's preferred television and the high number of 5 second milk advertisements, we also determined the cumulative total food promotions in seconds by food category. As shown in Table IV, the 30 preferred hours in French Quebec consisted of more seconds of beverage and dairy promotions and fewer grain products and prepared food promotions compared with both English samples. The English Quebec preferred viewing had a disproportionately high number of seconds devoted to candy and snack promotions compared with the other two groups.

Discussion

Advertisements, contests and sponsorships

The Quebec English viewing sample had the highest number of advertisements, followed by the Ontario English; however, the number of food/beverage related advertisements was similar across all three groups. Whereas the Quebec advertising ban does not appear to be influencing the frequency of food/beverage

advertisements seen by children in our study, it appears to be having an influence on the target audience of advertisements and the techniques used to emphasize the product or brand within advertisements. In terms of target audience, preschoolers, children or teens were significantly less likely to be targeted in French Quebec subjects' preferred viewing compared with both English groups' viewing. It is important to note; however, that up to 30% of advertisements aired during French Quebec preferred viewing were judged to be targeted at children, which may be in contravention of the advertising ban, which specifies that no advertising can be directed at children on shows where child viewership reaches 15%. These potential violations may be occurring because the monitoring of the *Consumer Protection Act* is based on public complaints rather than a systematic monitoring system. The advertising ban in Quebec is, however, having an impact on the content of advertisements during French Quebec's children's preferred television viewing. Fun and the appearance of media characters or celebrities were used significantly less frequently as persuasive appeals and there were significantly fewer food/beverage contests, and sponsorship announcements in the French Quebec viewing (and none related to food/beverages), which is a significant difference from the viewing of the two English groups.

Total promotions

When total advertisements, contests and sponsorship announcements were examined together, it was clear that, across all three groups, the food category with the highest frequency of promotions and the greatest exposure in terms of length of time during children's preferred viewing was candy and snacks. In terms of frequency, the Quebec French preferred viewing had significantly fewer candy and snack promotions compared with the two other groups as we had hypothesized. However, when length of time was considered,

Table III. Cumulative total frequency of promoted food and beverage categories (%) by Province/language.

Food category (sub-categories)	Ontario English No. (%)	Quebec French No. (%)	Quebec English No. (%)	Total Sample No. (%)	χ^2 (df = 2)	P*
Candy and snacks	49 (33.7)	31 (25.4)	71 (39.8)	151 (33.9)	15.9	p < 0.001
Candy, gum and fruit rolls	34 (23.3)	15 (12.3)	44 (24.7)	93 (20.9)		
Cookies and cookie dough	8 (5.5)	8 (6.6)	13 (7.3)	29 (6.5)		
Granola bars and cereal bars	5 (3.5)	2 (1.6)	14 (7.8)	21 (4.7)		
Chips, popcorn and pretzels	2 (1.4)	2 (1.6)	0	4 (0.9)		
Crackers	0	4 (3.3)	0	4 (0.9)		
Beverages	15 (10.4)	26 (21.4)	9 (5.1)	50 (11.2)	8.9	p < 0.01
Yogurt drinks	4 (2.7)	18 (14.8)	4 (2.2)	26 (5.8)		
Regular soft drinks and energy drinks	3 (2.1)	3 (2.5)	3 (1.7)	9 (2)		
Other	3 (2.1)	4 (3.3)	1 (0.6)	8 (1.8)		
Fruit juices (100% fruit)	2 (1.4)	1 (0.8)	1 (0.6)	4 (0.9)		
Chocolate milk (low fat)	3 (2.1)	0	0	3 (0.7)		
Restaurants	22 (15.1)	14 (11.5)	25 (14.1)	61 (13.7)	3.2	p < 0.2
Fast food restaurants	14 (9.6)	11 (9)	16 (9)	41 (9.2)		
Dine-in restaurants	8 (5.5)	3 (2.5)	9 (5.1)	20 (4.5)		
Grain products	20 (13.8)	4 (3.2)	19 (10.6)	43 (9.6)	11.2	p < 0.004
Cold cereal	16 (11)	2 (1.6)	10 (5.6)	28 (6.3)		
Other grain products	4 (2.8)	2 (1.6)	9 (5)	15 (3.3)		
Fruits and vegetables	4 (2.7)	3 (2.4)	4 (2.2)	11 (2.4)	0.2	p < 0.91
Fruits	4 (2.7)	2 (1.6)	4 (2.2)	10 (2.2)		
French fries and breakfast potatoes	0	1 (0.8)	0	1 (0.2)		
Dairy products	22 (15.1)	30 (24.6)	31 (17.5)	83 (18.6)	1.8	p < 0.42
Milk (2%)	13 (8.9)	2 (1.6)	22 (12.4)	37 (8.3)		
Cheese and cheese sticks	8 (5.5)	9 (7.4)	8 (4.5)	25 (5.6)		
Yogurt	1 (0.7)	18 (14.8)	1 (0.6)	20 (4.5)		
Butter	0	1 (0.8)	0	1 (0.2)		
Meat, poultry, fish and alternatives	2 (1.4)	8 (6.5)	4 (2.3)	14 (3)	b	
Prepared foods	12 (8.2)	3 (2.4)	15 (8.4)	30 (6.8)	b	
Other	0	3 (2.4)	0	3 (0.6)	b	
Total no. of food/beverage promotions	146 (100) ^a	122 (100) ^a	178 (100)	446 (100) ^a		

*P = a comparison between Ontario English, Quebec French and Quebec English.

^aBecause of rounding, percentages may not total 100.

^bChi square was not calculated because of low expected frequencies in some cells.

there were few differences in candy and snack promotions between the Ontario English and Quebec French groups. The Quebec English viewing consisted of the most candy and snack promotions in

terms of frequency and time. Results for frequency and time were also consistent in demonstrating that the Quebec French preferred viewing was made up of significantly fewer grain product promotions and

Table IV. Cumulative total promoted food and beverage categories in seconds by Province/language.

Food category (sub-categories)	Ontario English (seconds)	Quebec French (seconds)	Quebec English (seconds)	Total Sample (seconds)
Candy and snacks	935	825	1 470	3 230
Beverages	370	750	225	1 345
Restaurants	405	390	405	1 200
Grain products	585	75	525	1 185
Fruits and vegetables	70	60	90	220
Dairy products	270	735	335	1 340
Meat, poultry, fish and alternatives	60	165	100	325
Prepared foods	285	75	390	750
Ingredients, mixes, and seasonings	0	30	0	30
Supermarkets and convenience marts	0	60	0	60
Total seconds of food/beverage promotions	2 980	3 165	3 540	9 685

significantly more beverage promotions than both English groups. The low grain promotion in the French Quebec group likely reflects the few breakfast cereal commercials on children's preferred television while the high beverage promotion reflects the high percentage of yogurt drinks promoted on French Quebec television. There were no significant differences in dairy product promotion across the three groups in terms of frequency; however, when time was considered, many more seconds were attributed to dairy products in the Quebec French viewing sample. The promotion of fast food and dine-in restaurants was similar across all groups. As per recent content analyses that have been conducted in Canada (18–20), the United States (10,11), and Australia (14,15), across all three groups, there were few vegetable and fruit promotions in the top 90 hours.

Policy implications

The Quebec advertising ban does not appear to be limiting French or English Quebec children in our study from seeing food promotions during their preferred viewing on television. The Quebec advertising ban does appear to be having an influence on the types of food categories advertised, the techniques used to emphasize the brand, and the types of promotions viewed by French children in our sample. At this point; however, it is unclear as to what impact, if any, these changes have on the health of French children in Quebec and whether it influences their food intake or obesity rates. The *Consumer Protection Act* focuses on banning "child directed" commercial advertising. Our results clearly demonstrate that French speaking children in Quebec are seeing a significant amount of food and beverage advertising that is not "child directed" (for instance a chocolate bar advertisement directed at adults). What is the impact on children's health related behaviours and on their long-term health of seeing such advertisements? Research remains to be done in this area; however, research on branding has shown that preschools have high brand recognition particularly for fast foods (21). Early exposure (i.e., in childhood) to brands has also been shown to lead to greater and faster recognition of those brands in later life (22). In other words, branded food and beverage advertisements directed at adults and seen by children today may create the loyal customers of tomorrow.

The Quebec English group in our study does not appear to be protected by the *Consumer Protection Act* in Quebec given that their preferred viewing consists of programs that are broadcast from outside of Quebec and are therefore outside of the jurisdiction of the advertising ban. This a good example of cross border marketing sometimes referred to as the "leaky

border" in marketing regulations. In May 2010, the World Health Assembly addressed this issue by endorsing the draft WHO recommendations on the marketing of foods and non-alcoholic beverages to children. One of these recommendations included the need for intergovernmental cooperation in order to reduce the cross border marketing of foods high in saturated fats, sugars and salt to children (23).

The Quebec government has recently called for improved enforcement and monitoring of the *Consumer Protection Act* and a public awareness campaign was launched in the winter of 2009 (24). It is important to remember that the Quebec advertising ban was designed to reduce the commercialization of childhood. It was not designed to specifically target the marketing of foods and beverages as per the recent legislation in the UK aimed at children 16 years and under (25).

Our research also shows that despite *The Broadcast Code for Advertising to Children*, its *Code Interpretation Guideline* and *The Canadian Children's Food and Beverage Advertising Initiative (CAI)*, which govern advertising in all provinces except Quebec, children in Canada are seeing a significant number of food and beverage promotions during their preferred viewing on television. This is likely because the *CAI* is a voluntary initiative and many large food and beverage corporations have chosen not to participate. In addition, each corporate participant has made different commitments with regard to the types and healthfulness of foods that can be advertised to children. Each has also set independent child viewership threshold requirements which range from 25–50% (17). These commitments need to be strengthened and broadened to include all food and beverage corporations if such policies are going to succeed in protecting children.

Our study lends support to the importance of regulating food and beverage marketing during prime time viewing during programming that is designed for general audiences. During the week that we collected our data, up to 20% of the most viewed hours occurred between 8 pm and 10 pm, during programming for general audiences. US data has also shown children's exposure to food and beverage marketing on television is not concentrated during certain time periods or certain days. Rather, it is dispersed (26). While younger children are likely to be watching television in the morning, after school and on weekends, it is important to be aware that older children are watching prime time hours and to include these hours when doing research or developing policy intended to affect this age group of children. Corporations that have made pledges in *The Canadian Children's Food and Beverage Advertising Initiative* have committed to reduce or eliminate food advertising when audience thresholds reach between 25 and 50%, while the *Consumer Protection Act* requires an audience threshold of 15%. Although the Quebec ban

has a much stronger audience threshold than the CAI, both fail to capture general audience programming that older school-aged children favour.

Strengths and weaknesses

The strengths of our study included our direct measure of what English and French speaking children watched on television, the simultaneous television taping for a 7 day period, and a broad definition of television promotion, which included advertisements, contests and sponsorship announcements. Most importantly, our content analysis focused on what children actually watched on television rather than on pre-determined stations and time slots as is typically the case in similar research. In terms of weaknesses, the sample of children who completed viewing diaries was not randomly selected and may not have been representative. A different group of children may have been watching different television programs; however, the 81 hour content analysis sampled television from nine different Canadian stations, at a variety of times, on various days, providing us with sufficient variability and a good snapshot of television broadcasting that appeals to school children.

Our results dealing with French Quebec are likely generalizable to younger French speaking children in Quebec given that children in Quebec up to the age of 13 are living in the same advertising policy environment. Our results; however, may not be generalizable to English speaking children under 6 years in Ontario and Quebec given that two public broadcast channels very popular with this age group forbid advertising to children. Our television sample also may not have been representative although we selected this week of programming based on its distance from major holidays and school holidays. Lastly, our assessment of target audience and marketing techniques used to emphasize the brand, though based on definitions, were more subjective and thus have less reliability. However, our results that related to food categorization are more reliable and important.

Conclusion

More research on the influence of broadly based marketing bans is clearly needed. However, to stem the flow of food and beverage marketing aimed at children, alternatives to the status quo in marketing practices must be considered by government and industry. Regulatory approaches to the marketing of foods and beverages to children, such as that in Quebec, remain a viable option. A focus on marketing on television is necessary though not sufficient given the plethora of creative marketing tactics that are currently being deployed on children today in various media venues.

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3.2 A Nutritional Comparison of Foods and Beverages Marketed to Children in Two Advertising Policy Environments

Title: A nutritional comparison of foods and beverages marketed to children in two advertising policy environments

Running Head: A nutritional comparison of food marketing

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Abstract

Childhood obesity is associated with children's exposure to food/ beverage marketing. Policy options in this area are being sought in order to reduce childhood obesity rates on a population-level. We examined the nutritional quality of foods advertised to children during their preferred television viewing in Ontario (Canada), where advertising is self-regulated by industry, and in Quebec (Canada), where a child-directed advertising ban exists. A total of 428 children ages 10-12 completed television viewing diaries for 7 days. Thirty-two television stations were recorded simultaneously between 6 am and midnight. A content analysis of 90 hours of English Ontario, French Quebec, and English Quebec children's preferred viewing was then undertaken. A total of 429 food and beverage advertisements were analyzed and their nutritional quality was assessed. Food advertisements in the Quebec French sample were significantly higher in total and saturated fat, significantly lower in carbohydrates and sugar per 100 grams, and higher in protein as a percentage of energy than food ads in the two English samples. Eighty two percent (82%) of the Quebec French food advertisements were classified as either high fat, sugar or sodium compared to 89% of the Ontario English and 97% of the Quebec English sample. Similar proportions of advertisements were classified as "less healthy" across all three groups. While food advertisements in the Quebec French viewing differ in average amounts of some macronutrients, these promotions are no healthier. These results suggest that the Quebec advertising ban is having little influence on the healthfulness of foods marketed during children's preferred television viewing.

A Nutritional Comparison of Foods and Beverages Marketed to Children in Two Advertising Policy Environments

Introduction

Within Canada, significant spikes in overweight/obesity levels have recently been described. Between 1978/1979 and 2004, overweight/obesity increased from 13% to 26% in children ages 6 to 11, and increased from 14% to 29% in 12 to 17 year olds (1).

Currently, 26% of Canadian children aged 2 to 17 meet the criteria for overweight or obesity (2). Poor food intake is a significant factor which causes childhood obesity. The food intake of Canadian children currently does not meet government recommended nutritional guidelines. Fruit, vegetable, and milk consumption fall below the suggested minimum, snacks account for 27% of average daily food intake, and 22% of calories consumed by 4 to 18 year olds are from the “other foods” category (i.e. non-core foods) which are not recommended by Canada’s Food Guide (3).

The aetiology of childhood obesity is complex. One factor that has garnered the attention of public health advocates is the role played by food and beverage marketing. Multiple reviews of the literature have concluded that commercial food advertising aimed at children directly affects their food preferences, consumption patterns and food purchase requests (4-6). It has also been concluded that there is strong evidence that food and beverage marketing is associated with childhood obesity (6).

Children’s exposure to food and beverage marketing on television is significant in developed countries such as the United States, the United Kingdom, Australia, New Zealand and Canada (7-10). The majority of foods marketed to children on television are high in fat, sugar and sodium, in addition to being low in nutrients (11-14). Mathematical modeling has shown that restricting children’s exposure to food marketing on television is a

cost effective population based approach to childhood obesity prevention (15). Little research, however, has assessed the influence of various policy options with regards to food marketing directed at children, such as industry self-regulation and government imposed regulatory approaches including advertising bans. This research aims to contribute to this body of literature by comparing the healthfulness of foods and beverages advertised during the preferred television viewing of children living in two different television advertising policy environments. Canada is a good location to conduct such research because children within Quebec and those living in the rest of Canada are influenced by two different advertising policies. Since 1980, the province of Quebec, under the *Consumer Protection Act*, has prohibited commercial advertising directed at children under the age of 13 when children consist of 15% of viewership, and the product featured is exclusively designed for or appeals to children (16). This *Act* permits food and beverage advertisements in Quebec that are directed at children 13 years and over during peak child viewing. For instance, a fast food commercial featuring a man in his office is permitted in Quebec during children's peak viewing, whereas a fast food advertisement featuring a child's meal is not. Research has shown that children in Quebec see many food advertisements which are directed at adolescents and adults even when child viewership is greater than 15% (17,18). In the rest of Canada, advertising is self regulated by industry under the direction of Advertising Standards Canada which administers the *Broadcast Code of Advertising to Children*. Within this self-regulatory system, 16 of the largest food and beverage manufacturers launched the *Canadian Children's Food and Beverage Advertising Initiative*. By the end of 2008, 8 corporations had committed to advertise only "better for you" products, and the remainder had committed to completely eliminate food and beverage advertising to children under 12 years.

In the current study, it was hypothesized that, during their preferred viewing, French speaking children living in Quebec would be exposed to food advertisements that are lower in sugar and more healthful compared to that viewed by English speaking children from Ontario and from Quebec given that child directed products (such as candy and breakfast cereals aimed at children) would not be advertised to this French speaking group. It was also hypothesized that the Quebec English group would not benefit from the advertising ban given their propensity to watch television broadcast from outside of Quebec where the advertising ban does not apply.

Methods and Procedures

Subjects, ages 10 to 12, were recruited from 18 elementary schools in two metropolitan regions, one in Ontario and one in Quebec. All school boards with participating schools approved the study, parents' of subjects gave informed consent and all subjects gave verbal assent regarding their participation. In total, 225 English Ontario, 156 French Quebec and 47 English Quebec children from grades 5 and 6 participated in the study. A child's language was defined as French if they attended a French language school while the language of all other children (either attending English or French immersion schools) was defined as English. All 428 children completed television viewing diaries for a 7-day period that were modeled on that developed by the Bureau of Broadcasting Measurement. Between March 26, 2009 and April 1, 2009, a week selected because it did not fall on school or national holidays, subjects were asked to record in their viewing diary, all television viewing including the program name, the station number and the time they were watching, at 30 minute intervals. While subjects completed their television viewing diaries, 32 television stations of potential interest to English and French speaking children, were recorded by a third party contractor between 6 am and midnight. A multi-media

recording server was used to record the stations and the recordings were then downloaded to a hard drive for later viewing. Note that five preferred viewing half hour segments (for a total of 2.5 hours) for the English Quebec subjects were not taped and were replaced with the next most popular programs.

The television viewing diaries of the English Ontario, French Quebec and English Quebec subjects were analyzed to determine the 30 most frequently viewed hours of programming for each of the three groups. A content analysis of the non-programming content in the 90 hours of programming was then conducted by one research assistant who had completed 2 days of training. This analysis included documenting the day and time of the advertisement, the type of program and station on which it aired, the length of the advertisement, and the type of food/beverage product being promoted. To ensure reliability of coding, all food and beverage advertisements were reviewed by the research assistant twice. The main researcher reviewed a random 15% of this sample and intercoder agreement was 97%.

Food/beverage advertisements included advertisements, contests and sponsorship announcements that were at least 5 seconds in length that featured a food beverage, or restaurant. This length was selected given that the 30 second advertisement was not the norm. Advertisements varied in length between 5 and 45 seconds with an average of 22.9 seconds. Food categorization was based on the food categories used by Gantz et al. (7) and included candy and snacks, beverages, restaurants, grain products, fruits and vegetables, dairy products, meat, poultry, fish and alternatives, prepared foods, and other foods. Food categories were then reduced into the following 7 categories: candy, snacks, beverages, restaurants, cereal, dairy and other.

After the content analysis was completed, the nutrient information for each advertisements' featured food or beverage was collected. Nutrient information was systematically drawn from multiple sources including, in order or priority, company websites, direct contact with the corporation, nutrient labeling on products, and the Canadian Nutrient File. When gaps were encountered in this nutrient file, the USDA National Nutrient Database was referenced. When multiple food or beverage items were featured equally in the same advertisement, the nutritional information of all of the products was assessed and then averaged. When complete meals were depicted (i.e. a hamburger, fries, and drink), an average of the two main food items in the meal was computed (i.e. for the hamburger and fries portion only). Two featured restaurant meals were discontinued between the television taping and the nutritional content analysis. Nutritional information for a similar product by the same corporation was substituted in these cases.

The nutritional information for all foods and beverages was converted to 100 gram servings to facilitate comparisons. Liquids were first converted to 100 milliliter portions and then were converted to 100 gram servings by multiplying by the appropriate specific gravity (density) of commonly consumed foods (19). In order to calculate the energy content of foods, the Atwater general factor system was used (20). Each food advertisement was then categorized according to two different nutritional criteria to assess nutrition quality. First, foods and beverages depicted in the advertisements were categorized based on whether they met the criteria for "high fat", "high saturated fat", "high sugar", "high sodium", "low fibre", "high fat or high sugar" and "high fat, sugar or sodium" as per the method used by Powell et al. (14). A food or beverage was classified as "high fat" if >35% of its total energy was derived from fat, "high saturated fat" if >10% of its calories was

derived from saturated fat, and “high sugar” if >25% of energy was derived from sugar as per the upper limits of the Acceptable Macronutrient Distribution Range for children ages 4 to 18 years (21). “Low fibre” was defined as a food or beverage with <1.15 grams per serving while “high sodium” was defined as >380 mg per serving as per Powell et al. (14) who derived these cut-offs from the Dietary Reference Intakes (21). Foods were classified as “high fat or high sugar” if they met either the “high fat” or “high sugar” cut-off and were defined as “high fat, sugar or sodium” if they met the “high fat”, or “high sugar” or “high sodium” criteria. Secondly, each food ad was categorized using the U.K. Nutrient Profile Model, a three step model developed by the Food Standards Agency in the United Kingdom. This model has shown good convergent, discriminate, and construct validity (22) and there is a high level of dependence between the model’s categorization and decisions made by nutrition professionals (23). This model allocates points based on the nutritional content of 100 g of the food/beverage while considering energy, saturated fat, total sugar, sodium, fruit, vegetable and nut content, fibre and protein. It identifies foods/beverages as “less healthy” when foods score 4 points or more and beverages score 1 point or more. Those foods and beverages that did not fall into the “less healthy” category, we defined as “healthier” in this study.

All data was inputted and analyzed using PASW Statistics 17.0 (SPSS, 2009). Descriptive statistics were first tabulated. One-way ANOVA’s were calculated to assess group mean differences and were followed-up with post-hoc tests adjusted for multiple comparisons using the Bonferroni adjustment. When variances were not equal, the Brown-Forsythe test of equality of means was undertaken and post hoc analyses with the Dunnett C correction were completed. Non-parametric chi square analyses were also undertaken to determine expected group membership.

Results

Children's preferred television viewing

Children's specialty stations accounted for the majority of the 30 hours of preferred programming for each group: 87%, 62% and 93% for English Ontario, French Quebec and English Quebec viewers respectively. The preferred programming of children within the French Quebec group did not overlap with either English group, however, 30% of the Ontario English preferred programming fell within the preferred programming of the Quebec English group for a total of 9 hours. Further detail of children's preferred viewing has already been described elsewhere (17).

Total Number of Advertisements

In the 90 hour content analysis, there were a total of 1809 advertisements including 449 (25%) food/beverage advertisements and 104 distinct food/beverage products. Table 1 lists the distinct food and beverage products and the number of times that each food/beverage item was advertised in each of the three groups' 30 hours of preferred viewing. Note that in Table 2, as well as in subsequent tables, the total number of analyzed food/beverage advertisements is 427 rather than the 449 indicated above. This reduction reflects that the nutritional content of 22 food/beverage advertisements was not coded, as no specific food or beverage product was featured during these advertisements (i.e. the advertisement was for a brand). In the English Ontario sample, 7 of these advertisements featured dine-in restaurants while 3 featured fast food restaurants. In the French Quebec sample, 1 advertisement featured a fast food restaurant while 2 featured a supermarket chain. Finally, in the English Quebec sample, 8 advertisements were for dine-in restaurants while only one was for a fast food restaurant.

Macronutrients per 100 g of food

As outlined in Table 2, the mean total fat in grams per 100 grams of each food and beverage advertisements differed significantly across all three groups ($F(2,283) = 5.6, p = .004$). Post hoc tests revealed that the food/beverage advertisements in the preferred Quebec French viewing were significantly higher in total fat than the advertisements viewed by the Ontario English group ($\bar{\chi} = 6.4, SD = 8.3; p = .05$) and the Quebec English group ($\bar{\chi} = 7.1, SD = 8.0; p = .05$). Although food advertisements viewed by all three groups contained few trans fats, food and beverage advertisements differed in saturated fat across the three groups ($F(2, 297) = 3.3, p = .038$). In fact, advertisements viewed by the French Quebec group were significantly higher in saturated fat ($\bar{\chi} = 4.9, SD = 7.7$) compared to the Ontario English ($\bar{\chi} = 3.0, SD = 5.2; p = 0.05$) and the Quebec English ($\bar{\chi} = 3.3, SD = 5.0; p = 0.05$) food/beverage advertisements. Significant differences in carbohydrate ($F(2, 412) = 13.3, p < .001$), sugar ($F(2, 407) = 18.2, p < .001$) and energy ($F(2,367) = 4.1, p = .018$) per 100 grams were also apparent across the three groups. The Quebec French food and beverage advertisements were significantly lower in carbohydrates per 100 g ($\bar{\chi} = 25.8, SD = 26$) than both the Ontario English ($\bar{\chi} = 43.0, SD = 34.2; p = 0.05$) and Quebec English groups ($\bar{\chi} = 43.6, SD = 34.1, F = 17.8; p = 0.05$). A similar result was seen in sugar per 100 grams as the Quebec French food and beverage advertisements were significantly lower in sugar ($\bar{\chi} = 12.3, SD = 15.8$) than both the Ontario English ($\bar{\chi} = 24.4, SD = 23.1; p = .05$) and Quebec English groups ($\bar{\chi} = 27.2, SD = 24.6; p = .05$). Post hoc analyses also revealed that the Quebec French food and beverage advertisements were significantly lower in energy

per 100 g ($\bar{x}$ = 230.4, SD = 176.4) when compared to the Quebec English group ($\bar{x}$ = 282.5, SD = 148.5, p = .05).

Macronutrients as a percentage of energy

We also examined the percentage of energy from total fat, saturated fat, protein, sugar, and carbohydrate for each food/beverage advertisement. As shown in Table 3, when all 427 food/beverage advertisements were examined, on average, 25% of energy was derived from total fat, 12% from saturated fat, 13% from protein, 56% from carbohydrates and 36% from sugar. There were significant macronutrient differences as a percentage of energy in the food and beverage advertisements shown during English Ontario, French Quebec and English Quebec preferred viewing. The Quebec French food and beverage advertisements were significantly higher in average total fat as a percentage of energy ($\bar{x}$ = 29.5%, SD = 23.9%) than the Ontario English food/beverage advertisements ($\bar{x}$ = 21.5%, SD = 21.5%; p = .011). The Quebec French food and beverage advertisements were also significantly higher in protein as a percentage of energy ($\bar{x}$ = 17.2%, SD = 18.2%) than both the Ontario English ($\bar{x}$ = 11.2%, SD = 10.9%; p = 0.05) and Quebec English ($\bar{x}$ = 11.5%, SD = 12.3%; p = 0.05) food/beverage advertisements. Lastly, the French Quebec food and beverage advertisements were significantly lower in average total carbohydrates as a percentage of energy ($\bar{x}$ = 50.1%, SD = 30.1%) than the Ontario English food and beverage advertisements ($\bar{x}$ = 60.1%, SD = 30.7%; p = .023).

Macronutrients according to nutrient recommendations

When all food and beverage advertisements were examined (Table 4), 37% were considered high fat, 43% were categorized as high in saturated fat, 60% were classified as

high sugar, 19% were high in sodium and 76% were low in fibre. In total, 80% of all advertisements were high in fat or high in sugar whereas 90% were high fat, sugar or sodium. When group differences were examined, a significantly higher number of the Quebec French advertisements (63%; $\chi^2 = 28.78$, $p = .001$) emerged as high saturated fat compared to the Ontario English (32%) and Quebec English (37%) food and beverage advertisements. With regards to sugar, a significantly smaller number of Quebec French advertisements (48%; $\chi^2 = 9.9$, $p = .007$) were categorized as high sugar compared to the English Ontario (61%) and English Quebec sample (66%). Significantly fewer French Quebec advertisements were also classified as high fat, sugar or sodium (82%; $\chi^2 = 17.6$, $p = .001$) than the English Ontario (89%) or English Quebec food/beverage advertisements (97%).

The marketing of “healthier” versus “less healthy” foods

In total, a third (33.3%) of all 427 food/beverage advertisements were classified as “healthier” while the remainder (66.7%) were classified as “less healthy” as per the U.K. Nutrient Profile Model. As described in Table 5, no significant differences were found among the three groups in terms of the number of “healthier” versus “less healthy” food and beverage advertisements ($\chi^2 = 2.2$, $p = 0.337$). In all three instances, over 60% of food and beverage advertisements fell within the “less healthy” category.

Discussion

This study is the first, to our knowledge, to compare the nutritional quality of foods advertised to children in two advertising policy environments; one where advertising is self regulated by industry (in Canada excluding Quebec) and one where there is a legislated child directed advertising ban (in Quebec). We had hypothesized that foods advertised during the preferred viewing of Quebec French children would be lower in sugar compared

to foods advertised during the preferred viewing of English children from Ontario and Quebec given that products specifically designed for children are not permitted during peak child viewing in Quebec. In fact, the food and beverage advertisements in the preferred viewing of the French Quebec sample were significantly different than that seen in the preferred viewing of both English samples. The French Quebec advertisements featured food and beverage products that were significantly higher in fat and saturated fat per 100 gram, significantly higher in protein as a percentage of energy, and significantly lower in sugar and carbohydrates per 100 grams than the advertisements seen in both English groups' television viewing. In terms of the overall healthfulness of the foods and beverages advertised during each groups' preferred 30 hours of viewing, our results showed that a significantly higher number of advertisements in the French Quebec group met the threshold for high saturated fat, and a significantly lower number met the threshold for high sugar compared to the two other English groups. The French Quebec advertisements also had a significantly lower percentage of ads that were considered high fat, sugar or sodium (82%) compared to the Ontario English (89%) and Quebec English groups (97%). However, when the U.K. Nutrient Profile Model classification was considered, there were no significant differences in the overall healthfulness of the food and beverages viewed by the three groups during their preferred viewing. As such, our hypothesis that foods advertised in the Quebec French sample would be healthier was not supported.

Although the purpose of this study was not to compare the two nutritional systems of classification (i.e. the macronutrient cut-offs and the U.K. Nutrient Profile Model), two observations can be made about these findings. Firstly, the results between the two classification systems sometimes diverged, however, in all cases the majority of foods and beverages were classified as less healthy regardless of the system used. In some instances,

discrepant results may have resulted since the Nutrient Profile Model awards points for fruit, vegetable and nut content, fibre content and protein which is not considered when using macronutrient cut-offs. Secondly, the fact that both categorization systems described that the majority of foods and beverages advertised to children in Ontario and Quebec as less healthy, suggests that these foods would either, benefit from reformulation, or that they should not be marketed to children given their poor nutritional profile.

Policy Implications

Our research suggests that, regardless of the advertising policy environment, children aged 10 to 12 in Ontario and Quebec are viewing significant amounts of food and beverage advertising and, that overall, the nutritional quality of food advertisements seen on television is not in line with recommended nutritional guidelines. These results emphasize the need for policy in this area, as per Recommendation 1 of the recently endorsed WHO recommendations on the marketing of foods and beverages to children (24), which explicitly aims to reduce the impact of the marketing of foods and beverages to children. Quebec's *Consumer Protection Act* was developed in 1978 before childhood obesity was a concern, and it was not designed to limit the marketing of foods high in fat, sugar and salt.

Secondly, our results emphasize that banning commercial advertising “directed at the child”, when children consist of 15% of the viewership, and when the product featured is exclusively designed for children or appeals to children, as in the Quebec law, does not limit the amount or healthfulness of advertised food and beverage products to children. Currently, the impact of advertisements which are not “directed at the child” is unclear although recent publications on branding suggest that children recognize, understand and are influenced by branding from as early as 2 years onwards (25-27). When designing

policy aimed at limiting food marketing to children, it may be necessary to include marketing that is not specifically directed at the child.

Our research also demonstrates the influence of cross-border marketing. Originally, we hypothesized that the effect of the Quebec advertising ban would not extend to Quebec English subjects given their leaning to watch English television programming from outside of Quebec. This hypothesis was supported. The WHO has recently recommended that states need to cooperate to reduce cross-border marketing (24) and our results point to the need for a national policy in Canada regarding the marketing of foods and beverages high in fat, salt and sugar.

Lastly, our result shows that self-regulatory policies designed, implemented and evaluated by industry are not protecting English speaking children in Canada from high rates of nutritionally poor food advertising on television. Currently, in Canada (outside Quebec) advertising is self regulated and 19 large food, beverage and restaurant chains have committed to advertise “better for you” products or to completely eliminate food and beverage advertising to children. Not all food and beverage corporations have signed on to this initiative, and our results suggest that this self-regulatory system in Canada needs to be expanded and strengthened.

Strengths of our study include direct measurement of children’s preferred viewing, the simultaneous television taping for 7 days, our broad definition of advertising, and the rigorous application of two different nutritional criteria. Our results are limited by the smaller number of English Quebec children that determined their group’s preferred viewing, by the non-random selection of the children, and by the potential non-representativeness of our 7 day television taping although this week was chosen for its distance from major holidays which could influence advertising.

Conclusion

As has been shown with other populations of children in other countries, the diet viewed in advertisements on television by children in Canada in these two advertising policy environments is less than healthy and reflects a need for stronger regulations that focus specifically on the marketing of foods and beverages. Recent movement on this issue in the U.K., where food marketing to children up to age 16 has been banned, is encouraging, although research and policy needs to extend past the realm of television, given the extensive media environments and settings where children are targeted by food and beverage marketing.

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Disclosure

The authors have no conflict of interest to declare.

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Table 1. Foods/beverages advertised during children's preferred 90 hours of television

	Ontario English		Quebec French		Quebec English	
	Product/brand	No.	Product/brand	No.	Product/brand	No.
Candy	Baby Bottle Pop	2	Dentyne	2	Baby Bottle Pop	4
	Hershey’s Bliss	1	Juicy Fruit	1	Hershey’s Bliss	1
	Hubba Bubba products	4	Kinder Bueno	1	Hubba Bubba products	7
	Hubba Bubba Glop	5	Kit Kat Senses	5	Hubba Bubba Glop	7
	Juicy Fruit	3	Mini Eggs	2	Juicy Fruit	1
	Lindt Gold Bunny	1	Oh Henry	1	Lindt Gold Bunny	1
	Ring Pop	2	Smarties	1	Ring Pop	4
	Smarties	2	Trident Xtra Care Gum	2	Smarties	4
Total no.	20		15		29	
Snacks	Bear Paws Minis	2	Lays Classic (chips)	2	Bear Paws Minis	3
	Fruit by the Foot	2	Leclerc Cookies	7	Fruit by the Foot	4
	Gushers Fruit Flavored Snacks	2	Oreo Cookies	1	Gushers Fruit Flavored Snacks	2
	Oreo Cookies	6	Quaker Crispy Minis	2	Oreo Cookies	10
	Smart Pop	2	Special K Mocha Bar	2	Quaker Chewy Bars	2
	Quaker Chewy Bars	2	Triscuits	2	Rice Krispies Squares Bars	12
	Rice Krispies Squares Bars	3			Sponge Bob Fruit Snacks	9
	Sponge Bob Fruit Snacks	10				
Total no.	29		16		42	
Beverages	Alexander Keith’s Beer (alcohol)	1	100% Cranberry Juice Blend	1	Cheetah Power Surge	1
	Chocolate Milk (I)	3	Coors Light Beer (alcohol)	1	Coca-cola	1
	Coca-Cola	1	DanActive	5	Orange Juice (I)	1
	Orange Juice (I)	2	Nescafe Riche	1	Red Bull	1
	Pepsi	2	Pepsi	3	Skinny Cappuccino	1
	Skinny Cappuccino	2	Kiwi Bay Wine (alcohol)	1	Yoplait Yop	4
	Yoplait Yop	4	Yellow Dune Wine (alcohol)	1		
			Yoplait Yop	13		
Total no.	15		26		9	

	Ontario English		Quebec French		Quebec English	
	Product/brand	No.	Product/brand	No.	Product/brand	No.
Restaurants	Chuck E Cheese	4	Burger King : BK Burger Shots	1	Chuck E Cheese	5
	Dairy Queen	1	Harvey's: Angus Mushroom Melt	4	Harvey's: Angus Mushroom Melt	1
	Harvey's: Angus Mushroom Melt	1	La Cage aux Sports: Wings	1	McDonald's: Happy Meal	12
	Kelsey's	2	McDonald's: Big Mac Wrap	1	Montana's	1
	McDonald's: Happy Meal	8	St Hubert: Super Quart	2	Pizza Hut	3
	Montana's	1	Subway	1	Subway	1
	Pizza Hut	1	Tim Horton's: Chicken Wrap	4	Tim Horton's: Coffee	1
	Subway	2			Wendy's: The Baconator	1
	Tim Horton's: Coffee	1				
	Wendy's: The Baconator	1				
Total no.		22		14		25
Cereal	Cinnamon Toast Crunch	1	Diamond Shreddies	1	Cinnamon Toast Crunch	1
	Frosted Flakes	3	Special K 5 Grains	1	Froot Loops	1
	Honey Bunches of Oats	1			Frosted Flakes	4
	Honey Nut Cheerios	2			Honey Nut Cheerios	1
	Honeycomb	4			Honeycomb	2
	Mini Wheats	2			Multigrain Krispies	1
	Multigrain Krispies	1				
	Special K 5 Grains	2				
Total no..		16		2		10

Ontario English			Quebec French		Quebec English	
	Product/brand	No.	Product/brand	No.	Product/brand	No.
Dairy	Black Diamond Cheestrings	6	Activia (yogurt)	3	Black Diamond Cheestrings	6
	Danino (yogurt)	1	Boursin Cuisine	1	Danino (yogurt)	1
	Fun Cheez	1	Butter (I)	1	Fun Cheez	1
	Milk (I)	13	Danino (yogurt)	6	Kraft Singles Cheese Slices	1
	Philadelphia Cream Cheese	2	Milk (I)	1	Milk (I)	22
			Natrel Milk	1	Philadelphia Cream Cheese	2
			Mini Babybel (cheese)	4		
			P'tit Quebec Cheese	4		
			Silhouette 0+	6		
			Yoplait Yoptimal (yogurt)	3		
Total no.		23		30		33
Other	Eggo Waffle Original	1	Bagel-fuls Original	1	Delissio Deluex Pizza	2
	Europe's Best Frozen Fruit	2	Chicken (I)	4	Eggo Waffle Original	4
	High Liner Seafood	1	Eggo Waffle	1	Europe's Best Frozen Fruit	2
	Kraft Dinner Original	11	Europe's Best Frozen Fruit	1	Kraft Dinner Original	12
	Michelina's Entrees	1	Exceldor Chicken	1	Maple Leaf Fresh Sure Chicken	1
	Mott's Fruitsations	2	Hellmann's ½ Fat Mayo	1	Michelina's Entrees	1
	Naturegg Omega Pro	1	IGA	2	Mott's Fruitsations	2
	Wonder + (bread)	3	Maple Leaf Bologna	1	Naturegg Omega Pro	3
			Maple Leaf Ham	1	Wonder + (bread)	5
			Michelina's Entrees	2		
			Mott's Fruitsations	1		
			Naturegg Omega Pro	1		
			McCain Superfries	1		
			Toscana Pizza Grilled Vegetable	1		
Total no.		22		19		32
TOTALS		147		122		180

Table 2. Nutrients per 100 g of foods/beverages advertised during children's preferred 90 hours of television

	Ontario English, $\bar{x}$ (sd)	Quebec French, $\bar{x}$ (sd)	Quebec English, $\bar{x}$ (sd)	Total Sample, $\bar{x}$ (sd)	F (2, 424)	P
All foods/beverages						
Total fat (g)	6.4 (8.3)	10.4 (13.1)	7.1 (8.0)	7.8 (9.9)	5.6	0.004
Saturated fat (g)	3.0 (5.2)	4.9 (7.7)	3.3 (5.0)	3.6 (6.0)	3.3	0.038
Trans fat (g)	0.1 (0.3)	0.2 (0.5)	0.1 (0.4)	0.2 (0.4)	0.6	0.541
Protein (g)	5.9 (6.5)	7.4 (7.4)	5.6 (6.0)	6.2 (6.6)	2.7	0.068
Carbohydrate (g)	43.0 (34.2)	25.8 (26.0)	43.6 (34.1)	38.5 (32.9)	13.3	0.001
Sugar (g)	24.4 (23.1)	12.3 (15.8)	27.2 (24.6)	22.1(22.8)	18.2	0.001
Sodium (mg)	279.3 (258.3)	257.2 (303.9)	290.5 (269.6)	277.7 (275.8)	0.5	0.598
Fibre (g)	1.9 (3.1)	1.4 (2.6)	1.3 (2.1)	1.5 (2.9)	2.1	0.126
Energy (kcal)	273.3 (145.8)	230.4 (176.4)	282.5 (148.5)	265.0 (157.1)	4.1	0.018
No. (%)	137 (100.0)	119 (100.0)	171 (100.0)	427 (100.0)		

Table 3. Nutritional content of foods/beverages advertised during children's preferred 90 hours of television

	Ontario English, $\bar{x}$ (sd)	Quebec French, $\bar{x}$ (sd)	Quebec English, $\bar{x}$ (sd)	Total Sample, $\bar{x}$ (sd)	F (2, 424)	P
All food/beverages						
Total fat (%)	21.5 (21.5)	29.5 (23.9)	24.1 (20.7)	24.8 (22.0)	4.4	0.013
Saturated fat (%)	10.2 (13.0)	14.0 (14.5)	11.1 (12.3)	11.6 (13.3)	3.0	0.051
Protein (%)	11.2 (10.9)	17.2 (18.2)	11.5 (12.3)	13.0 (14.0)	7.2	0.001
Sugar (%)	37.7 (27.3)	30.5 (30.4)	38.5 (25.7)	36.0 (27.8)	3.2	0.041
Carbohydrate (%)	60.1 (30.7)	50.1 (30.1)	56.9 (29.6)	56.0 (30.3)	3.7	0.026
Sodium (mg) per serving	170.9 (228)	166.9 (273.6)	181 (233.6)	173.8 (243.2)	0.1	0.876
Fibre (g) per serving	1 (1.4)	0.9 (1.4)	0.7 (1.0)	0.9 (1.3)	1.4	0.258
No. (%)	137 (100.0)	119 (100.0)	171 (100.0)	427 (100.0)		

Table 4. Nutritional content of foods/beverages advertised during children's preferred 90 hours of television according to recommendations

	Ontario English, No. (%)	Quebec French, No. (%)	Quebec English, No. (%)	Total sample, No. (%)	χ^2 (df=2)	P
Nutrition recommendations						
High fat	43 (31.4)	45 (37.8)	68 (39.8)	156 (36.5)	2.4	0.298
High saturated fat	44 (32.1)	75 (63.0)	63 (36.8)	182 (42.6)	28.78	0.001
High sugar	84 (61.3)	57 (47.9)	113 (66.1)	254 (59.5)	9.9	0.007
High sodium	27 (19.7)	15 (12.6)	38 (22.2)	80 (18.7)	4.4	0.111
Low fibre	101 (73.7)	89 (74.8)	136 (79.5)	326 (76.3)		
High fat or high sugar	106 (77.4)	90 (75.6)	147 (86.0)	343 (80.3)	5.9	0.053
High fat, sugar or sodium	122 (89.1)	97 (81.5)	165 (96.5)	384 (89.9)	17.6	0.001
No. (%)	137 (100.0)	119 (100.0)	171 (100.0)	427 (100.0)		
UK Nutrient Profile Model						
Less healthy	94 (68.6)	73 (61.3)	118 (69.0)	285 (66.7)		
Healthier	43 (31.4)	46 (38.7)	53 (31.0)	142 (33.3)		
No. (%)	137 (100.0)	119 (100.0)	171 (100.0)	427 (100.0)		

3.3 Self regulation by Industry in Food Marketing is Having Little Impact During Children's Preferred Television Viewing

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Abstract

Objective: To examine the efficacy of self-regulation of food marketing to children by comparing, during children's preferred viewing on television, the differences in food and beverage marketing between two groups of corporations: 17 corporations participating in the *Children's Food and Beverage Advertising Initiative* (CAI) and 35 corporations not participating (non-CAI) in this initiative.

Methods: The food/beverage marketing activities of CAI and non-CAI corporations during 99.5 hours of children's preferred viewing on television were compared. First, we determined the preferred television viewing of 272 children ages 10-12 who completed TV viewing journals for a 7 day period. Thirty-two television stations were simultaneously recorded, and a content analysis of children's preferred viewing was conducted and included coding all food/beverage promotions (advertisements, contests and sponsorship announcements) and their nutritional content. Each food/beverage promotion was classified by corporation type (i.e. CAI or non-CAI.)

Results: The CAI was responsible for significantly more food/beverage promotions, more candy/snack and restaurant promotions and used media characters more frequently in their food/beverage promotions than the non-CAI group. Nutritionally, the CAI food/beverage promotions were higher in fats, sugar, sodium and energy per 100 grams. A significantly greater proportion of the CAI food/beverage promotions were considered "less healthy" compared to the non-CAI promotions.

Conclusion: With the exception of the 4 corporations that did not market to children at all, the commitments that have been made in the CAI are not having a significant impact on the food and beverage marketing environment on television which is preferred by 10-12 year olds.

Introduction

It has been estimated that 10% of the world's school-aged children are overweight and at increased risk for the development of chronic disease (1). Childhood obesity has recently been declared a "national health crisis" in the United States (2). Currently, in the 9 to 13 year old age group in Canada, 31% of boys and 28% of girls meet the criteria for either overweight or obesity and it is estimated that 3 of every 10 adolescents aged 9 through 18 has an energy intake that exceeds their caloric needs (3).

Childhood obesity has been shown to be associated with the marketing of food and beverages (4). The World Health Assembly recently endorsed the draft WHO recommendations which state that there is a clear rationale for member states to develop policy that will reduce the impact of the marketing of foods and beverages that are high in fats, sugars and salt on children (5).

The majority of governments, (for instance Canada, the United States, Australia, Spain) are, for the most part, currently relying on the food, beverage and restaurant industry to self-regulate in the area of food/beverage marketing directed towards children (6). However, there is no scientifically-based evidence that such a policy model is reducing children's exposure to food marketing or stemming childhood obesity rates(7). Since the introduction of increased self-regulatory marketing measures in the United States, television food advertising, overall, has declined for children 2-11 years and increased for children 12-17 years from 2002/2003 levels (8-9). However, no changes have been observed in specific sub-categories of television food advertising directed at children such as sugary breakfast cereals (9). No research to our knowledge, has examined the efficacy of self-regulation by comparing the marketing activities of food, beverage and restaurant

corporations participating in self-regulatory marketing initiatives to those that are not participating in such initiatives.

The Children's Food and Beverage Advertising Initiative (CAI) was announced in April 2007 in Canada and was fully implemented by December 2008. Within this initiative, 17 large food and beverage manufacturers, including Burger King Restaurants of Canada Inc., Campbell Company of Canada, General Mills Canada Corporation, Kellogg Canada Inc., Kraft Canada Inc., McDonald's Restaurants of Canada Ltd., Nestle Canada Inc., Parmalat Canada Inc., and Weston Bakeries Limited pledged to devote 50% of their child-directed advertising on television, radio, print and the Internet to "healthier dietary choices". Cadbury Adams Canada Inc., Coca-Cola Canada, Hershey Canada Inc., Janes Family Foods Ltd., Mars Canada Inc., McCain Foods Canada, PepsiCo Canada, and Unilever Canada Inc., for their part, pledged to not direct any advertising to children under age 12. The CAI corporations also pledged to reduce their use of third party licensed characters, and eliminate product placement and advertising in elementary schools. Each corporation independently developed its own nutrition criteria, and definition of "advertising directed primarily to children under 12 years of age" (10).

The purpose of the current study is to compare the marketing practices on television of food/ beverage corporations that are participating in the CAI to those corporations not participating in the CAI in terms of the frequency and repetition of promotions, the use of media characters, and the nutrition of the foods/beverages featured in these promotions. It is expected that, as a group, those corporations participating in the CAI will be advertising less frequently, use media characters less regularly and that their food/beverage promotions will feature foods with a superior nutritional profile compared to food/beverage promotions in the non-CAI group.

Methods

In order to compare the marketing activities of CAI and non-CAI corporations, we (1) determined children's preferred television viewing, (2) conducted a content analysis of this viewing, (3) classified each food/beverage promotion by corporation type (i.e. CAI or non-CAI), and (4) conducted a nutritional analysis of the foods/beverages featured in every promotion.

Determination of Children's Preferred Viewing

A total of 272 subjects between the ages of 10 and 12 years were recruited from 14 schools in a large metropolitan center. Sixty-two percent of the sample was female and 38% was male. All subjects gave oral assent, their parents gave informed consent and each school and school board with participating students approved the study. From March 26 through April 1 2009, a week selected because it did not include school or statutory holidays, each participant completed a television viewing diary (11). During this same week, a third party-contractor recorded 32 television stations of potential appeal to participants from 6 am to midnight on a multi-media recording server.

Children's preferred television viewing was defined as all television programs viewed by at least 5 children in the sample. This resulted in a sample of 99.5 hours of television viewing. Two sub-samples of preferred viewing were then created from this sample: an 87.5 hour sample which only included programming from children's specialty channels, and a 12 hour sample which only included children's preferred viewing from generalist stations.

The Content Analysis of Children's Preferred Viewing

A content analysis of all the non-programming content in the total 99.5 hours was conducted and included the systematic documentation of type and length of promotion, the station on which it aired, the type of food or beverage being promoted, and the presence of media characters. The content analysis was conducted by a research assistant who had completed two days of training. All food and beverage promotions were coded twice by the research assistant and the main researcher reviewed a random sample of 15% of these promotions to ensure reliability. Inter-coder agreement was 97%.

Food/beverage promotions included advertisements, contests and sponsorship announcements that featured a food, beverage or restaurant. These varied in length between 5 and 45 seconds ($\bar{x}$ = 20.3 seconds). Foods were categorized into the following categories: candy and snacks, beverages, restaurants, grains, dairy, fruit and vegetables, meat and alternatives, prepared foods and other. Media characters included the presence of licensed characters, movie or sports celebrities, and company-created mascots (i.e. Tony the Tiger) in the advertisement. Media characters were coded as promoting a food/beverage product if they endorsed the product/restaurant verbally (i.e. They're great!) or non-verbally.

The Classification of Promotions by Corporation Type

Once the content analysis was complete, we determined which corporation was responsible for every promotion by researching product names online. Next, corporations were either classified as CAI or non-CAI. CAI corporations were those corporations participating in the *Children's Food and Beverage Advertising Initiative* at the time that data was collected in March/April 2009 ($n = 17$). Non-CAI corporations were those not participating in this initiative at this time. The food categories in which corporations sell

and manufacture products was determined through online research on Canadian corporate websites. Company size rankings (top 50 quick-serve restaurants in North-America, top 100 food processing in North America, top 100 candy manufacturing world-wide) were obtained through trade journal articles published online (12-14).

The Collection of Nutritional Information

The nutrient information for the featured food during the promotion was collected from, in order of priority, company websites, direct contact with the corporation, product labels, the Canadian Nutrient File and the USDA National Nutrient Database. When many food and or beverage items were featured in a promotion, the nutritional information of all products was averaged. When complete meals were highlighted (such as chicken tenders, apple slices and a drink), the nutritional information for two main food items (i.e. chicken and apple) were added together (i.e. the energy for the chicken plus the energy for the apple).

The nutritional information gathered included total fat, saturated fat, trans fat, protein, carbohydrate, sugar, fibre, sodium, and energy per 100g of each advertised food. Liquids were first converted to 100 milliliter servings and then to 100 gram servings by multiplying by the specific density of foods (15). The Atwater general factor system (16) was used to calculate the total fat, saturated fat, trans fat, protein, carbohydrate, and sugar as a percentage of energy. Each food/beverage was also categorized using the 3-step U.K. Nutrient Profile Model developed by the Food Standards Agency in the U.K. This model allocates points to foods based on the energy, saturated fat, total sugar, sodium, fruit, vegetable, nut, fibre and protein content of 100 grams of a food/beverage. Foods that score 4 points or more and beverages that score 1 point or more are categorized as “less healthy”.

In this study, foods that did not fall into this category were defined as “healthier”. The U.K. Nutrient Profile Model has been shown to classify foods in a manner that is consistent with the decisions made by dietitians (17). It has also shown good construct, convergent, discriminate validity (18).

Analysis

All data was inputted and analyzed using PASW Statistics 17.0 (SPSS, 2009). Non-parametric chi square analyses were undertaken in order to compare CAI and non-CAI expected promotion frequencies to actual promotion frequencies, to compare the use of media characters and to compare the frequencies of foods classified according to the U.K. Nutrient Profile Model. Weighted chi-square analyses were used to examine the frequency of promotions by food categories. Weights were based on the number of food categories in which CAI and non-CAI corporations actually manufacture and sell (as described in Table 1). T-tests were calculated to determine group differences in average nutrient content.

Results

Children’s Preferred Television Viewing

Children’s preferred television viewing consisted of 99.5 hours of programming drawn from 11 television stations including 3 children’s stations (87.5 hours) and 8 generalist stations (12 hours).

Comparison of CAI and Non-CAI Corporations

During children’s 99.5 hours of preferred viewing, 13 CAI corporations and 35 non-CAI corporations were responsible for all the food/beverage promotions. During the 87.5 hours that consisted exclusively of preferred viewing on children’s specialty channels, 9 CAI corporations and 16 non-CAI corporations were responsible for the food/beverage promotions. The CAI corporations that advertised during children’s total preferred viewing

consisted of 13 multinational corporations whereas the non-CAI corporations consisted of 6 Canadian corporations, 1 American corporation and 28 multinational corporations. The CAI corporations that advertised included 1 restaurant chain, 7 food-related corporations, 1 beverage-related corporation, and 4 corporations that manufacture both food and beverages. The non-CAI corporations were more diverse and included 12 restaurant chains, 10 food manufacturers, 1 beverage manufacturer, 4 corporations that manufacture both food and beverages, 5 corporations that exclusively manufacture/bottle alcoholic beverages and 3 industry associations. Size comparisons between CAI and non-CAI corporations were difficult due to inconsistent financial reporting between corporations and lack of public information available regarding private corporations. However, all CAI corporations were ranked in 2009 trade articles as being in the top 100 food/beverage processors or top 50 quick serve restaurants or confectionary manufacturers. Only 43% (n = 15) of non-CAI corporations were ranked in the top of their categories, 20% did not meet these rankings and 37% were not ranked (10 private companies and 3 industry groups). Table 1 identifies the food categories in which CAI and non-CAI corporations manufacture or sell food products. Many corporations have product lines in multiple food categories.

Length of Food/beverage Promotions

CAI promotions ranged in length between 5 and 45 seconds and were longer at an average 21.3 seconds in length (SD = 9.2) compared to non-CAI promotions ($\bar{x}$ = 18.6, SD = 9.7; $t = 3.028$, $p = .003$) which ranged in length between 5 and 30 seconds.

Frequency of Food/beverage Promotions

In the 99.5 hours of children's preferred television programming, there were 2017 total promotions and 24% of these were food/beverage promotions (n = 481). A similar rate

of food/beverage promotions (24%) was found for both the preferred viewing on children's specialty channels (87.5 hours) and the preferred viewing on generalist stations (12 hours). The frequency of CAI and non-CAI advertisements, contests, sponsorship announcements and total food and beverage promotions is provided in Table 2 for the total children's preferred viewing (99.5 hours), the 87.5 hours sample and the 12 hour sample.

The Most Frequent Advertisers

The top three advertisers in the total 99.5 hours of preferred viewing were CAI members (General Mills Canada Corporation, Kraft Canada Inc., Kellogg Canada Inc.) and their promotions (n = 167) accounted for 35% of the total number of food/beverage promotions. When we examined children's preferred viewing that occurred exclusively on children's specialty channels (n = 87.5 hours), the same three CAI corporations were responsible for 39% of the total food and beverage promotions.

The five most frequent CAI advertisers in the total sample of 99.5 hours (General Mills Canada Corporation, Kraft Canada Inc., Kellogg Canada Inc., Mars Canada and McDonald's Restaurants of Canada Ltd.) were responsible for 80% of the CAI promotions whereas the five most frequent non-CAI advertisers (Dairy Farmers of Canada, Topps Company Inc., Post Foods Canada Corp., CEC Entertainment Inc., and Ultima Foods) were responsible for 57% of the non-CAI food/beverage promotions. When we examined only those preferred hours that occurred on children's specialty channels, 9 CAI corporations and 16 non-CAI corporations were responsible for all the food/beverage promotions. In this sub-set of preferred viewing, the same top 5 CAI advertisers were responsible for 85% of the food/beverage promotions, whereas the same top 5 non-CAI advertisers, were responsible for 74% of the non-CAI food/beverage promotions.

Number of Products and Repetition of Advertisements

Whereas in the total sample of 99.5 hours, the CAI advertised 46 different food/beverage/restaurant products, the non-CAI advertised 51 different products. Nine (20%) of the CAI products and 5 (10%) of the non-CAI products were repeated more than 10 times in the sample of 99.5 hours of preferred television. In the 87.5 hour sample of preferred programming on children's specialty channels, the CAI advertised 27 different food/beverage products, 9 (33%) of which were repeated more than 10 times. The non-CAI advertised 20 different products and 5 (25%) were repeated more than 10 times. Table 3 provides a list of these products and the number of times they were repeated in the 87.5 hour sample.

Use of Media and Licensed Characters

In children's total preferred programming, 7 CAI corporations and 6 non-CAI corporations used media characters in their food/beverage promotions. During children's preferred viewing on children's specialty channels (87.5 hours), 5 CAI corporations and 2 non-CAI corporations used media characters in their food/beverage promotions. Table 4 summarizes the use of media characters during food and beverage promotions in the 99.5 hour, 87.5 hour, and 12 hour generalist preferred programming.

In the 99.5 preferred children's hours, 82 (90%) of 91 CAI promotions with media characters promoted "less healthy" foods or beverages (as defined by the UK Nutrient Profile Model) while 13 (48%) of 27 of the non-CAI promotions with media characters promoted these foods. In the 87.5 hour sample, 72 (92%) of 78 CAI promotions with media characters promoted "less healthy" foods or beverages while 9 (45%) of 20 of the non-CAI promotions with media characters promoted these foods. In both the 99.5 hour ($\chi^2 = 23.4$, $p < .001$) and 87.5 hour samples ($\chi^2 = 24.8$, $p < .001$), the CAI advertisements with

media characters were significantly more likely to promote “less healthy” foods than the non-CAI group.

Food Category Analysis

The frequency of food and beverage promotions by food categories is presented in Table 5 for both the 99.5 hour and the 87.5 hour samples. In the total preferred viewing sample, the most frequently advertised CAI food products were drawn, in order of importance, from the candy and gum, fruit rolls/snacks, prepared foods, fast food restaurants and cold cereal food categories. For the non-CAI group, the most frequently advertised food categories include milk, candy and gum, fast food restaurants, dine-in restaurants, and cold cereal.

Nutrition Analysis

The CAI food and beverage promotions were significantly higher in fats, sugar and sodium per 100 grams. Table 6 compares the average macronutrient composition, fibre, sodium and energy per 100 grams of the foods or beverages featured in the promotions of the CAI and non-CAI corporations in the total children’s preferred viewing. Total fat, saturated fat, protein, carbohydrate, and sugar as a percentage of energy and fibre and sodium per serving are compared in Table 7. When the CAI and non-CAI food and beverage promotions were classified according to the UK Nutrient Profile Model, a significantly greater number of CAI promotions were classified as “less healthy”. More precisely, 243 (80%) of the CAI food/beverage promotions were considered “less healthy” compared to 97 (55%) of the non-CAI promotions ($\chi^2 = 34.0$, $p = .001$).

Discussion

Overall, the results of this study indicate that self regulation by industry in food and beverage marketing to children is having little impact on children’s food marketing

environment. In fact, compared to the non-CAI group, the CAI group was responsible for significantly more food/beverage promotions during children's total preferred viewing and during their preferred viewing on children's specialty channels (including significantly more food/beverage advertisements, contests and sponsorship announcements in both instances). Contests and sponsorship announcements, in fact, accounted for 29% of CAI promotions during children's total preferred viewing. It is unclear as to whether such forms of promotion on television are covered in CAI definitions of "advertisements directed primarily to children under 12" however, it is likely that advertising is being defined in a very narrow sense by many of the CAI corporations and excluding such forms of marketing.

Advertisement repetition, which has been shown to affect child preferences and behaviours (19), and the use of media characters also figured significantly more frequently in the CAI advertisements compared with non-CAI advertisements. CAI pledges specify reduced use of licensed characters for products that do not meet nutritional criteria and while licensed characters were used on a limited basis in children's preferred viewing, company created mascots are featured in 22% of all CAI food/beverage promotions. In addition, the CAI promotions with media characters were significantly more likely to promote "less healthy" foods than the non-CAI group. Similar results have been described in Australia (20). There is no literature to our knowledge which compares the impact of licensed characters versus company created mascots in television commercials however, evidence shows that characters are effective at attracting children's attention, increasing product recognition and inducing favourable attitudes toward a product (21-22). Although research needs to be completed in this area, it seems likely that company created mascots would have a similar influence on children's preferences.

We expected the CAI food/beverage promotions to have a nutritional profile that was superior to the non-CAI food/beverage promotions although this was not the case. Compared to the non-CAI group, there were significantly more CAI candy and snacks and fast food restaurant promotions than one would expect even given the food categories in which CAI and non-CAI corporations manufacture food and beverages. Nutritionally, the CAI food/beverage promotions also fared more poorly than the non-CAI promotions with 80% of CAI featured foods/beverages falling into the “less healthy” category according to our U.K. Nutrient Profile Model analysis. Per 100 grams, the CAI food and beverage promotions featured products that were significantly higher in fats, sugar, sodium and energy compared to non-CAI food/beverage advertisements. Overall, these results point to the need for more stringent consistent nutrition standards that are scientifically based. Currently the CAI nutrition criteria vary significantly between corporations and many of the products which fit these nutritional criteria seem of questionable nutritional value.

Despite the fact that the CAI corporations are fairly homogeneous, not all CAI corporations are behaving similarly. Food and beverage marketing during children’s preferred viewing is highly concentrated in the hands of 5 large multi-nationals whom are responsible for 80% of this type of marketing. Some other corporations are marketing at low levels, while others are not marketing at all. Four CAI corporations did not advertise during the 99.5 hours of children’s total preferred viewing and 8 CAI corporations did not advertise foods or beverages during the sub-set of children’s preferred viewing that only included children’s specialty channels (Burger King, Cadbury Adams, Campbell’s, Coca Cola, Hershey, Jane’s, McCain’s, and Unilever.) Voluntary participation in self-regulations to curb marketing directed at children can place corporations who choose to participate at a competitive disadvantage (23). As such, given their fiduciary and legal responsibilities to

shareholders, most corporations who choose to participate commit to weak marketing restrictions. However, our data shows that even within self-regulation schemes, the competitive playing field is not level amongst CAI corporations. Solutions to either encourage participation in self-regulatory initiatives must be sought as voluntary participation is not sufficient and may lead to competitive inequities among food and beverage corporations.

Strengths and Weaknesses

It can be argued that the CAI and non-CAI groups represent different groups of corporations. Ideally, we would have compared the size of those corporations participating in the CAI and those in the non-CAI group. However, given the inconsistency of financial reporting, we compared the corporations on a number of variables including the type of corporation, the food categories in which they manufacture and by the existence of company rankings. The CAI group is more homogeneous than the non-CAI particularly given that it is formed exclusively of large publically-traded multi-nationals. Restaurants and beverage manufacturers, non-publically traded corporations and local (national) corporations are sparsely represented or not represented at all in this group. It is important to keep these differences in mind when examining the data however, despite these differences, one would still expect to see contrasts between the marketing activities of the CAI and non-CAI particularly given that 15 non-CAI corporations were ranked in the top of their categories.

Other weaknesses include that the determination of children's preferred viewing and the television recording was conducted over one week period that may not have been representative of children's viewing habits or television programming at other points during the year. Also, the viewing sample was based on what self-selected children ages 10 to 12

watch on television therefore, our results may not be generalizable to what older or younger children in Canada are viewing.

Our selection of the 10-12 year old age segment is a strength of the study. It has been suggested (8), that corporations participating in self-regulatory initiatives may be focusing their advertising on programs which fall slightly above their cut-offs for child viewing. Currently the corporations participating in the CAI have inconsistent definitions of “programming directed primarily at those under 12 years”. Child audience thresholds vary from 30-50-% of the audience. These definitions appear to simply limit the time to which the marketing restrictions apply. Here again, consistency across corporations and more stringent audience thresholds, such as 15% in the province of Quebec, would improve children’s food/beverage marketing environments on television. Other strengths include our direct measure of children’s preferred viewing, the simultaneous taping of 32 television stations over a 7 day period and a definition of promotions which included all advertisements, contests and sponsorship announcements that were 5 seconds or more in duration.

Conclusion

This study only addresses some of the commitments made by CAI corporations. Future research needs to independently evaluate commitments that have been made by CAI corporations in other areas such as the use of product placement in television and movies and in-school marketing activities. To date, two annual compliance reports have been published that demonstrate that CAI participants, with few exceptions, are meeting their own commitments (10;24). As Wilde (25) indicates, what these evaluations fail to show is whether these corporate pledges are stringent enough to actually change children’s food and beverage marketing environment. To accomplish this goal, specific and measurable

indicators would need to be developed that are clearly linked to self-regulatory objectives (6).

Since our data collection, two new corporations (Ferrero Canada Ltd., and Post Foods Canada Corp.) have joined the CAI. In 2010, the CAI enhanced its pledges and corporations committed to devote 100% of their child-directed advertising to “better for you” products. Each corporation continues to define this term independently and inconsistently. The scope of the included media has been expanded to include video and computer games, “G” rated (general audience) DVD’s and mobile media that is directed to children under the age of 12 (10). While commendable, it is unlikely that such changes will have a measureable influence on children when participation remains voluntary and when commitments are heterogeneous and not necessarily based on sound scientific principles of nutritional research.

Wansink and Huckabee have stated that “...food companies are not focused on making people fat, they are focused on making money” (p. 159) (25). Neither are food companies focused on keeping people thin. The *Children’s Food and Beverage Initiative* is not likely having a positive influence on children’s food and beverage intake and their obesity rates. The food and beverage industry can, if it chooses, play a significant role in curbing childhood obesity rates. While some food and beverage corporations have stepped up to the plate in this regard, others are simply paying lip service to the childhood obesity crisis and are “...not yet fully engaged with the seriousness and urgency” of the current childhood obesity epidemic (p. 330) (26). Future research should examine the progress of those corporations participating in the CAI. However, in the meantime, governments may want to consider alternatives to self-regulation in marketing to children in order to protect the health of our children.

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Table 1. Food categories in which CAI and non-CAI corporations manufacture/sell products

	CAI	Non-CAI
Candy and snacks	8	6
Beverages	5	13
Restaurants	1	12
Grains	6	3
Dairy	3	4
Fruit and vegetables	2	5
Meat and alternatives	1	4
Prepared foods	6	6
Other	5	5
Total no. of corporations	13 ^a	35 ^a

^a Numbers do not add up as corporations sell/manufacture in more than one food category type

Table 2. Frequency of food and beverage promotions during children's preferred viewing

	CAI No. (%)	Non-CAI No. (%)	P No. (%)
99.5 hrs preferred tv			
Ads	216 (71)	165 (93)	p = 0.009
Contests	32 (11)	7 (4)	p = 0.001
Sponsorships	55 (18)	6 (3)	p = 0.001
Total promotions	303 (100)	178 (100)	p = 0.001
Rate of promotions	3.0/hr	1.8/hr	
87.5 hrs preferred children's tv			
Ads	181 (69)	120 (93)	p = 0.001
Contests	28 (11)	7 (5)	p = 0.001
Sponsorships	53 (20)	2 (2)	
Total promotions	262 (100)	129 (100)	p = 0.001
Rate of promotions	3.0/hr	1.5/hr	
12 hrs preferred generalist tv			
Ads	35 (85)	45 (92)	p = 0.264
Contests	4 (10)	0 (0)	
Sponsorships	2 (5)	4 (8)	
Total promotions	41 (100)	49 (100)	p = 0.399
Rate of promotions	3.4/hr	4.1/hr	

Table 3. Foods and beverages advertised more than 10 times during 87.5 hrs of children's specialty station programming

	<u>CAI</u>		<u>Non-CAI</u>	
	Product/brand	No. of repeats	Product/brand	No. of repeats
Candy and snacks	Oreo Cookies	12	Baby Bottle Pop	13
	Gushers Fruit Snacks	11	Ring Pop	13
	Hubba Bubba products	15		
	Hubba Bubba Glop	18		
	Rice Krispies Squares Bars	18		
	Sponge Bob Fruit Snacks	28		
Beverages			Yoplait Yop	10
Restaurants	McDonald's: Happy Meal	32	Chuck E Cheese	11
Dairy	Cheestrings	17	Milk	36
Prepared Foods	Kraft Dinner Original	33		

Table 4. Presence of media characters in food and beverage promotions during children's preferred viewing

	CAI No. (%)	Non-CAI No. (%)	P
99.5 hrs preferred tv			
Media character appearance	91 (30)	27 (15)	p < 0.001
Licensed characters	15	0	
Celebrities	9	0	
Company created mascots	67	27	
Media character promotion	38 (13)	12 (7)	p = 0.029
Total food/beverage promotions	303 (100)	178 (100)	
87.5 hrs preferred children's tv			
Media character appearance	78 (30)	20 (16)	p = 0.002
Licensed characters	15	0	
Celebrities	3	0	
Company created mascots	60	20	
Media character promotion	37 (14)	11 (9)	p = 0.075
Total food/beverage promotions	262 (100)	129 (100)	
12 hrs preferred generalist tv			
Media character appearance	13 (32)	7 (14)	
Media character promotes	1 (2)	1 (2)	
Total food/beverage promotions	41 (100)	49 (100)	

Table 5. Frequency of promotions by food and beverage categories (%) during children's preferred viewing hours

Food category (sub-categories)	<u>99.5 hrs all programming</u>				<u>87.5 children's programming</u>			
	CAI No. (%)	Non-CAI No. (%)	Total No. (%)	P	CAI No. (%)	Non-CAI No. (%)	Total No. (%)	P
Candy and snacks	140 (46.2)	40 (22.5)	180 (37.4)	p < 0.001	129 (49.2)	40 (31.0)	163 (41.7)	p = 0.001
Candy and gum	51 (16.8)	32 (18.0)	83 (17.3)		44 (16.8)	32 (24.8)	76 (19.4)	
Fruit rolls and snacks	48 (15.8)	0	48 (10.0)		48 (18.3)	0	48 (12.3)	
Cookies and cookie dough	14 (4.6)	6 (3.4)	20 (4.2)		12 (4.6)	6 (4.7)	18 (4.6)	
Granola bars and cereal bars	25 (8.3)	0	25 (5.2)		25 (9.5)	0	25 (6.4)	
Chips and crackers	2 (0.7)	2 (1.1)	4 (0.8)		0	2 (1.6)	2 (0.5)	
Beverages	10 (3.3)	25 (14.0)	35 (7.3)	p = 0.917	0	10 (7.8)	10 (2.6)	
Yogurt drinks	0	10 (5.6)	10 (2.1)		0	10 (7.8)	10 (2.6)	
Regular soft drinks, energy drinks	5 (1.6)	3 (1.7)	8 (1.7)		0	0	0	
Other	5 (1.6)	6 (3.4)	11 (2.3)		0	0	0	
Fruit juices (100% fruit)	0	2 (1.1)	2 (0.4)		0	0	0	
Chocolate milk (low fat)	0	4 (2.2)	4 (0.8)		0	0	0	
Restaurants	35 (11.6)	44 (24.8)	79 (16.4)	p < 0.001	32 (12.2)	20 (15.5)	52 (13.3)	p < 0.001
Fast food restaurants	35 (11.6)	22 (12.4)	57 (11.9)		32 (12.2)	6 (4.7)	38 (9.7)	
Dine-in restaurants	0	22 (12.4)	22 (4.6)		0	14 (10.9)	14 (3.6)	

Food category (sub-categories)	CAI No. (%)	Non-CAI No. (%)	Total No. (%)	P	CAI No. (%)	Non-CAI No. (%)	Total No. (%)	P
Grain products	47 (15.5)	13 (7.3)	60 (12.5)	p = 0.055	39 (14.9)	12 (9.3)	51 (13.0)	p = 0.137
Cold cereal	31(10.2)	12 (6.7)	43 (8.9)		27 (10.3)	11 (8.5)	38 (9.7)	
Other	16 (5.3)	1 (0.6)	17 (3.5)		12 (4.6)	1 (0.8)	13 (3.3)	
Fruits and vegetables	1 (0.3)	6 (3.4)	7 (1.5)		0	5 (3.9)	5 (1.3)	
Fruits	0	6 (3.4)	6 (1.2)		0	5 (3.9)	5 (1.3)	
French fries and breakfast potatoes	1 (0.3)	0	1 (0.2)		0	0	0	
Dairy products	29 (9.6)	38 (21.3)	67 (13.9)	p = 0.974	27 (10.3)	36 (27.9)	63 (16.1)	p = 0.921
Milk (2%)	0	37 (20.8)	37 (7.7)		0	36 (27.9)	36 (9.2)	
Cheese, cheese sticks and yogurt	29 (9.6)	1 (0.6)	30 (6.2)		27 (10.3)	0	27 (6.9)	
Meat, poultry, fish and alternatives	0	9 (5.1)	9 (1.9)		0	6 (4.7)	6 (1.5)	
Prepared foods	40 (13.2)	3 (1.7)	43 (8.9)	p < 0.001	35 (13.4)	0	35 (9.0)	
Other	1 (0.3)	0	1 (0.2)		0	0	0	
Total no. of food/beverage promotions	303 (100.0)	178 (100.0)	481 (100.0)		262 (100.0)	129 (100.0)	391 (100.0)	

Table 6. Nutrients per 100 g of foods and beverages advertised during 99.5 hrs of children's preferred programming

	CAI $\bar{x}$ (sd)	Non-CAI $\bar{x}$ (sd)	Total sample $\bar{x}$ (sd)	t	P
Total fat (g)	8.2 (8.6)	5.2 (8.0)	7.1 (8.5)	3.9	p < 0.001
Saturated fat (g)	3.5 (5.3)	2.3 (4.5)	3.1 (5.0)	2.7	p = 0.007
Trans fat (g)	0.3 (0.7)	0.1 (0.2)	0.2 (0.6)	4.2	p < 0.001
Protein (g)	6.0 (6.5)	5.5 (5.2)	5.8 (6.0)	0.951	p = 0.342
Carbohydrate (g)	50.6 (32.1)	32.0 (32.9)	43.8 (33.6)	6.1	p < 0.001
Sugar (g)	28.3 (23.4)	19.5 (26.8)	25.1 (25.0)	3.7	p < 0.001
Fibre (g)	1.6 (3.5)	1.5 (2.9)	1.6 (3.3)	0.3	p = 0.744
Sodium (mg)	348.2 (276.5)	232.6 (228.4)	305.7 (265.6)	4.7	p < 0.001
Energy (kcal)	323.7 (101.5)	210.3 (164.6)	282.0 (139.4)	8.3	p < 0.001
No (%)	303 (100.0)	176 (100.0)	479 (100.0)		

Table 7. Nutritional content of foods and beverages advertised during 99.5 hrs of children's preferred programming

	CAI $\bar{x}$ (sd)	Non-CAI $\bar{x}$ (sd)	Total sample $\bar{x}$ (sd)	t	P
Total fat (%)	23.1 (23.0)	24.4 (19.3)	23.5 (21.7)	- 0.632	p = 0.528
Saturated fat (%)	10.1 (14.3)	11.9 (10.7)	10.8 (13.1)	- 1.478	p = 0.140
Protein (%)	8.5 (9.3)	15.9 (13.4)	11.2 (11.5)	- 6.475	p < 0.001
Carbohydrate (%)	60.1 (36.3)	55.0 (25.4)	58.2 (32.8)	1.822	p = 0.064
Sugar (%)	33.5 (26.6)	36.1 (28.6)	34.5 (27.4)	- 1.004	p = 0.316
Fibre (g) per serving	0.9 (1.4)	1.3 (1.9)	1.1 (1.6)	- 2.125	p = 0.003
Sodium (mg) per serving	195.0 (204.3)	311.4 (496.0)	237.8 (345.8)	- 2.973	p = 0.003
No (%)	303 (100.0)	176 (100.0)	479 (100.0)		

CHAPTER 4

DISCUSSION

4.1 Summary of Results

In summary, results from the three studies clarify that neither advertising policy in Canada, self regulation by industry in Ontario and the advertising ban in Quebec, is limiting the frequency of obesogenic food and beverage marketing seen by children ages 10 to 12 years during their preferred viewing. While we hypothesized that Quebec English subjects would be exposed to significantly more food and beverage promotions than Quebec French subjects, in fact, similar rates of food marketing were seen by Ontario English, Quebec French and Quebec English children. However, French Quebec subjects were, as predicted, exposed to significantly fewer grain (particularly cereal), candy and snack food promotions than the Ontario and Quebec English groups. We failed to hypothesize however, that the French Quebec subjects would also be exposed to more beverage promotions. In addition, the French Quebec children were targeted less frequently, and media characters were used less often than in the English groups. Food advertisements in the Quebec French sample were significantly higher in total and saturated fat, significantly lower in carbohydrates and, and higher in protein as a percentage of energy than the two English samples. As hypothesized, the food advertisements in the Quebec French sample were significantly lower in sugar per 100 grams. However, contrary to prediction, the overall healthfulness of the advertised food and beverages was similar across the three groups. Eighty two percent (82%) of the Quebec French food advertisements were classified as either high fat, sugar or sodium compared to 89% of the Ontario English and 97% of the Quebec English sample. Similar proportions of

advertisements ($\bar{\chi} = 67\%$) were classified as “less healthy” across all three groups. Finally, and contrary to what was hypothesized, as a group, the corporations participating in the *Canadian Children’s Food and Beverage Advertising Initiative* were responsible for significantly more food/beverage promotions, more candy/snack and restaurant promotions, and used media characters and repetition more frequently than those corporations who were not participating in the CAI. Nutritionally, the CAI food/beverages were higher in fats, sugar, sodium, and energy per 100 grams. Lastly, a significantly greater proportion of the CAI food/beverage promotions were considered “less healthy” (80%) compared to the non-CAI promotions (55%).

4.2 Is Self Regulation Working?

Although this research did not analyze all commitments made in the CAI, our results clearly demonstrate that the current self regulatory policies in advertising are not sufficient with regard to television advertising. As described in the individual research studies, the main problems with the CAI include the voluntary nature of the CAI and the heterogeneity of company commitments. Since the collection of our data, the CAI membership has expanded from 17 to 19 food and beverage corporations however, even with these additions, there are significant membership gaps including at least 35 (non-CAI) corporations that are advertising food and beverage products during children’s preferred viewing. The majority of large restaurant chains (fast-food and dine-in) are also notably absent from the CAI’s membership. As previously mentioned, the fact that each company has made independent and varying commitments in the CAI is also problematic. Their definition of child directed advertising with viewing thresholds that range from 25 to 50% are unlikely to capture the range of programming viewed by children particularly given that

17% of the television viewed by our subjects was viewed between 8 and 10 pm. Also, company definitions of “advertising” although not spelled out in the CAI are likely narrow and do not encompass the full range of marketing activities seen on television such as contests and sponsorship announcements, forms of marketing that were plentiful in our analyses. The CAI nutrition criteria are also variable and not sufficiently stringent given that 80% of the foods/beverages advertised in our research were classified as “less healthy”. After our data collection (in 2010), the CAI enhanced its pledges and corporations committed to devote 100% of their child-directed advertising to “better for you” products. While the effect of this change remains to be examined, definitions of “better for you” products are still defined independently by corporations and these definitions are inconsistent across the CAI. Criticism has of course been levied that corporations set their nutritional criteria in a self-serving manner (69;70). A more rigorous approach would be to have an external group of nutrition experts set this criterion. Another problem with the CAI lies with their focus on the use of licensed characters. Licensed character use during children’s preferred viewing in our research was fairly infrequent and this may represent a real change that has come about as a result of the CAI. However, when marketing to children on television, the food and beverage industry seems to be focusing instead on the use of company created mascots which likely have the same effect of licensed characters in sparking the interest and desire of the child.

4.3 Is the *Consumer Protection Act* Working?

Our research reveals that the *Consumer Protection Act* is not limiting the frequency of food and beverage advertisements seen by French children in Quebec. Although they are targeted less frequently in these advertisements and are seeing fewer cereal advertisements,

the overall healthfulness of these advertisements is poor (with 61% of food/beverage advertisements falling into the “less healthy” category). While a minority of these advertisements (30%) were directed at children, French Quebec children still viewed many advertisements for products such as gum, chocolate, cookies and fast food that were directed at adults. While the “directed at child” concept may protect children with regard to the advertisement of toys and other household related products, it does not protect children from seeing a significant amount of unhealthy food and beverage advertising. As previously mentioned, the *Consumer Protection Act* was designed in 1978 and implemented in 1980 in order to reduce the commercialization of childhood. It was not designed to reduce the impact of food and beverage marketing high in fats, salt and sugar that is seen by children. Many of these child directed advertisements would be difficult to prove in a court of law given that the definition of “child directed” elaborated in the *Consumer Protection Act*’s application guide is fairly subjective and does not provide any concrete examples.

A second problem with the *Consumer Protection Act* is that this legislation incurs no benefit for the English speaking minority living in Quebec. Although the Quebec government asserts that the *Consumer Protection Act* applies to all television broadcast within Quebec, this premise has never been tested in a court of law. Also, the food and beverage industry is certainly not interpreting the legislation in this manner. Instead, based on our research, the focus by industry seems to be on French language broadcasting in Quebec. Those watching French language television are thus receiving some benefit, while those watching English language channels broadcast from outside of Quebec are receiving no benefit. This cross-border issue, a problem that has arisen in other jurisdictions particularly since the advent of cable and satellite television, is frequently coined as the

“leaky border” of broadcasting regulations. This is not a problem which is exclusive to Quebec. It is frequently seen in all countries that border other countries with weaker marketing restrictions.

A third issue with the *Consumer Protection Act* is related the 15% viewership threshold for child directed advertising. While the actual 15% viewership threshold is strong, and a model for others to follow, the manner in which it is determined is lacking. When the “Office de la protection du consommateur” (OPC) in its *Consumer Protection Act*’s application guide refers to the 15% child viewership requirement, it provides BBM television viewing data from 1979-1980 as a guideline. This data describes children’s viewing times as Monday through Friday 7-8:30 am, 9-10:30 am, 11-12:30 pm and 4-6 pm. Saturday hours are 7-1 pm, 2-4:30 pm and 5-6 pm and Sunday hours include 7-10 am, 5-5:30 pm and 6:30-7 pm. As described in Figures 2.5-2.11, the most frequently viewed hours by children in grade 5 and 6 in our sample differ significantly from those of 1979-1980. The greatest number of children in our sample were watching television Monday through Friday between 4-9 pm. Other peaks occurred between 7 and 8 am in the mornings on weekdays. There was also high frequency of television viewing on Saturday mornings and then Sunday evening. Also interesting is that BBM, which is affiliated with Nielsen, is the only corporation to collect television viewing statistics in the province of Quebec and, it does not collect information specifically on 12 year old children. It only collects television viewing information on children that are 2 to 11 years. Given that corporations use BBM survey data to make advertising decisions in Quebec, it would seem that some important data that is required by food and beverage corporations (i.e. what 12 year olds are watching) are missing.

The final problem with the *Consumer Protection Act* is the monitoring of the *Act*. In our research, 30% of the food/beverage advertisements during the French Quebec children's preferred viewing were directed at children. These advertisements potentially violated the *Consumer Protection Act*. The food and beverage industry on French Quebec channels is most definitely pushing the boundaries of what is considered to be "child directed". Currently, the OPC relies on consumer complaints as there is no systematic monitoring of advertising directed at children. The health advocacy group Quebec Coalition on Weight-Related Problems and the consumer protection group, "Option Consommateurs" have initiated many complaints to the Office (99). Since 2008, there have been multiple cases brought against corporations in Quebec who have advertised to children. In 2009, Saputo Inc. was fined \$44,000 for distributing Igor muffins promotional materials to Quebec daycare centers (100) and General Mills Canada was fined \$2000 for inviting children on Lucky Charms cereal boxes to seek out their web site which included advertisements, games and cartoons directed at children (101). Fines were also levied at McDonald's (\$12,000) (102), and Burger King (\$12,000) in 2009 (103). In 2010, cases have been brought against Kellogg's, McDonald's, Yum! Restaurants International (Kentucky Fried Chicken), Cadbury (Trident), Yum! Restaurants International (Pizza Hut), and Nickels Restaurants for directing television advertisements at children (99).

As mentioned earlier, in 2006, the Quebec government recommended improving the enforcement and monitoring of the *Consumer Protections Act* (80). In the winter of 2009, the Quebec government sent informational booklets to Quebec households in order to inform the public about the *Consumer Protection Act* and how to lodge a complaint.

4.4 Policy Recommendations Advocated by the WHO

Policy recommendations regarding limiting marketing directed at children have been made by multiple organizations including The International Association for the Study of Obesity (IASO), The International Obesity Task Force, Consumers International (104) and the WHO (4). All have advocated the reduction of food and beverage marketing directed at children.

In 2007, resolution WHA60.23 on the prevention and control of non-communicable diseases of the Sixtieth World Health Assembly, called for the development of a set of recommendations to reduce the marketing of foods, and non-alcoholic beverages to children in order to temper the influence of foods high in fats, sugar and salt (105). Later in 2008, during the Sixty-first World Health Assembly, resolution WHA61.14, objective 3 called on Member States to develop and implement a framework on promoting responsible marketing of foods, and non-alcoholic beverages to children. Again, this resolution emphasized the goal of limiting the influence of foods and beverages high in fats, sugar and salt (106). After consultations with relevant stakeholders including member states, NGO's and the food and advertising industry, in 2009, the WHO published a set of recommendations on the marketing of foods and non-alcoholic beverages to children (107). These 12 recommendations focus on the rationale of the policy, policy development, policy implementation and policy monitoring and evaluation. In terms of the policy rationale, recommendations 1 and 2 state that the policy should aim to reduce the impact of the marketing of foods and beverages high in fats, sugar and salt on children by reducing children's exposure (defined as the "reach, frequency and impact") to this type of marketing and by reducing the power (defined as the "content, design and execution") of

these marketing messages. In terms of policy development in this area, recommendations include the consideration of a stepwise approach (which examines the power of marketing and children's exposure to marketing independently) or a comprehensive approach which restricts all high fat, sugar and salt foods to children therefore addressing the issue of the power of marketing and exposure concurrently. While both comprehensive and stepwise approaches are presented, the WHO advocates for a comprehensive approach that it describes as having the greatest potential of reducing the impact of high fat, sugar and salt foods and beverages. Next, the WHO recommends that clear definitions be used in the policy development (Rec 4) and that governments be leaders in the development, implementation, monitoring and evaluation of such policy (Rec 6). It is recommended that specific settings where "children gather" should be free from food and beverage marketing (Rec 5). Recommendations 7 and 8 specify that the most effective approach needs to be considered, that states need to cooperate in order to minimize cross-border marketing and that enforcement mechanisms need to be outlined with clear sanctions and a reporting system for complaints. In recommendation 10 and 11 a monitoring system with specific measurable indicators to ensure compliance is recommended, in addition to an evaluation system to examine the influence of the policy which relates to the aim of the policy. Lastly, the final recommendation focuses on supporting more research in this area with particular focus on the implementation and evaluation of developed policies.

The above 12 recommendations were endorsed by the World Health Assembly in May 2010. Member states were also specifically encouraged (a) to implement recommendations on food and beverage marketing, (b) to determine the best policy approach and to develop and/or strengthen existing policy in this area, (c) to establish a monitoring and evaluation system, (d) to foster inter-governmental cooperation in order to

minimize the influence of cross-border marketing, and lastly (e) to engage relevant public and private interests in implementing the recommendations (4).

4.5 Policy Recommendations for Canada: Where Should We Go From Here?

Given that our research results suggest that neither the self-regulatory system in Canada, nor the statutory advertising ban in Quebec are limiting children's exposure to obesogenic food and beverage marketing, where do we go from here? In Canada, the self regulatory approach could be improved by expanding its membership to include the majority of food and beverage corporations, and definitions of "child directed advertising", "healthier dietary choices" and "advertising directed primarily to children under 12 years of age" could be strengthened and broadened. "Child directed advertising" could be expanded to include advertisements, contests and sponsorship announcements on television, on the Internet, in print, and on the radio and in settings where children gather such as schools, community centers and recreational facilities. The definition of "healthier dietary choices" could be based on stringent nutritional criteria determined by an independent nutritional body without industry ties. "Advertising directed primarily to children under 12 years of age" could be expanded to include all viewing on child stations regardless of child viewership. The use of media characters in children's marketing could also be broadened to include company created mascots, celebrities and licensed characters. The expected outcomes of such self regulatory policies could also be defined by industry in advance and, ideally, these would be linked to children's food intake as per the recommendations of Harris et al.(108). Industry compliance could be monitored by an independent body that would examine industry actions and impact (108). While such changes would likely

dramatically improve the self-regulation of advertising to children in Canada, these changes are unlikely without government intervention.

All corporate decisions, including those regarding marketing to children, are made with profit in mind as corporations have a fiduciary responsibility to their shareholders. Food and beverage corporations that have chosen to participate in the CAI have, generally, made weak commitments so that they are not disadvantaged in the marketplace. Simon, who examined corporate lobbying and deceptive practices in the United States, also argues that food companies cannot be trusted to self-regulate given their record of public relations campaigns couched as public promises of corporate responsibility, their extensive lobbying against policies designed to improve the health of children, and their record of misleading statements at public meetings (109). Since it will likely never be in the interest of food and beverage corporations to participate in self-regulatory initiatives, a regulatory approach to marketing directed at children is recommended in Canada.

In order to protect children from obesogenic marketing, the federal government needs to implement marketing restrictions of “unhealthy” food and beverages in all media forms and child settings. First “unhealthy” food and beverages needs to be defined by a group of independent nutrition experts who are not industry-affiliated. Canada could perhaps consider using the U.K. Nutrient Profile Model to define what is healthy as this model was developed and tested systematically by the Food Standards Agency and it has shown good convergent, discriminate, and construct validity (22). There is a high level of dependence between the model’s categorization and decisions made by nutrition professionals (23) and it considers the essential nutrients including energy, saturated fat, total sugar, sodium, fruit, vegetable and nut content, fibre and protein. When defining “unhealthy” foods and beverages, one needs to be aware of the frequency of branded

advertising on television that does not feature a specific food or beverage product (i.e. a fast food advertisement that shows families having fun and features its logo.) This type of branded advertising must be included in the definition of “unhealthy” foods and beverages given the sway and power of brands (110-112). One potential consequence defining what foods and beverages are considered healthy is that industry may be pushed to reformulate food and beverage products and create new products that are considered “healthier”. Marketing to children also needs to be defined broadly to include, but not be limited to, advertisements, contests, sponsorship announcements, product placement, store displays, and package labeling. Broad and inclusive language needs to be used when drafting such as policy as marketers are extremely creative and new methods of marketing are constantly being developed. For instance, in October 2009, a group called Cablevision Systems launched a new form of interactive television advertising that allows cable subscribers to download coupons, request samples and even order take-out by using their television remote control (113). It is predicted that this type of “enhancement” will be common-place in the next five years (113).

This newly developed policy in Canada also needs to ban marketing at all locations where children gather such as schools, day care centers, community centers, and recreation facilities. A systematic monitoring process needs to be developed and implemented by a government appointed independent body without links to industry and that operates at arm’s length from government. As per the recommendations of Hawkes, the content of the marketing messages, the quantity of marketing, and the emotional power of the food and beverage marketing needs to be monitored (114). Lastly, a clear enforcement mechanism such as set fines would have to be elaborated. Such an approach would, in our opinion, have the greatest influence on children’s exposure to food and beverage marketing and on

their health, and would constitute a population health approach to childhood obesity prevention.

4.6 Policy Recommendations for Quebec

In Quebec, the *Consumer Protections Act* could be strengthened by updating the guidelines regarding the 15% child viewership threshold to reflect when children under 13 years are actually watching television today (i.e. including the hours between 8 to 10 pm). In addition, to improve compliance with this *Act*, a board could review and approve each food and beverage advertisement before it is aired during children's viewing to ensure that it is not "child directed". Under this scenario, compliance with the *Consumer Protection Act* would be very high and children would be protected entirely from some food and beverage products that hold great appeal to children that are currently slipping through the cracks because of poor monitoring. However, children would continue to view a large amount of obesogenic food/beverage advertising that is not child directed (i.e. the chocolate bar advertisement aimed at adults) even with such improved compliance. Given the influence of branding, it is unlikely that children's health would be protected under this scenario.

In our opinion, the only means to completely protect children from the influence of food and beverage marketing in Quebec is to add a provision to the *Consumer Protection Act* that bans the marketing of unhealthy foods and beverages (defined by an independent nutrition experts appointed by government) regardless of whether it is child-directed or not, during children's viewing on television. Ideally, such a ban would define marketing in a broad sense and extend to all forms of media, to places where children gather and to product placement, store displays, and package labeling.

4.7 The Importance of Consistent Policy Across Canada

One argument against the development and implementation of advertising regulations that is frequently brought forward is that of the “leaky border”. This position states that it is futile to regulate advertising directed at children since the broadcasting border is permeable. Because the broadcasting border is permeable, in our view, it is paramount that the influence of any new developed marketing restrictions in Canada be consistent across the country. Otherwise, a “leaky border” will ensue that can undermine the effect of the stronger restrictions. In our research, we expected that the “leaky border” would be between Ontario and the United States given children’s access to American television on Canadian cable networks. However, none of the children’s preferred viewing in our sample was drawn from American stations. Instead, the “leaky border” was between Ontario and Quebec. The Quebec English children received no benefit from the *Consumer Protection Act* given their propensity to view television broadcast from outside of Quebec where advertising restrictions are weaker. Such a result emphasizes the importance of having marketing policies in Canada that offers similar protection to all children. Marketing restrictions could be developed separately by individual provinces, however, it would be more efficacious if the federal government intervened in this area in order to minimize the potential of leaky provincial borders. To fully protect Canadian children, a similar marketing policy would also exist in the United States as, even though, the children’s preferred viewing in our study was on Canadian television, children most certainly also view television on American networks and specialty channels. There has been movement on this issue in the United States. In 2009, the *Interagency Working Group on Food Marketed to Children* have proposed draft nutrition standards for marketing foods and

beverages to children aged 2-17 years (24) and in September 2010, the Federal Trade Commission (FTC) subpoenaed 48 food corporations to determine current levels of expenditures and marketing activities directed at children (23). These actions, combined with First Lady Michelle Obama's obesity prevention efforts, have created some momentum for this issue in the United States. However, the strong value placed on freedom of expression combined with the power of the food and beverage lobby in the United States among other factors, makes a total food and beverage ban unlikely in the near future. In fact, in recent study examining the attitudes of expert federal policymakers in obesity and public health, and nutrition and physical activity researchers, food and beverage marketing restrictions directed at children were categorized as having low political feasibility despite their potentially strong public health impact (115).

4.8 The Feasibility of Marketing Restrictions in Canada

Legally, advertising can be regulated by both the federal and provincial governments. The federal government has jurisdiction over broadcast media whereas provinces have jurisdiction through their power to regulate business and consumer protection (116). Constitutional jurisdiction however, is not sufficient for the development and implementation of advertising restrictions. According to the health policy framework developed by Richmond and Kotelchuk, a knowledge base, a social strategy, and political will are all required in order to achieve the prevention of public health problems (117). Political will includes the desire and commitment of legislators, administrators, interest groups and the population as a whole to support or develop new policies. In Canada and in Quebec, recent polling results have revealed that a social consensus exists within the population as a whole with regards to marketing directed at children. According to the

results of a survey commissioned by the Quebec Coalition on Weight Related Problems (118), 82% of the Canadian population either somewhat agreed or strongly agreed that the marketing of unhealthy foods and beverages should be restricted in Canada. Support for such restrictions were highest in Quebec (86%) and lowest in the Maritimes (72%). There was less popular support for a complete marketing ban in Canada according to this same polling. On average, 64% of the Canadian population either somewhat agreed or strongly agreed that advertising targeting kids should be banned in Canada. Support for this option was highest in the Maritimes (73%), followed by Quebec (72%). Alberta favoured this option the least with 55% of those polled supporting this action (118).

Political will for regulatory action is clearly lacking in the food, beverage and restaurant industries. These corporations, as a whole, continue to favour self-regulatory approaches to food marketing directed at children. They argue that all foods can be part of a healthy diet, that no one food, or category of foods or beverages is responsible for the obesity epidemic and that exercise is the key to weight control rather than food intake (119). They also maintain that food and beverage marketing simply pushes consumers to switch brands and that it does not increase food category consumption of foods and beverages. Health and nutrition experts however argue that "...food industry strategies to increase revenues typically depend on the "eat more" campaigns designed to promote larger portions, frequent snacking, and the normalization of sweets, soft drinks, snacks, and fast food as daily fare." (p.1809) (120). Industry also emphasizes personal responsibility and contends that parents should "just say no" to their kids' requests for food and beverages. Health advocates, for their part, argue that by heavily advertising nutritionally poor foods, parents are being undermined. Overall, the practices, strategies, and arguments advanced by the food and beverage industry to influence public opinion have been compared to those of

the tobacco industry (121;122). “Food industry self-regulation seems to be motivated more by external threats: negative public attitudes, government action that restricts key business practices, and litigation.” (p.245) (123). Health groups such as the Chronic Disease Prevention Alliance of Canada, the Canadian Diabetes Association, Dietitians of Canada, the Canadian Cancer Society, Quebec Coalition on Weight-Related Problems, and the Center for Science in the Public Interest among others strongly favour government regulatory action with regards to the marketing of foods and beverages directed at children.

Various levels of government in Canada also seem to be demonstrating some political will. In September 2010, the federal, provincial and territorial (F/P/T) ministers of health identified the reduction of the marketing of foods and beverages high in fats, sugar and/or sodium to children as one of three policy priorities that necessitate collective action in their report entitled *Curbing Childhood Obesity: An F/P/T Framework for Action to Promote Healthy Weights* (27). In December 2010, the Council of the Pan-Canadian Public Health Network⁶ created the *Expert Task Group on Reducing Marketing and Advertising of Foods and Beverages High in Fat, Sugar or Sodium to Children* (125) and the Public Health Agency of Canada (PHAC) distributed a request for proposal on the development of a proposed framework to monitor Canada’s food and beverage marketing environment for children (126). While there is no doubt that there has been positive advancement on this issue in Canada, regulation in this area remains improbable, at least in the short-term, given that the Harper government remains staunchly anti-regulatory in most sectors.

⁶ The Pan Canadian Public Health Network was created in 2005 by Federal, Provincial and Territorial (F/P/T) Health Ministers to help with information sharing among government levels, to provide policy advice to Deputy Ministers of Health and to provide support during public health crises (124).

4.9 How Our Research Results Differ From Others?

Overall, food and beverage advertisements in this research represented 26% of the total advertisements viewed by children in Ontario and Quebec. This result was similar to that reported by Lebel et al. (84) in their examination of French Quebec stations but higher than the 15-20% reported by Adams et al. (82), Kelly et al. (30) in Ontario, Advertising Standards Canada (67) and by Laperrière (85). This discrepancy, although not large, may be accounted for by our inclusive definition of promotions that included advertisements, contests and sponsorship announcements 5 seconds in length and longer. In terms of the rate of food advertising per hour per channel, the 3.9 rate for the Ontario English viewing was the same as that described by Kelly et al. in their analysis of 168 hours of children's television in Ontario in 2007-2008 (30). Our rate of food advertisements per hour was less than that the 5.1 rate described by Adams et al. (82) however, this discrepancy may be accounted for by their channel selection (that included many stations not preferred by children including CBC, SRC, CTV, and the A-Channel) and by the fact that recent evidence in Ontario and Alberta demonstrates that peak children's viewing has less food and beverage advertising than non-peak children's viewing (30).

In terms of the healthfulness of the food and beverages advertised, similar food categories predominated in our research when compared to Adams et al. (83) and Kelly et al.'s results (30). In particular, restaurants, grains and beverages predominated in both our Ontario English research and Adams et al.'s. Our Ontario English results also consisted of fewer cereal, fast food and snack food advertisements than that seen in Kelly et al.'s Ontario sample (30) although these food products still figured prominently in the Ontario English viewing. Advertisements for dairy products and candy were seen more frequently

in our Ontario English television viewing than in either Adams et al (83) or Kellie et al.'s (30) Ontario results. In terms of the overall healthfulness of the Ontario English advertisements, our U.K. Nutrient Profile results indicating that 69% of advertised foods were “less healthy”, compared favourably to that of Adams et al. who described that 60% of foods advertised in programs with particular appeal to children fell into this category.

Our Quebec French results, showing that 4 food/beverage advertisements aired per hour of children's preferred programming, were identical to Laperrière's (85). Similar food categories (i.e. restaurants, snacks, beverages etc.) were seen in our research and the research of Lebel (84) and Laperrière (85), however, our research revealed fewer restaurant and snack advertisements and more candy and beverage advertisements. Such discrepancies may reflect different food category classifications and/or potential increases in the marketing of these food categories in French Quebec. In terms of the healthfulness of the advertisements in the Quebec French sample, 61% were “less healthy” according to the Nutrient Profile Model and 82% were high in either fat, sugar or salt. These results are comparable to what has already been reported in French Quebec. Lebel et al. indicated that 73% of food/beverage advertisements did not meet the recommendations of Canada's Food Guide (84) and Laperrière concluded that 64% of his total sample of advertisements, and 83% of his sample viewed by children 2 to 12 years, were unhealthy (85).

Our results demonstrating the poor performance of the corporations participating in the CAI compared to non-CAI corporations can be compared to those of Kunkel et al. who compared corporations participating in the American *Children's Food and Beverage Advertising Initiative* to those corporations not participating in this initiative, in a 70.5 hour content analysis of children's television viewing in the United States (88). Our CAI group was responsible for a smaller percentage of food and beverage advertisements during

children's preferred viewing (63%) than that described by Kunkel et al. in the United States (71%) (88). This difference, although not large, may indicate that the reach of the American *Children's Food and Beverage Advertising Initiative* may be greater than that of the Canadian CAI. Differences here may also be accounted for by different definitions of child viewing. Interestingly, results published in the August 2010 Advertising Standards Canada compliance report of the CAI indicate that, in 2008, CAI corporation advertising accounted for 96% of food and beverage advertising seen by children in Canada on YTV, Nickelodeon, Treehouse and Teletoon (68). Unfortunately, it is difficult to understand these results since few methodological details are provided in their report regarding the number of hours analyzed, the time of year that analysis was conducted etc. In terms of the healthfulness of CAI and non-CAI advertisements, Kunkel et al.'s results, although they use vastly different nutritional criteria, differ from ours in that they conclude that the corporations participating in the American *Children's Food and Beverage Advertising Initiative* are advertising fewer "whoa"⁷ foods (69%) than the non-pledge corporations (83%) (88). Our results, in opposition, indicate that a greater proportion of the CAI advertisements (80%) were considered "less healthy" compared to the non-CAI (55%).

4.10 Limitations and Strengths of the Results

4.10.1 Limitations

Firstly, seasonality is a limitation of this research. Children completed their television viewing diaries and the television was taped in late March. The television sample was not randomly selected and it may not represent television programming and advertising at other times of year. However, this 7 day period during the winter was selected because of

⁷ See footnote 3 for the definition of "whoa".

its distance from major holidays and school holidays. Gantz et al. has also indicated that television programming is most likely to vary by day rather than by week (49). Children may also have different viewing habits at different times of year. For instance, in the warmer months, they may be watching less television and therefore have less exposure to food and beverage advertising on television.

Secondly, measurement error may be a limitation. The measurement of children's television viewing may have under-reported actual television viewing. Although it was pre-tested and easy to complete, the television journal did not capture as much television viewing as the questions regarding usual weekly television viewing in the *Questionnaire for Child*. This discrepancy may reveal that children may have omitted some of their television viewing and/or might reveal that they over-estimated their usual television viewing. The answer here may lie somewhere in between, however, the television viewing diaries did provide a record of the television programs that were viewed by children.

Thirdly, the sample of children was not randomly selected and may not have been representative. In order to maximize compliance, we chose to use a convenience sample of children since participating in this study required a significant commitment. A different group of children may have been watching different programs, however, the 81 hour content analysis covered 9 different stations over 7 days at various times and provided sufficient variability and a good snapshot of what children this age are watching on television.

A fourth weakness is that, despite using a convenience sample, we recruited a smaller sample size of English-speaking Quebecers. In addition, this group's highest level of education within the family was lower than we found in the other two samples of

children. Further group comparisons were limited by school boards forbidding the collection of data on ethnicity or income level.

With regard to the corporations that were compared in the final study, a financial comparison of the CAI and non-CAI corporations was not possible given inconsistent financial reporting between corporations. Instead, the CAI and non-CAI corporations were compared by corporation type, trade journal company rankings and food manufacturing categories. The CAI group was more homogenous than non-CAI group and while it is certainly important to keep these differences in mind when examining the data, similar numbers of ranked corporations were members of each group. More precisely, all 13 CAI corporations and 15 of the 35 non-CAI that advertised during the 99.5 hours were ranked as the largest in their categories.

4.10.2 Strengths

Methodologically, one of the greatest strengths of this research was the direct measurement of what children were actually watching on television rather than examining a set number of stations at pre-determined times as is frequently done in the literature. A second strength was the simultaneous taping while children were completing their television diaries that permitted us to analyze the advertisements that the children actually viewed.

Our broad definition of advertising that included advertisements, contests and sponsorship announcements and included all promotions that were 5 seconds in length or more was also a significant strength. Frequently in the literature, only actual advertisements 30 seconds in length or more are counted. Such a procedure neglects a significant amount of food and beverage marketing directed at children on television.

Another strength is that we examined all the food and beverage promotions using two different nutritional criteria. First, we examined the macronutrients per 100 grams, the macronutrients as a percentage of energy, and the macronutrients according to nutrient recommendations of each featured food/beverage products. Second, we classified each featured product by the U.K. Nutrient Profile Model. By rigorously applying two different nutrition criteria, we strengthened our nutritional results.

The inclusion of both French and English Quebec children in our sample was also a strength and this inclusion permitted us to conclude that Quebec English children are not receiving any protection from the *Consumer Protection Act*. Lastly, our selection of the 10 to 12 year old age segment was a strength as it allowed us to analyze how corporations are targeting their advertising to programs that fall around their threshold for “child directed viewing”.

4.11 Generalizability of the Results

It is likely that our results regarding children’s exposure too food and beverage advertising and its healthfulness can be generalized to English children in Ontario and Quebec between 6 and 9 years and to French Quebec children under 10 years. However, our results may not be generalizable to English children in Ontario and Quebec that are under 6 years of age since CBC and TVO dominate the television landscape for English pre-school children and these stations do not advertise to children. With regard to adolescents in Ontario and Quebec, it is likely that their exposure to food and beverage marketing is even higher than what we reported for the 10 to 12 year olds given that Kelly et al. (30) describe that the rate of food/beverage advertising is lowest during children’s peak viewing and given that Powell et al. have described increased rates of marketing for

teens since 2002/2003 levels (46). It is unclear as to whether our results are generalizable to other parts of the country as, with the exception of Alberta where higher rates of food advertising to children on television have been found (30), no research has been conducted in other provinces in Canada.

4.12 Future Research

A great amount of research remains to be completed with regard to the marketing of foods and beverages directed at children on television in Canada. To date in Canada, research has only examined the television viewing preferences of children in Ontario, Quebec and Alberta. Also, no research has examined the advertising content of the viewing preferences of young children (i.e. those under 6 years) or adolescents. Given that research in the United States has indicated that adolescent targeted marketing has increased on television since the advent of stricter self-regulatory measures (46;87), this is a group that merits to be researched.

From a policy perspective, the health impact of various advertising policies also requires further research. In Quebec, research conducted by Goldberg concluded that the Quebec advertising ban appears to have decreased the consumption of children's breakfast cereals for children 9 through 12 (127). More precisely, his results indicated that English speaking Quebecers had significantly more children's breakfast cereals in their homes compared to French speaking Quebec children. His analysis also indicated however that income played a role, in that lower income children had more breakfast cereals than upper-income children. More recently, Baylis & Dhar have used data from the Canadian Foodex Survey from 1984 to 1992 in order to examine whether fast food consumption differs between Anglophone, Francophone and Allophone populations in Ontario and Quebec

(128). Their results indicate that the probability of purchasing fast food is greater in households with children in Ontario compared to similar families in Quebec. Quebec Francophone families also are less likely to purchase fast food than Quebec Anglophone families who are likely exposed to English media and advertising emanating from outside the province. While this research suggests that the Quebec advertising ban may be having an effect on food purchases (and ensuing consumption), much research remains to be done in this area. No research has examined whether the self-regulation of food and beverage advertising is influencing food intake, however, given the current high levels of food and beverage marketing viewed by children, a positive influence is not likely.

With regards to marketing directed at children in other media venues, a few studies have examined the availability of “fun foods” in Canada (129), however, no published research in Canada to date has examined food and beverage advertising on the Internet⁸, the last survey of marketing to children at school is now outdated (43), and no research has examined marketing to children in other venues (such as daycare centres, and community centres). Research examining other forms of marketing including labeling, and store displays have also not been broached in Canada and even internationally, very little data has been published in these areas.

4.13 Conclusion

The current advertising policies that exist in Canada today, both the self regulatory policy and the statutory policy in Quebec, are not succeeding in reducing children’s exposure to food and beverage marketing on television. Canadian children, regardless of language and province, are viewing a significant amount of food and beverage advertising

⁸ However, the author is currently leading one study on the differences in marketing between English and French food and beverage websites with child directed content. She is also conducting a second study on the differences in marketing between English and French advergames on these websites.

that is high in fat, sugar and salt. The Government of Canada could play a pivotal role in reducing children's exposure to food and beverage marketing by developing a comprehensive policy in this area that restricts the marketing of unhealthy food and beverage marketing in all media venues, and in places where children gather. If the goal is to reduce the population prevalence of childhood obesity, however, this type of policy cannot exist in isolation. Marketing restrictions need to be implemented as part of a comprehensive population health strategy aimed at changing the obesogenic environment in which our children live. Such an approach, with participation from federal, provincial, and municipal governments, communities and individuals will lead to reduced obesity rates in Canadian children.

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Appendix A



Advertising Standards Canada
Les normes canadiennes de la publicité



The Broadcast Code for Advertising to Children

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Revised April 2007

THE BROADCAST CODE FOR ADVERTISING TO CHILDREN

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I. BACKGROUND

The Broadcast Code for Advertising to Children is designed to complement the general principles for ethical advertising outlined in the *Canadian Code of Advertising Standards* which applies to all advertising. Both Codes are supplementary to all federal and provincial laws and regulations governing advertising, including those regulations and procedures established by the Canadian Radio-television and Telecommunications Commission (CRTC), Industry Canada, and Health Canada.

The purpose of the Code is to serve as a guide to advertisers and agencies in preparing commercial messages which adequately recognize the special characteristics of the children's audience. Children, especially the very young, live in a world that is part imaginary, part real and sometimes do not distinguish clearly between the two. Children's advertising should respect and not abuse the power of the child's imagination.

Discretion and sensitivity will be exercised by the Children's Clearance Committee when reviewing children's advertising, particularly with reference to sex-role stereotyping and violence consistent with the principles of industry broadcast self regulatory codes such as those endorsed by the Canadian Association of Broadcasters (CAB), Advertising Standards Canada (ASC) and the Canadian Broadcasting Corporation (CBC).

The foregoing does not imply a call for the elimination of fantasy in children's advertising. Many childhood possessions become particularly meaningful as they are incorporated into the child's fantasy world and it is natural and appropriate to communicate with this audience in their own terms. But such presentations should not stimulate unreasonable expectations of product or premium performance.

Imitation and exploration have always been part of the child's learning process and the broadcast media now form part of that experience. It is recognized, of course, that it remains the primary responsibility of parents "to instruct a child in the way that he/she should go". The Code and the Guidelines that are issued from time to time are designed to help advertisers avoid making that task more difficult.

The Broadcast Code for Advertising to Children is endorsed by the CRTC and may constitute a condition of broadcasting licenses.

II. THE CODE

1. Definitions

(a) "Children's Advertising" refers to any paid commercial message that is carried in or immediately adjacent to a children's program. Children's advertising also includes any commercial message that is determined by the broadcaster as being directed to children and is carried in or immediately adjacent to any other program.

(b) Children – "Children" refers to persons under 12 years of age.

(c) A Child Directed Message – "A child directed message" refers to a commercial message on behalf of a product or service for which children are the only users or form a substantial part of the market as users, and the message (i.e. language, selling points, visuals) is presented in a manner that is directed primarily to children.

(d) Children's Program – A "children's program" refers to a program that is directed to the under-12 audience, as defined by the broadcaster.

(e) Commercial Message – A "commercial message" has the same meaning as that defined in the Television Broadcasting Regulations, 1987.

(f) Premium – A "premium" is anything offered with or without additional cost, and is conditional upon the purchase of the advertiser's regular product or service.

(g) The Code – This Code shall be known as "The Broadcast Code for Advertising to Children" and shall hereinafter be referred to as "the Code".

2. Jurisdiction

All Children's advertising must conform to the Code, be precleared in accordance with the procedures set out from time to time by the ASC and have the requisite ASC clearance number.

3. Factual Presentation

(a) No children's advertising may employ any device or technique that attempts to transmit messages below the threshold of normal awareness.

(b) Written, sound, photographic and other visual presentations must not exaggerate service, product or premium characteristics, such as performance, speed, size, colour, durability, etc.

(c) The relative size of the product must be clearly established.

(d) When children's advertising shows results from a drawing, construction, craft or modelling toy or kit, the results should be reasonably attainable by an average child.

(e) The words "new", "introducing", "introduces" or similar words may be used in the same context in any children's advertising for a period of up to one year only.

4. Product Prohibitions

(a) Products not intended for use by children advertised either directly or through promotions that are primarily child-oriented.

(b) Drugs, proprietary medicines and vitamins in any pharmaceutical form, with the exception of children's fluoride toothpastes.

5. Avoiding Undue Pressure

(a) Children's advertising must not directly urge children to purchase or urge them to ask their parents to make inquiries or purchases.

(b) Direct response techniques that invite the audience to purchase products or services by mail or telephone are prohibited in children's advertising.

(c) In children's advertising which promotes premiums or contests, the product must receive at least equal emphasis. Promotion of the premium or contest must not exceed one-half of the commercial time.

In promoting contests which have an age restriction that excludes children, this must be made clear orally or visually.

6. Scheduling

(a) The same commercial message or more than one commercial message promoting the same product cannot be aired more than once in a half-hour children's program. In children's programs of longer duration, the same commercial message or more than one commercial message promoting the same product must not appear more than once in any half-hour period.

(b) No station or network may carry more than four minutes of commercial messages in any one half-hour of children's programming or more than an average of 8 minutes per hour in children's programs of longer duration.

(c) In children's programs, only paid commercial messages are included in the four minutes per half-hour limitation. Promotions and public service announcements may occupy the time difference between the Code limit and the CRTC regulation limit. Broadcasters will, however, consider the appropriateness of the content of public service announcements before scheduling in children's programs.

(d) For the purposes of this section, the time devoted to the broadcasting of a children's program includes any time devoted to a commercial message that is inserted within the program and/or immediately adjacent to the end of the program and also includes any time devoted to a child-directed commercial message inserted between the end of the program and the beginning of the following program.

7. Promotion by Program Characters, Advertiser-Generated Characters, and Personal Endorsements

(a) Puppets, persons and characters (including cartoon characters) well-known to children and/or featured on children's programs must not be used to endorse or personally promote products, premiums or services. The mere presence of such well-known puppets, persons or characters in a commercial message does not necessarily constitute endorsement or personal promotion. (For example, film clips or animation are acceptable as a mood or theme-setting short introduction to commercial messages before presenting the subject of the commercial message itself.) These puppets, persons and characters may not handle, consume, mention or endorse in any other way the product being advertised.

(b) This prohibition does not apply to puppets, persons and characters created by an advertiser which may be used by advertisers to sell the products they were designed to sell as well as other products produced by the same advertiser or by other advertisers licensed to use these characters for promotional purposes.

(c) Professional actors, actresses or announcers who are not identified with characters in programs appealing to children may be used as spokespersons in advertising directed to children.

(d) Puppets, persons and characters well-known to children may present factual and relevant generic statements about nutrition, safety, education, etc. in children's advertising.

8. Price and Purchase Terms

(a) Price and purchase terms, when used, must be clear and complete. When parts or accessories that a child might reasonably suppose to be part of the normal purchase are available only at extra cost, this must be made clear in audio and video.

(b) The cost must not be minimized as by the use of "only", "just", "bargain price", "lowest price(s)", etc.

(c) The statement in audio, "it has to be put together" or a similar phrase in language easily understood by children must be included when it might normally be assumed that the article would be delivered assembled.

(d) When more than one toy is featured in a commercial message it must be made clear in audio and video, which toys are sold separately (this includes accessories).

9. Comparison Claims

(a) Commercial messages shall not make comparisons with a competitor's product or service when the effect is to diminish the value of other products or services.

(b) In the case of toys or children's possessions, comparisons should not be made with the previous year's model, even when the statements or claims are valid.

10. Safety

(a) Commercial messages, except specific safety messages, must not portray adults or children in clearly unsafe acts or situations (e.g. the use of flame or fire is not permitted in children's advertising).

(b) Commercial messages must not show products being used in an unsafe or dangerous manner (e.g. tossing a food item into the air and attempting to catch it in the mouth, etc.)

11. Social Values

(a) Children's advertising must not encourage or portray a range of values that are inconsistent with the moral, ethical or legal standards of contemporary Canadian society.

(b) Children's advertising must not imply that possession or use of a product makes the owner superior or that without it the child will be open to ridicule or contempt. This prohibition does not apply to true statements regarding educational or health benefits.

Interpretation Guidelines for Clause 11

- i. Child-directed messages for food products in broadcast advertising that are inconsistent with the pertinent provisions of the *Food and Drugs Act and Regulations*, or the Canadian Food Inspection Agency's *Guide to Food Labelling and Advertising* shall be deemed to violate Clause 11 (Social Values) of the *Broadcast Code for Advertising to Children*. This Interpretation Guideline is intended, among other purposes, to ensure that advertisements representing mealtime clearly and adequately depict the role of the product within the framework of a balanced diet, and snack foods are clearly presented as such, not as substitutes for meals. *
- ii. Every "child-directed message" for a product or service should encourage responsible use of the advertised product or service with a view toward the healthy development of the child.**
- iii. Advertising of food products should not discourage or disparage healthy lifestyle choices or the consumption of fruits or vegetables, or other foods recommended for increased consumption in Canada's *Food Guide to Healthy Eating*, and Health Canada's nutrition policies and recommendations applicable to children under 12.**

- iv. The amount of food product featured in a "child-directed message" should not be excessive or more than would be reasonable to acquire, use or, where applicable, consume, by a person in the situation depicted.**
- v. If an advertisement depicts food being consumed by a person in the advertisement, or suggests that the food will be consumed, the quantity of food shown should not exceed the labelled serving size on the Nutrition Facts Panel (where no such serving size is applicable, the quantity of food shown should not exceed a single serving size that would be appropriate for consumption by a person of the age depicted).**

* April 2004

** September 2007

Note: These Guidelines do not form part of the *Code*. They are intended to provide guidance regarding the interpretation and application of Clause 11 to food product advertising.

12. Substantiation Required

Where measurable claims are made regarding specific products - performance, safety, speed, durability, etc., the advertiser must be prepared on request to provide the Children's Advertising Section with evidence supporting such claims, and/or a sample of the product.

13. Assessment

Each commercial message shall be judged on its individual merit.

14. Code Administration

(Procedure in effect across Canada, with the exception of Quebec, whose authority to prohibit broadcast advertising to children has been affirmed. Clearance numbers are not required for commercial messages broadcast in Quebec. Therefore, the following procedure applies to the rest of Canada only.)

(a) Enforcement & Jurisdiction - The enforcement body for this Code will be the Children's Advertising Section of the ASC/Children's Clearance Committee.

The Section shall have nine members: the chairperson; three public representatives, and one member each nominated respectively by the CRTC, private broadcasters, the CBC, advertiser and advertising agency associations.

In order to ensure balanced representation, any member who is unable to participate may be represented by an approved alternate. A quorum shall consist of four members, at least one of whom shall be a public representative.

ASC has jurisdiction only over commercial messages broadcast by Canadian stations or on behalf of Canadian advertisers.

(b) Clearance and Consultation - No broadcaster shall broadcast any children's advertising which has not received the prior approval of the Children's Advertising Section. The prior approval is not mandatory for children's advertising that is carried in one market only but individual broadcasters are responsible for ensuring that such commercial messages do conform to the Code.

Because of the time and expense involved in creating television advertising, it is recommended that where any reasonable doubt exists about possible contravention of the Code, advertisers or their advertising agencies should submit ideas in storyboard or script form.

(c) Enforcement procedure - If the broadcaster/Children's Advertising Section of ASC determines that any children's advertising is in breach of the Code, a broadcaster shall not run the offending commercial message and the advertiser and/or its agency and ASC shall be so notified.

(d) Compliance Time - The Children's Clearance Committee may, at its discretion, allow time for compliance for commercial messages produced prior to the announcement of this edition of the Code.

III. GUIDELINES AND PROCEDURES

These Guidelines and Procedures do not form part of the Code. However, they are generally intended to assist broadcasters, advertisers, advertising agencies and media placement services, particularly the creative, media and traffic departments, in adhering to the provisions as well as the spirit and intent of the Code. Every effort should be made to ensure that persons involved in these functions are thoroughly familiar with the Code and these Guidelines and Procedures.

More detailed commercial message clearance procedures have been established by the Children's Advertising Section and are subject to change from time to time. Information concerning these procedures is available from ASC and the CAB.

Broadcasters, advertisers and agencies often enquire about the interpretation of certain clauses of the Code. In this regard, the CAB and the ASC in cooperation with broadcasters, advertisers and public representatives have instituted an on-going process to establish accepted code clause interpretations that are intended to serve as a guide for the industries. Information concerning these interpretations is available from ASC and the CAB.

1. Program Classification

Audience analysis and other studies of children's interests and viewing habits show a major, definite shift in viewing patterns at the age of 12. Using this age-level definition has the further advantage that the Code will conform to the audience breakout used by the Bureau of Broadcast Measurement (BBM), and/or Nielsen Marketing Research.

The program and production departments of the station or network staff know the primary audience they are trying to reach with each show. From a viewer's point of view, of course, the most obvious criteria are the type and nature of the program, its suitability for the child audience, and the time of scheduling. Viewer enquiries about program classification may be directed to the individual station or the network.

As with any commercial message, the ultimate responsibility for acceptance or rejection of a child-directed commercial message remains with the individual broadcasting station. A station may for its own reasons decide to reject a commercial message which carries an ASC authorization number. The CBC does not accept commercial messages of any kind in or adjacent to programs designated by the CBC as directed to children under 12 years of age.

Advertising directed to children is acceptable on a limited basis (maximum two minutes per clock half hour/four minutes per clock hour) in and adjacent to programs designated by the CBC as having an overall family/adult audience appeal.

Where doubt exists, the station, the advertiser or the advertising agency involved, may refer the commercial message to the Children's Section of the ASC for a decision as to whether it conforms to the Broadcast Code for Advertising to Children.

2. Pre-Schoolers

Children of pre-school age often are unable to distinguish between program content and advertisements. Therefore, any commercial message scheduled for viewing during the school-day morning hours should be directed to the family, parent or an adult, rather than to children and should have the requisite ASC clearance number if appearing in or adjacent to a child-directed program.

3. Program Promotions and Public Service Announcements

Although the Code does not apply to unpaid public service announcements or to program promotions, stations are urged to conform to the spirit of the Code when scheduling such announcements and promotions. For example, promotion trailers and public service announcements shown during children's programs or family viewing time, should not include sensational scenes unsuitable for child viewing.

4. Local Advertising

Local advertising refers to those commercial messages which appear in one market only. Although pre-clearance is not mandatory for commercial messages that are purely local, stations are responsible for ensuring that local advertising directed to children or which appears in children's programs conforms to the provisions of the Code.

5. Advertisers and Advertising Agencies

(a) ASC will review scripts and storyboards on a consultative basis but an approval number will be assigned only after the Children's Advertising Section has reviewed a finished commercial.

(b) When tag lines to be used by a local announcer are sent out with a commercial message the tag line should also be submitted.

(c) Sometimes the exigencies of broadcast timing and production call for "on the floor changes" in a script. It is therefore important that all those involved in production be familiar with the Code so that any such changes do not conflict with specific clauses or the spirit of the Code.

(d) The Children's Advertising Section generally meets every other week to review commercial messages.

6. Scheduling

The Children's Advertising Section has raised a concern with respect to the scheduling of children's advertising, featuring known characters and their related products in or adjacent to programs in which the same characters appear.

It has been agreed that broadcasters and advertisers should, to the best of their ability, continue to implement the established industry practice and refrain from the scheduling of children's advertising in

such a manner. It is understood that there may be occasions where this kind of scheduling cannot be avoided.

The Telecaster Committee of Canada has agreed to make provisions reflecting the established policy part of its guidelines.

7. Clearance Procedures - Advertising Standards Canada

All children's advertising except, that which is purely local, must receive authorization from the Children's Clearance Committee prior to broadcast.

All authorized commercial messages must carry an ASC number (e.g. ASC-012345) which should appear on the traffic instructions. Private broadcasters will not accept children's advertising which does not carry such a number. Telecaster Services of TVB member stations and networks will identify children's advertising via the Telecaster One Number (which embraces all other numbers, except CBC) which gives the expiry date and a K to signify the commercial message has been cleared by the Children's Clearance Committee. The Telecaster One Number could look like this sample A20223cd4-1089K.

All approved commercial messages shall carry the initials ASC, plus a six digit number which will be valid for one year from date of issue. IT MUST BE RENEWED AT THE END OF THE ONE YEAR PERIOD, if it is to air subsequent to the expiry date.

Advertisers (agencies) are to re-apply for a new number at the expiry of each commercial message and stations will not accept commercial messages with an expired number.

Submission procedures can be found on ASC's Website (www.adstandards.com), or requested from ASC.

Children's Advertising Section
Advertising Clearance Division
Advertising Standards Canada

IV. ASC CLEARANCE SERVICES AND RATES

A complete description of ASC Children's Clearance Services and Rates can be found on ASC's Website or requested from ASC.

Revised: April 2007

Source:

<http://www.adstandards.com/en/clearance/childrens/broadcastCodeForAdvertisingToChildren.aspx>

Appendix B

CANADIAN CODE OF ADVERTISING STANDARDS INTERPRETATION GUIDELINES

ASC develops Interpretation Guidelines to enhance industry and public understanding of the interpretation and application of the clauses of the Canadian Code of Advertising Standards (Code). Guidelines are developed and updated on an as-needed basis.

Interpretation Guideline #1 – Alleged Infractions of Clauses 10 or 14: Elements of Humour and Fantasy¹

In assessing impression(s) likely to be conveyed by an advertisement, Council shall take into consideration the use and application in the advertisement(s) of such elements as humour and fantasy.

Interpretation Guideline #2 – Advertising to Children⁴

2.1 As used in Clause 12 of the *Code*, the phrase “advertising that is directed to children”, (advertising to children), includes a commercial message on behalf of a product or service for which children are the only users or form a substantial part of the market as users, and the message (i.e. language, selling points, visuals) is presented in a manner that is directed primarily to children under the age of 12.

2.2 Advertising to children that appears in any medium (other than the media specifically excluded under the *Code* from the definition “medium” and from the application of the *Code*), shall be deemed to violate Clause 12 of the *Code* if the advertising does not comply with any of the following principles or practices:

a. Food Product Advertising to Children²

- i. Food product advertising addressed to children must not be inconsistent with the pertinent provisions of the *Food and Drugs Act and Regulations* and the Canadian Food Inspection Agency’s *Guide to Food Labelling and Advertising*. This *Code Interpretation Guideline* is intended, among other purposes, to ensure that advertisements representing mealtime clearly and adequately depict the role of the product within the framework of a balanced diet, and snack foods are clearly presented as such, not as substitutes for meals.

b. Healthy Active Living³

- i. Advertising to children for a product or service should encourage responsible use of the advertised product or service with a view toward the healthy development of the child.
- ii. Advertising of food products should not discourage or disparage healthy lifestyle choices or the consumption of fruits or vegetables, or other foods recommended for increased consumption in Canada’s *Food Guide to Healthy Eating*, and in Health Canada’s nutrition policies and recommendations applicable to children under 12.

c. Excessive Consumption⁴

- i. The amount of product featured in food advertising to children should not be excessive or more than would be reasonable to acquire, use or, where applicable, consume, by a person in the situation depicted.
- ii. If an advertisement depicts food being consumed by a person in the advertisement, or suggests that the food will be consumed, the quantity of food shown should not exceed the labelled serving size on the Nutrition Facts Panel (where no such serving size is applicable, the quantity of food shown should not exceed a single serving size that would be appropriate for consumption by a person of the age depicted).

d. Factual Presentation⁴

- i. Audio or visual presentations must not exaggerate service, product or premium characteristics, such as performance, speed, size, colour, durability, etc.
- ii. Advertising to children must not misrepresent the size of the product.
- iii. When showing results from a drawing, construction, craft or modelling toy or kit, the results should be reasonably attainable by an average child.
- iv. The words “new”, “introducing”, “introduces” or similar words may be used in the same context in any children’s advertising for a period of up to one year only.



Advertising Standards Canada
Les normes canadiennes de la publicité



- e. **Product Prohibitions⁴**
 - i. Products not intended for use by children may not be advertised either directly or through promotions that are primarily child-oriented.
 - ii. Drug products, including vitamins, may not be advertised to children, with the exception of children's fluoride toothpastes.
- f. **Avoiding Undue Pressure⁴**
 - i. Children must not be directly urged to purchase or to ask their parents to make inquiries or purchases.
- g. **Price and Purchase Terms⁴**
 - i. Price and purchase terms, when used in advertising directed to children, must be clear and complete. When parts or accessories that a child might reasonably suppose to be part of the normal purchase are available only at extra cost, this must be clearly communicated.
 - ii. The costs of goods, articles or services in advertising directed to children must not be minimised as by the use of "only", "just", "bargain price", "lowest price(s)", etc.
 - iii. The statement "it has to be put together" or a similar phrase in language easily understood by children must be included when it might normally be assumed that an article featured in advertising directed to children would be delivered assembled.
 - iv. When more than one product is featured in advertising directed to children, it must be made clear in the advertising which products are sold separately (this includes accessories).
- h. **Comparison Claims⁴**
 - i. In advertising to children no comparison may be made with a competitor's product or service when the effect is to diminish the value of other products or services.
- i. **Safety⁴**
 - i. Adults or children must not be portrayed in clearly unsafe acts or situations except where the message primarily and obviously promotes safety.
 - ii. Products must not be shown being used in an unsafe or dangerous manner (e.g. tossing a food item into the air and attempting to catch it in the mouth, etc.).
- j. **Social Values⁴**
 - i. A range of values that are inconsistent with the moral, ethical or legal standards of contemporary Canadian society must not be encouraged or portrayed.
 - ii. Advertising to children must not imply that without the product the child will be open to ridicule or contempt; or that possession or use of a product makes the owner superior (this latter prohibition does not apply to true statements regarding educational or health benefits).
- k. **General³**
 - i. Advertising to children must:
 - use age-appropriate language that is easily understandable by children of the age to whom the advertisement is directed;
 - refrain from using content that might result in harm to children;
 - collect only the information reasonably required to allow the child to engage in the activity, e.g. collect only the minimal amount of personal information sufficient to determine the winner(s) in contests, games or sweepstakes-type of advertising to children;
 - limit the advertiser's right to deal with anyone other than the parents or guardians of children who win a contest, game or sweepstake's promotion;
 - require children to obtain their parent's and/or guardian's permission before they provide any information; and make reasonable efforts to ensure that parental consent is given;
 - refrain from using the data collected from children to advertise and promote products or services other than those designed for/appropriate for children;
 - not attempt to collect from children data related to the financial situation or to the privacy of any member of the family. Furthermore, advertisers must not, and must not ask for permission to, disclose personal information that may identify children to third parties without obtaining prior consent from parents or unless authorized by law. For this purpose, third parties do not include agents or others who provide support for operational purposes of a website and who do not use or disclose a child's personal information for any other purpose.
- l. **Assessment⁴**
 - i. Each advertisement shall be judged on its individual merit.

Source: <http://www.adstandards.com/en/ASCLibrary/interpretationGuidelines.pdf>

Appendix C

Children's Food and Beverage Advertising Initiative



Our Vision

The food and beverage industry in Canada is committed to advertising and marketing products to Canadian children in a responsible way to help prepare them to make wise decisions about healthy dietary choices and healthy lifestyles. We recognize that the special nature and needs of children requires particular care and diligence on the part of advertisers.

Our Commitment

The food and beverage industry plays a significant role in supporting the health of Canadians, especially children. Accordingly, companies participating in this initiative are committed to follow one or both of these practices:

- Use their creativity and marketing activities to promote and support healthy dietary choices and healthy lifestyles to children under 12 years of age.
- Shift their children's advertising and marketing emphasis to foods and beverages that are consistent with the principles of sound nutrition guidance, including those that are lower in total calories, fats, salt and added sugars and higher in nutrients that are significant to public health.

These commitments will be realized through the means set out in the following pages.

Charter Participants

Cadbury Schweppes
Campbell Canada
Coca-Cola Ltd.
General Mills Canada
Hershey Canada
Janes Family Foods
Kellogg Canada Inc.
Kraft Canada Inc.
McCain Foods (Canada)
McDonald's Canada
Nestlé Canada Inc.
Parmalat Canada Inc.
PepsiCo Canada
Unilever Canada
Weston Foods Canada

Advertising messaging and content

Participants will devote at least 50%¹ of their television, radio, print and internet advertising directed primarily to children under 12 years of age² to further the goal of promoting healthy dietary choices and healthy lifestyles. This will be achieved in one of the following ways (or some combination of each):

- ☒ By advertising products that represent healthy dietary choices in accordance with company developed standards that are consistent with established scientific and/or government standards. Examples of standards include:
 - Foods that reflect the principal advice of Canada's *Food Guide* particularly foods that meet the criteria for nutrient content claims including "free" or "low" claims for calories as well as fat, saturated fat, trans fat, sugar, salt as per the Canadian Food Inspection Agency *Guide to Food Labelling and Advertising*
 - Foods that meet the criteria for diet-related health claims or biologic role claims as per the CFIA *Guide to Food Labelling and Advertising*
 - Foods that meet the criteria for healthy eating claims as per CFIA's *Guide to Food Labelling and Advertising*
 - Foods that meet the standards for participating in the Heart & Stroke Foundation's *Health Check™* program
- ☒ By advertising that prominently includes healthy lifestyle messages designed to appeal to children, such as messages that:
 - encourage physical activity
 - encourage good dietary habits, consistent with established scientific and/or government standards such as Canada's *Food Guide* or Canada's *Physical Activity Guide for Children*
 - focus on portion controlled options
 - appeal specifically to children under the Long Live Kids! social marketing initiative encouraging children to eat smart, move more and be media wise
 - promote government healthy active living initiatives

Use of Products in Interactive Games

Participants will commit that, in any interactive game primarily directed to children under 12 where the company's food or beverage products are incorporated into the game, the interactive game must incorporate or be accompanied by products representing healthy dietary choices or healthy lifestyle messaging as set out above.

¹ This minimum percentage may be increased over time.

² Measured in media impressions at the time the advertising is purchased, as determined by reliable third party data such as BBM Nielsen ratings for TV and radio, ComScore for Internet, PMB (Print Measurement Bureau) data for magazines, Nadbank for newspapers, COMB (Canadian Outdoor Measured Bureau) for outdoor and others.. The 50% commitment will be calculated separately for each advertising medium. Measurement of advertising on company-owned websites will be determined in accordance with standards established as part of the company's commitment.

Use of Licensed Characters

While the use of licensed characters is already restricted in children's broadcast advertising³, participants will also commit to reduce their use of third-party licensed characters in advertising that appears in other media primarily directed to children under 12⁴, if such advertising does not otherwise comply with the messaging and content options set out above. Each participating company in its commitment statement will identify the percentage reduction in its use of licensed characters.

Product Placement

Participating companies will commit to not paying for or actively seeking to place their food or beverage products in the program/editorial content of any medium primarily directed to children under 12 for the purpose of promoting the sale of those products.

Advertising in Schools

Participating companies will remain committed to adhering to standards established by schools individually and by school boards overall. Furthermore, participants will commit to not advertising food or beverage products in elementary schools.⁵

Implementation

Each participating company will formalize and publish an individual plan, commitment details, and implementation schedule in the first quarter of 2008 following the formal announcement of the Children's Food and Beverage Advertising Initiative.

Auditing and Enforcement

The plans for each participating company, including their specific commitments that identify the healthy dietary choices criteria, will be established in consultation with Advertising Standards Canada (ASC) under a new program administered by ASC.

ASC will be responsible for auditing commitments by participating companies. In order to confirm compliance by participating companies, auditing will include the review of advertising materials, product information, and media impression information (see footnote 2 above) submitted to ASC on a confidential basis.

ASC will publish annual compliance reports identifying those companies that meet/exceed their commitments as well as those who have failed to do so. ASC will also respond to all public inquiries relating to these reports.

³ *Broadcast Code for Advertising to Children – Clause 7: Promotion by Program Characters, Advertising-Generated Characters, and Personal Endorsements.*

⁴ *This commitment does not extend to the use of licensed characters on packaging, provided the packaging does not appear in advertising directed to children under 12. This limitation will not apply to the use of company-created/owned characters.*

⁵ *This limitation will not apply to displays of food and beverage products, charitable /not-for-profit activities including fundraising, public service messaging and educational programs.*

Appendix D

The Quebec *Consumer Protection Act* (1978) Sections 248 and 249

Publicité aux moins de 13 ans.

248. Sous réserve de ce qui est prévu par règlement, nul ne peut faire de la publicité à but commercial destinée à des personnes de moins de treize ans.

1978, c. 9, a. 248.

Faits considérés.

249. Pour déterminer si un message publicitaire est ou non destiné à des personnes de moins de treize ans, on doit tenir compte du contexte de sa présentation et notamment:

- a) de la nature et de la destination du bien annoncé;
- b) de la manière de présenter ce message publicitaire;
- c) du moment ou de l'endroit où il apparaît.

Présomption.

Le fait qu'un tel message publicitaire soit contenu dans un imprimé destiné à des personnes de treize ans et plus ou destiné à la fois à des personnes de moins de treize ans et à des personnes de treize ans et plus ou qu'il soit diffusé lors d'une période d'écoute destinée à des personnes de treize ans et plus ou destinée à la fois à des personnes de moins de treize ans et à des personnes de treize ans et plus ne fait pas présumer qu'il n'est pas destiné à des personnes de moins de treize ans.

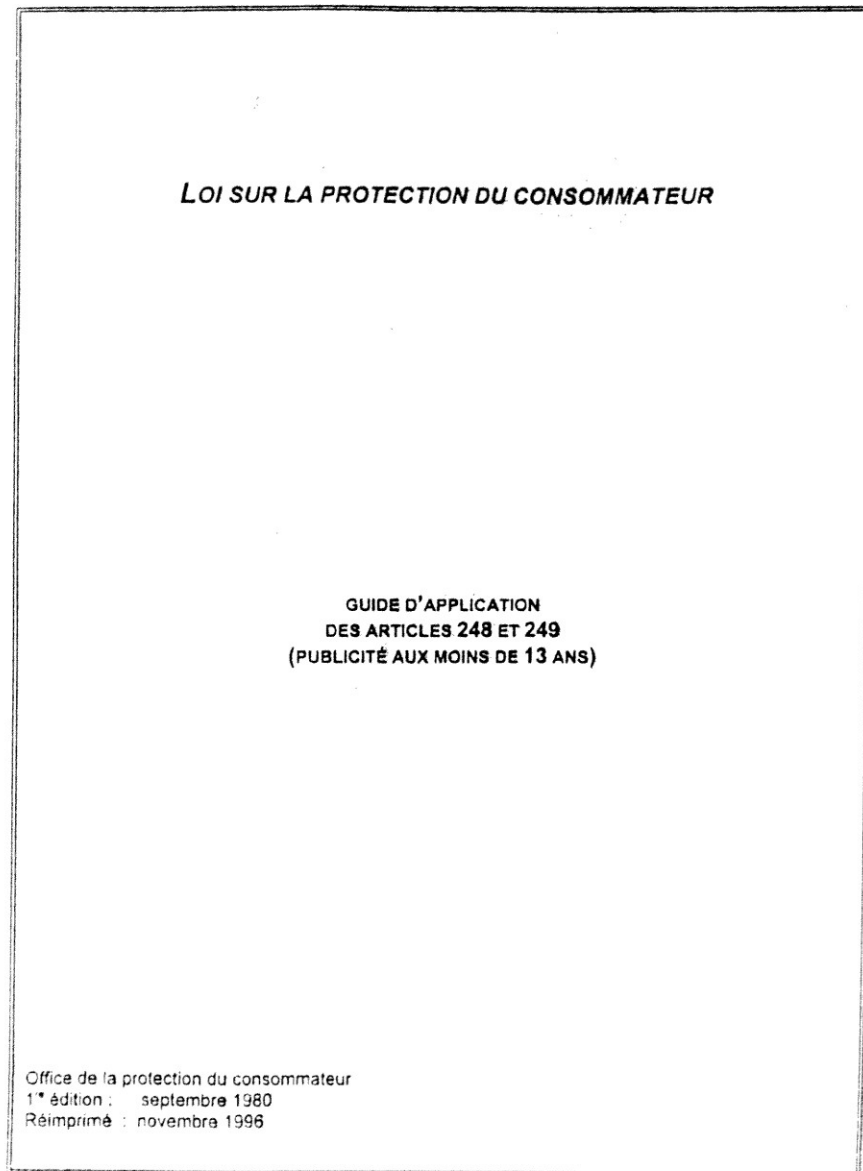
1978, c. 9, a. 249.

Source:

http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=2&file=/P_40_1/P40_1_A.html

Appendix E

Application Guide for the *Consumer Protection Act*



1. DÉFINITIONS

PRÉSENTATION DONT LA CONCEPTION FAIT PARTICULIÈREMENT APPEL AUX APPÉTITS DE L'ENFANT DE FAÇON À SUSCITER SON INTÉRÊT :

Une telle présentation s'apprécie par l'impression générale qu'elle dégage.

Ces présentations recourent à des procédés qui, bien que non exclusivement réservés aux publicités enfantines, sont néanmoins généralement reconnus comme suscitant l'intérêt de l'enfant. En conséquence, une attention particulière sera apportée à ce qui suit :

1. l'utilisation de thèmes ayant trait au fantastique, au magique, au mystère, au suspense, à l'aventure;
2. l'utilisation de personnes qui permettent à l'enfant de s'identifier, ainsi : l'utilisation induite d'enfants, l'utilisation de voix enfantines, de héros, de créatures fantastiques ou fantaisistes; également, l'utilisation d'animaux;
3. l'utilisation particulièrement insistante ou idéalisée de la relation parent-enfant ou d'une autre relation de dépendance avec une personne adulte (professeur, etc.), équivalant à une exploitation induite de ces thèmes;
4. l'utilisation du dessin animé;
5. l'utilisation d'une musique particulièrement attrayante pour les enfants;
6. aussi, au plan technique, des moyens tels : l'utilisation spectaculaire du son et de la couleur, l'utilisation du découpage rapide, de l'animation, de la répétition...

Le fait que le contenu verbal d'un message soit orienté vers l'adulte, ne fait pas présumer qu'il n'est pas destiné à des personnes de moins de 13 ans si le contenu visuel fait particulièrement appel aux appétits de l'enfant et suscite son intérêt.

LES ÉMISSIONS POUR ENFANTS :

Les émissions pour enfants, au sens du présent guide, sont celles qui sont dirigées aux enfants de moins de 12 ans, soit qu'elles soient ainsi désignées par les diffuseurs, soit que cela ressorte de toute évidence de leur nature, de leur contenu et du moment de leur programmation.

Ces émissions comprennent les périodes publicitaires qui les précèdent ou les suivent immédiatement et qui ne font pas partie de l'émission précédente ou de l'émission suivante.

LES POURCENTAGES :

Les pourcentages relatifs à la part de l'auditoire du groupe des 2 à 11 ans dont il est fait mention dans ce guide, sont ceux du Bureau of Broadcast Measurement (BBM).

Dans le cas de diffusion réseau, la région de Montréal, sous la rubrique «Auditoire dans rayonnement», sert de référence pour l'ensemble du Québec.

Dans ce cas de diffusion régionale, le sondage de cette région s'applique.

Ces pourcentages sont ceux de la même émission lors de la saison identique précédente.

Dans le cas d'un déplacement à l'horaire d'une saison à l'autre ou d'une nouvelle émission, l'annonceur sera réputé avoir fait preuve de diligence raisonnable pour la première saison de cette émission, si, en se basant sur les critères d'évaluation suivants :

1. la nature de l'émission,
2. le moment de la diffusion,
3. la concurrence des autres émissions au même moment, et en tenant compte des données relatives aux niveaux d'écoute, au chapitre 5 de ce guide, il pouvait raisonnablement prévoir que l'émission n'atteindrait pas un auditoire dont la part du groupe des 2 à 11 ans serait de 15 % et plus de l'auditoire total ou de 5 % et plus selon le cas.

2. LA PUBLICITÉ COMMERCIALE

2.1 LES PRODUITS ET SERVICES EXCLUSIVEMENT DESTINÉS AUX ENFANTS

Il s'agit, ici, principalement de jouets et de certaines friandises ou aliments dont les enfants sont les utilisateurs presque exclusifs et qui présentent un attrait marqué pour eux. À cause de la nature de ces produits, l'application des principes qui suivent devra être marquée d'une grande rigueur.

Selon le traitement qui lui sera donné, le message publicitaire pourra être diffusé comme suit :

2.1.1 ÉMISSIONS POUR ENFANTS :

Ces produits ou services ne peuvent, à toutes fins pratiques, être annoncés dans les émissions pour enfants (à moins que la présentation du message ne soit telle qu'elle ne puisse, en aucune façon, susciter l'intérêt des enfants).

2.1.2 TOUTES LES ÉMISSIONS SAUF CELLES POUR ENFANTS :

Pour être acceptables dans les émissions autres que les émissions pour enfants, ces messages ne doivent pas s'adresser aux personnes de moins de 13 ans et leur présentation ne doit pas faire particulièrement appel aux appétits de l'enfant de façon à susciter son intérêt.

Ceci n'exclut pas une association sobre de l'enfant et du produit ou service.

Une attention particulière, dans le cas de ce type de produit ou service doit être apportée à la sobriété du message et à la représentation réaliste et objective des caractéristiques et de la performance du produit.

2.1.3 ÉMISSIONS DONT LA PART DES AUDITEURS ENFANTINS EST INFÉRIEURE À 15 % :

Un message publicitaire qui s'adresse partiellement aux adultes et partiellement aux enfants (par exemple : un message dont le contenu verbal s'adresse véritablement à l'adulte mais dont la présentation, en tout ou en partie, fait particulièrement appel aux appétits de l'enfant de façon à susciter son intérêt) ne peut être diffusé que dans les émissions dont la part du groupe des 2 à 11 ans représente moins de 15 % de l'auditoire total de l'émission.

2.1.4 ÉMISSIONS DONT LA PART DES AUDITEURS ENFANTINS EST INFÉRIEURE À 5 % :

Un message publicitaire principalement destiné aux enfants ne peut être diffusé dans une émission dont la part du groupe des 2 à 11 ans atteint 5 % de l'auditoire total de l'émission.

2.2 LES PRODUITS ET SERVICES NON EXCLUSIVEMENT DESTINÉS AUX ENFANTS MAIS PRÉSENTANT UN ATTRAIT MARQUÉ POUR EUX :

Cette catégorie comprend certains produits appelés «familiaux» (ex. : certaines friandises, certaines céréales, certains gâteaux et desserts, les «hamburgers», les parcs d'amusement) et certains produits destinés aux adolescents (ex. : certains jeux).

Selon le traitement qui lui sera donné, le message publicitaire pourra être diffusé selon les règles énoncées aux paragraphes 3.1.1, 3.1.2, 3.1.3 et 3.1.4.

2.3 LES PRODUITS ET SERVICES NE PRÉSENTANT PAS D'ATTRAIT POUR LES ENFANTS :

Cette catégorie comprend les produits destinés exclusivement aux adultes, certains produits «familiaux» (ex. : shampoing, pâte dentifrice), certains produits destinés aux adolescents (ex. : certains jeux, les pommades) et certains produits destinés exclusivement aux enfants (ex. : produits d'hygiène pour bébés).

Les messages publicitaires relatifs à ces produits peuvent être diffusés dans toutes les émissions s'ils s'adressent aux adultes.

**GUIDE D'APPLICATION
DES ARTICLES 248 ET 249
PUBLICITÉ COMMERCIALE**

Tableau «synthèse» des règles

	PRODUITS ET SERVICES EXCLUSIVEMENT DESTINÉS AUX ENFANTS	PRODUITS ET SERVICES PRÉSENTANT UN ATTRAIT MARQUÉ POUR LES ENFANTS	PRODUITS ET SERVICES NE PRÉSENTANT PAS D'ATTRAIT POUR LES ENFANTS
DÉFINITION	Comprend : jouets, certaines friandises, aliments...	Comprend produits familiaux et adolescents : certaines céréales, desserts, jeux	Comprend produits adultes, familiaux, adolescents et enfantins
ÉMISSIONS POUR ENFANTS	JAMAIS sauf présentation non susceptible d'intéresser les enfants	JAMAIS sauf présentation non susceptible d'intéresser les enfants	Toujours, mais présentation adulte
TOUTES ÉMISSIONS SAUF CELLES POUR ENFANTS	Messages non conçus de façon à faire particu- lièrement appel aux appétits de l'enfant et à susciter son intérêt	Messages non conçus de façon à faire particulièrement appel aux appétits de l'enfant et à susciter son intérêt	Toujours, mais présentation adulte
ÉMISSIONS DONT LA PART DES 2 À 11 ANS EST DE MOINS DE 15 %	Messages partiellement adressés aux enfants	Messages partiellement adressés aux enfants	Toujours, mais présentation adulte
ÉMISSIONS DONT LA PART DES 2 À 11 ANS EST DE MOINS DE 5 %	Messages principalement adressés aux enfants	Messages principalement adressés aux enfants	Toujours, mais présentation adulte

3. LA PUBLICITÉ ÉDUCATIVE

Les dispositions de la *Loi sur la protection du consommateur* qui interdisent la publicité destinée aux enfants, ne visent que la publicité commerciale.

L'une des formes les plus courantes de publicité non commerciale est la publicité éducative.

Une publicité éducative adressée aux enfants doit rencontrer les normes suivantes :

1. elle doit être de nature à assurer la formation et le développement de l'enfant;
2. elle ne doit pas, considérée globalement, constituer une supercherie pour contourner l'esprit de la loi;
3. le produit ne doit pas être identifiable autrement que de façon générique et il ne doit pas y avoir de marque de commerce;
4. elle doit respecter les diverses exigences de l'article 91 du règlement général;
5. l'identification du commanditaire doit être faite sobrement, par une signature non animée, qui n'excèdera pas une durée de cinq secondes, quelle que soit la longueur du message publicitaire.

4. LES NIVEAUX D'ÉCOUTE

À titre de guide pour les annonceurs et les publicitaires, l'Office reproduit ci-dessous une grille indiquant les moments de la journée où les enfants sont à l'écoute de la télévision.

Ces périodes ont été identifiées à partir des niveaux d'écoute des 2 à 11 ans, sur l'ensemble du territoire québécois, en se basant sur la moyenne des sondages de l'automne 1979 et du printemps 1980¹.

En prenant 15 % de la population totale des 2 à 11 ans au Québec comme norme d'un niveau d'écoute significatif (au 1^{er} janvier 1980, les enfants de 2 à 11 ans comptent pour 14.5 % de la population du Québec), les périodes où le niveau d'écoute des enfants, converti en part de l'auditoire total pour chaque tranche de 30 minutes, s'est révélé supérieur à cette norme, sont les suivantes :

a) du lundi au vendredi :

de 7 h 00 à 8 h 30
de 9 h 00 à 10 h 30
de 11 h 00 à 12 h 30
de 16 h 00 à 18 h 00

b) le samedi :

de 7 h 00 à 13 h 00
de 14 h 00 à 16 h 30
de 17 h 00 à 18 h 00

c) le dimanche :

de 7 h 00 à 10 h 00
de 17 h 00 à 17 h 30
de 18 h 30 à 19 h 00

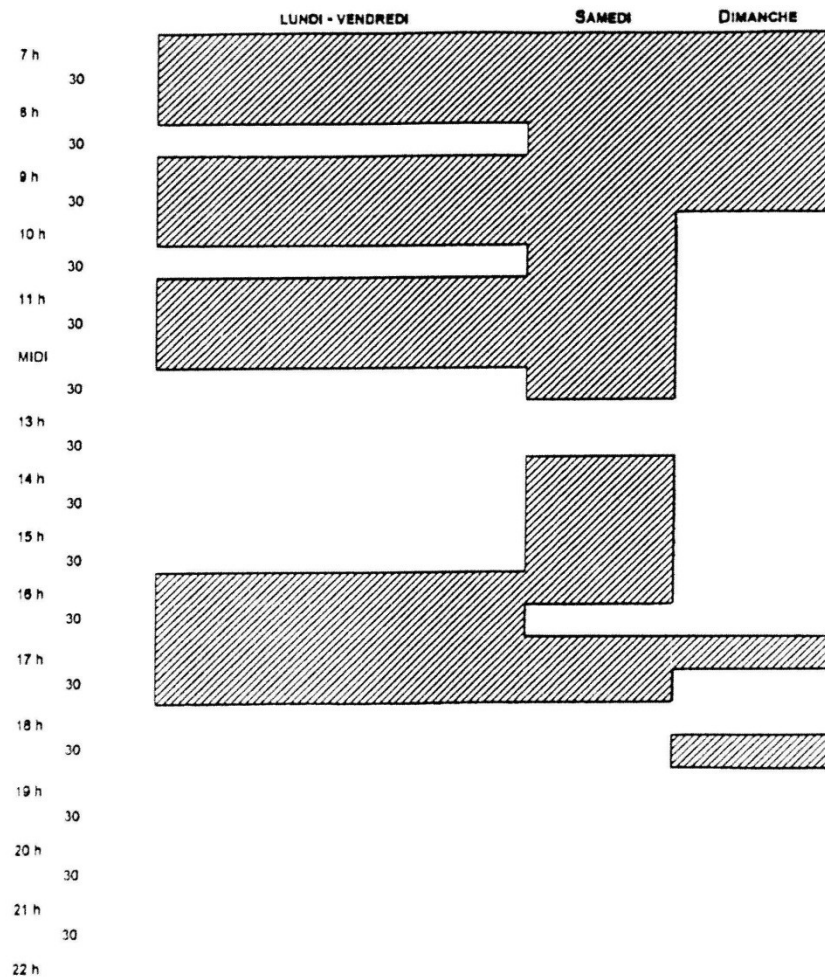
Ces données sont reproduites de façon graphique à la page suivante.

¹

Le niveau d'écoute est l'addition des cotes d'écoute d'un groupe donné, en occurrence les 2 à 11 ans, pour une tranche de trente minutes. Ces renseignements sont tirés des sondages du Bureau of Broadcast Measurement (BBM).

**PART DES ENFANTS DE 2 À 11 ANS
DANS L'AUDITOIRE TOTAL PAR TRANCHE DE 30 MINUTES²**

SAISON 1979-1980



² Les tranches hachurées indiquent les moments où la part des enfants de 2 à 11 ans dans l'auditoire total atteint ou excède 15 %.

Source: Office de la protection du consommateur

Appendix F

Research Ethics Board Approval



The Ottawa
Hospital | L'Hôpital
d'Ottawa

*Research Ethics Board
Conseil d'éthique en recherches*

Monday, July 28, 2008

Dr. Lise Dubois
University of Ottawa

Dear Dr. Dubois:

Re: Protocol # 2008388-01H Food Advertising, Food Intake and Obesity in Anglophone and Francophone Children in Ontario and Quebec
Protocol approval valid until - Monday, July 27, 2009

Thank you for the letter from Ms. M. Potvin Kent dated July 22, 2008. I am pleased to inform you that this protocol underwent expedited review by the Ottawa Hospital Research Ethics Board (OHREB) and is approved. No changes, amendments or addenda may be made to the protocol or the consent form without the OHREB's review and approval. This approval is conditional upon receipt of the approval letters from the four participating School Boards. Please forward the letters as soon you receive them.

The validation date should be indicated on the bottom of all consent forms and information sheets (see copy attached). If the study is to continue beyond the expiry date noted above, a Renewal Form should be submitted to the OHREB approximately six weeks prior to the current expiry date. If the study has been completed by this date, a Termination Report should be submitted.

The Ottawa Hospital Research Ethics Board is constituted in accordance with, and operates in compliance with the requirements of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans; Health Canada Good Clinical Practice: Consolidated Guideline; Part C Division 5 of the Food and Drug Regulations of Health Canada; and the provisions of the Ontario Health Information Protection Act 2004 and its applicable Regulations.

Yours sincerely,

Raphaël Saginur, M.D.
Chairman
Ottawa Hospital Research Ethics Board

Encl.

/ll

Revised 16/09/2008

Appendix G

Principal Recruitment Letter

December 2009

Dear Principal,

My name is Monique Potvin Kent and I'm a PhD candidate at the University of Ottawa completing research on children's exposure to junk food advertising on television under the direction of Dr. Lise Dubois. I'm interested in determining whether there is an association between junk food advertisements directed at children and children's food intake and weight. Such information is tremendously important given that childhood obesity rates have doubled over the past 25 years and given that junk food advertising is viewed as one potential factor that is contributing to childhood weight and food intake problems.

The federal government is interested in the results of this study and full funding has been provided by the Canadian Institutes of Health Research for a three year period. This study has been approved by the Ottawa Hospital Research Ethics Board as well as by your school board.

I am currently recruiting subjects for this study and would like to invite the children in grades 5 and 6 from your school and their parents to participate. I have enclosed a short summary of my research study for your information. In addition, I have included a copy of the *Information Sheet and Consent Form for Parents* that parents will be required to sign which outlines the details of the children's and parents' participation. Although most of the data in this study will be collected in the children's homes through questionnaires sent through the school, children would be weighed and measured during class time and questionnaires would be explained. If your school chooses to participate, I would visit classrooms with students in grades 5 and 6 on two occasions, once for approximately 5 to 10 minutes in January/February 2009 and a second time for 30 minutes in February/March 2009. The chart below describes the research activities I would conduct with the classrooms on these visits, and the teachers' role in this study if you choose to have your school participate.

In order to compensate the children and teachers for their time and effort, the school would be given \$350 to be spent on educational materials or an activity of its choice. In addition, the school would be provided with aggregate research results once the research is complete that could be shared with the children and passed on to parents.

I would be willing to visit your school and meet with teachers to describe my research more thoroughly and answer questions. If you have any questions or concerns, please contact me directly.

Researcher Visit to the Class	Timing	Activity in Classroom with Researcher (***Minutes taken of class time in brackets)	Teacher's Role
#1	January/ February 2009	(1) Introduction of project (2) Distribution of <i>Information Sheet and Consent Form for Parents</i> (*** 5 to 10 minutes of class time)	(1) Collect <i>Information Sheet and Consent Form for Parents</i>
#2	February/ March 2009	(1) Re-introduce study (2) Receive verbal assent from each child (3) Instructions and distribution of <i>Questionnaire for Child</i> and <i>Questionnaire for Parent</i> (to be completed at home) (4) Instructions for <i>Media Diary</i> (to be completed at a later date) (5) Height and weight measurement (***30 minutes of class time)	none
	April 2009		(1) Review instructions for <i>Media Diary</i> (to be completed at home) (2) Distribute provided <i>Media Diary</i> and letter to parents regarding <i>Media Diary</i>

I hope you will consider having your school participate in this study. I will be in touch with you shortly regarding your decision.

Thank you for your time and consideration.

Yours sincerely,

Monique Potvin Kent
PhD Candidate in Population Health
University of Ottawa

décembre 2008

Monsieur le directeur, Madame la directrice

Mon nom est Monique Potvin Kent et je suis étudiante au doctorat à l'Université d'Ottawa. Je suis en train de faire une étude, sous la direction du Lise Dubois PhD, sur l'exposition des enfants aux publicités à la télévision et sur Internet sur la 'malbouffe', c'est-à-dire les aliments vides ou sans grande valeur nutritive. Je veux voir s'il y a un lien entre les publicités sur la malbouffe destinées aux enfants, les aliments qu'ils mangent, et leur poids. Ces renseignements sont extrêmement importants étant donné que les taux d'obésité chez les enfants ont doublé depuis 25 ans et que les publicités sur la malbouffe sont perçues comme un des facteurs possibles contribuant aux problèmes de poids et d'alimentation chez les enfants.

Cette étude est financée par les Instituts de recherche en santé du Canada pour une période de trois ans et a été approuvée par le Conseil d'éthique en recherche de l'Hôpital d'Ottawa ainsi que par votre Conseil scolaire.

Je recrute présentement des personnes pour cette étude et j'aimerais inviter les élèves de la 5^e à la 6^e année de votre école et leurs parents à participer. J'ai inclus un sommaire de mon étude à titre informatif. De plus, j'ai inclus un exemplaire du *Feuilleton d'information et formulaire de consentement pour les parents* que les parents auraient à signer et qui décrit en outre la participation des élèves et des parents. Bien que la plupart des données seront recueillies dans les demeures des élèves au moyen de questionnaires envoyés par l'entremise de l'école, les enfants seraient pesés et mesurés pendant les heures de classe et on leur expliquerait le questionnaire. Si votre école choisissait de participer à l'étude, je la visiterais à deux occasions, la première pour 5 à 10 minutes en janvier ou en février 2009 et la deuxième en février ou en mars 2009 pour environ 30 minutes. Le tableau qui suit décrit les activités de recherche que je ferais avec vos classes lors de ces visites et le rôle de l'enseignant ou de l'enseignante dans cette étude si vous acceptez que votre école y participe.

Afin de dédommager les enfants et les enseignants pour leur temps et leurs efforts, chaque école recevrait 350 \$ à dépenser pour du matériel pédagogique ou une activité de son choix. De plus, l'école recevrait les résultats globaux une fois l'étude terminée et pourrait les partager avec les enfants et les transmettre à leurs parents.

Visite de la recherche à la classe	Moment	Activité en salle de classe de la recherche (***Minutes de temps de classe utilisées entre parenthèses)	Rôle de l'enseignant ou l'enseignante
N° 1	janvier/ février 2009	(1) Introduction du projet (2) Distribution du <i>Feuilleton d'information et formulaire de consentement</i> , et de la lettre d'introduction aux parents (*** 5 à 10 minutes de temps en classe)	(1) Recueillir le <i>Feuilleton d'information et formulaire de consentement pour les parents</i>
N° 2	février/ mars 2009	(1) Introduire l'étude à nouveau (2) Recevoir le consentement verbal de chaque enfant (3) Instructions et distribution du <i>Questionnaire pour l'enfant</i> et <i>Questionnaire pour le parent</i> (à remplir à la maison) (4) Explication du <i>Journal médiatique</i> (à être rempli en avril) (5) Mesure de la taille et du poids (***30 minutes de temps en classe)	Aucun
	avril 2009		(1) Revoir les instructions pour le <i>Journal médiatique</i> (à remplir à la maison) (2) Distribuez le <i>Journal médiatique</i> ainsi que la lettre aux parents concernant ce journal

Ce serait un plaisir pour moi de visiter votre école et de rencontrer les enseignants et enseignantes pour décrire ma recherche en plus de détail et répondre aux questions si besoin est. Pour toute question ou préoccupation au sujet de cette étude, veuillez communiquer avec moi.

J'espère que vous serez intéressé à ce que votre école participe à cette étude. Je communiquerai avec vous sous peu pour obtenir votre décision.

Je vous remercie de l'attention que vous portez à ma requête et vous prie d'agréer mes sentiments reconnaissants.

Monique Potvin Kent
Étudiante au doctorat en Santé des populations
Université d'Ottawa

Appendix H

Information Sheet and Consent Form for Parents

Food Advertising, Food Intake, and Obesity in Anglophone and Francophone Children in Ontario and Quebec

You and your child are being asked to participate in a research study conducted by Monique Potvin Kent, PhD Candidate in Population Health and by Dr. Lise Dubois, Canada Research Chair in Nutrition and Population Health and Associate Professor in the Department of Epidemiology and Community Medicine at the University of Ottawa.

This study is funded by the Canadian Institutes for Health Research and is being undertaken in collaboration with the Chronic Disease Prevention Alliance of Canada.

Purpose of the Study: The purpose of the study is to determine the amount of junk food advertising that children in Ontario and Quebec are exposed to on television and to determine whether this advertising is related to their food consumption and weight. Such information is tremendously important given that childhood obesity rates have doubled over the past 25 years and given that junk food advertising is viewed as one potential factor that is contributing to childhood weight and food intake problems.

A total of 1,600 children from grades 5 and 6 from Ontario and Quebec will complete questionnaires regarding their food consumption and media use in order to examine this issue.

Study Procedures and Time Commitment:

Your participation as the child's parent will consist of:

- (1) filling out a very short questionnaire about your education level, marital status etc. and your child's language and media access;
- (2) filling out a questionnaire with your child about their food intake, physical activity and media use;
- (3) returning to the researcher these questionnaires in the addressed postage paid envelope that is provided;
- (4) returning to the researcher the *Media Diary* in the addressed postage paid envelop that is provided; and
- (5) answering follow-up questions by telephone should the researchers require clarification on questionnaire responses.

*Time commitment for you: 15-20 minutes total in January/April 2009.

Your child's participation will consist of:

At school:

- (1) being weighed and measured.

*Time commitment for your child: approximately 30-40 minutes of in-class time in February/March 2009

At home:

- (1) filling out a questionnaire about their food intake, physical activity and media use with your help; and
- (2) completing a *Media Diary* for a one week period in April 2009 of what they watch on television (i.e. what programs, at what times, on which stations).

*Time commitment for your child: approximately 10 minutes in February/March 2009 and 10-15 minutes per day for 7 days in April 2009

Risks: Participation in this study will not involve any risks. Some children may feel uncomfortable being weighed but to minimize any feelings of discomfort, children will be weighed away from their classmates and all results will be kept confidential.

Benefits: Although you and your child's participation in this study will not benefit you or your child directly, your child's school will receive \$350.00 for educational materials or an activity for participating in the study. In addition, the school will be provided with aggregate (not individual) research results once the research is complete. These results will then be passed on to children's parents. Also, the results from this study will provide valuable information to policy makers regarding the influence of advertising policy in Canada.

Voluntary Participation and Withdrawal: You and your child are under no obligation to participate in this study. If you and your child choose to participate, you or he/she can withdraw from the study at any time and/or choose not to answer any questions, without suffering any negative consequences. If you or he/she choose to withdraw, all data gathered until the time of withdrawal will be destroyed.

Confidentiality and Anonymity: All information collected by the researcher will remain confidential unless release is required by law. The contents of the questionnaires, heights and weights will only be used for research purposes. All personal information will be kept at the Institute of Population Health at the University of Ottawa under lock and key. Anonymity will be protected in the following manner. Children and their parents will be assigned a number which will be indicated on their questionnaires and *Media Diary*. All questionnaires and *Media Diary* will be returned to the researcher at the University of Ottawa in the provided addressed postage paid envelopes. The link between the subject's name and subject number will be housed separately at the Institute of Population Health (University of Ottawa) under lock and key.

Conservation of data: The questionnaires and *Media Diary* will be kept in a locked cabinet at the Institute of Population Health at the University of Ottawa and only the principal investigator, the research director and the research assistants will have access to it. All data will be destroyed after a period of fifteen years. The Ottawa Hospital Research Ethics Board and the Ottawa Health Research Institute may review relevant study records, under the supervision of Dr. L. Dubois' staff, for audit purposes.

Questions About the Study: Should you have any questions about this study, you can contact Monique Potvin Kent. If you have any questions about your rights (or your child's) as a research subject, you can contact the Chairperson of the Ottawa Hospital Research Ethics Board.

Consent: I have read this 3 page Information Sheet and Consent Form and I, (print name) _____ agree to participate in this study.

I have also discussed it with my child and...

☐ I give permission for my child to participate

☐ I do NOT give permission for my child to participate

Name of Student : (please print) _____

Name of Parent/Guardian : (please print) _____

Signature of Parent/Guardian : _____

Date : _____

*There are two copies of the *Information Sheet and Consent Form for Parents*, one of which is yours to keep.

Feuillet d'information et formulaire de consentement pour les parents

Publicités sur les aliments, l'alimentation et l'obésité chez les enfants francophones et anglophones en Ontario et au Québec

Vous et votre enfant êtes invités à participer à une étude menée par Monique Potvin Kent, candidate au doctorat en Santé des populations et par Lise Dubois PhD, titulaire de la Chaire de recherche du Canada en nutrition et santé des populations et professeure agrégée au Département d'épidémiologie et de médecine sociale à l'Université d'Ottawa.

Cette étude est subventionnée par les Instituts de recherche en santé du Canada et entreprise en collaboration avec l'Alliance pour la prévention des maladies chroniques au Canada.

Objet de l'étude : L'étude vise à déterminer le nombre de messages publicitaires sur la 'malbouffe' (aliments sans grande valeur nutritive) auxquels les enfants de l'Ontario et du Québec sont exposés à la télévision et de voir si ces publicités influencent leur consommation d'aliments et leur poids. Ces renseignements sont extrêmement importants étant donné que les taux d'obésité chez les enfants ont doublé depuis 25 ans et que les publicités sur la malbouffe sont perçues comme un des facteurs possibles contribuant aux problèmes de poids et d'alimentation chez les enfants.

Un total de 1 600 enfants de la 5^e et la 6^e année rempliront un questionnaire au sujet de leur consommation d'aliments et leur utilisation des médias afin d'examiner cette question.

Marche à suivre et temps requis pour l'étude :

Votre participation à titre de parent de l'enfant consisterait à :

- (6) remplir un court questionnaire au sujet de votre niveau d'éducation, votre état matrimonial, etc. et la langue de l'enfant et son accès aux médias;
- (7) aider votre enfant à remplir un questionnaire au sujet de son alimentation, son activité physique et son utilisation des médias;
- (8) retourner ces questionnaires au chercheur dans l'enveloppe affranchie fournie;
- (9) retourner le *Journal médiatique* au chercheur dans l'enveloppe affranchie fournie;
- (10) répondre à des questions de suivi par téléphone si les recherchistes ont besoin de clarification sur certaines des réponses au questionnaire.

*Temps de participation du parent : un total de 15 à 20 minutes en février/avril 2009.

La participation de votre enfant consisterait :

À l'école :

- se faire peser et mesurer.

* Votre enfant y passerait environ 30 à 40 minutes en salle de classe en février ou en mars 2009.

À la maison :

- de remplir un questionnaire au sujet de son alimentation, ses activités physiques et son utilisation des médias;
- remplir un *Journal médiatique* sur ce qu'il ou elle regarde à la télévision (c.-à-d. quelles émissions, à quelle heure et sur quelle poste) pour une période d'une semaine en avril 2009.

*Votre enfant y passerait environ 10 minutes en février ou en mars 2009 et 10 à 15 minutes par jour pour 7 jours en avril 2009.

Risques : La participation à cette étude ne pose aucun risque. Certains enfants peuvent sentir un inconfort à se faire peser, mais pour minimiser ces sentiments, les enfants seront pesés à l'écart de leurs compagnons de classe et les résultats seront confidentiels.

Avantages : Bien que votre participation et celle de votre enfant à cette étude n'aura pas d'avantage direct pour vous, l'école de votre enfant recevra 350 \$ pour du matériel pédagogique ou pour une activité en reconnaissance de leur participation à l'étude. De plus, l'école recevra les résultats globaux (pas les résultats individuels) une fois l'étude terminée. Ces résultats seront ensuite transmis aux parents des enfants. En outre, les résultats de cette étude fourniront de précieux renseignements aux décideurs quant à l'influence des politiques gouvernementales sur les messages publicitaires au Canada.

Participation volontaire et retrait : Votre enfant et vous n'êtes aucunement obligés de participer à cette étude. Si votre enfant et vous décidez de participer, vous pouvez vous retirer de l'étude en tout temps ou choisir de ne pas répondre à aucune des questions sans conséquence négative. Si vous ou votre enfant choisissez de vous retirer, toutes les données recueillies jusqu'au moment du retrait seront détruites.

Confidentialité et anonymat : Tous les renseignements recueillis par la chercheuse demeureront confidentiels à moins que leur divulgation soit requise par la loi. Le contenu des questionnaires, les tailles et les poids ne seront utilisés qu'à des fins de recherche. Toute information personnelle sera conservée sous clé à l'Institut de recherche sur la santé des populations à l'Université d'Ottawa. L'anonymat sera protégé comme suit. Les enfants et leurs parents seront identifiés au moyen d'un numéro qui sera indiqué sur leurs questionnaires et leurs *Journaux médiatiques*. Tous les questionnaires et le *Journal médiatique* seront retournés au chercheur dans l'enveloppe affranchie et fournie. Le lien entre le nom du sujet et le numéro du sujet sera conservé séparément, sous clé, à l'Institut de recherche sur la santé des populations (Université d'Ottawa).

Conservation des données : Les questionnaires et le *Journal médiatique* seront conservés sous clé dans un classeur à l'Institut de recherche sur la santé des populations à l'Université d'Ottawa et seuls le chercheur principal, le directeur de recherche et les assistants de recherche y auront accès. Toutes les données seront détruites après quinze ans. Le Conseil d'éthique en recherche de l'Hôpital d'Ottawa et l'Institut de recherche en santé d'Ottawa peuvent revoir les dossiers pertinents de l'étude, sous la supervision du personnel de Mme Lise Dubois, à des fins de vérification.

Questions au sujet de l'étude : Pour toute question au sujet de cette étude, communiquez avec Monique Potvin Kent. Pour toute question au sujet de vos droits (ou de ceux de votre enfant) à titre de sujet de recherche, veuillez communiquer avec le président du Conseil d'éthique en recherche de l'Hôpital d'Ottawa.

Consentement : J'ai lu ce feuillet d'information et formulaire de consentement de 3 pages et je (nom en lettres moulées) _____ accepte de participer à cette étude.

J'en ai aussi discuté avec mon enfant et...

- ☐ Je donne la permission à mon enfant de participer
- ☐ Je ne donne PAS la permission à mon enfant de participer

Nom de l'élève : (en lettres moulées) _____

Nom du parent/tuteur : (en lettres moulées)

Signature du parent/tuteur : _____

Date : _____

*Il y a deux exemplaires du *Feuillet d'information et formulaire de consentement pour les parents* dont un que vous pouvez conserver.

Appendix I

Subject number: _____

Questionnaire for Parent

Instructions

*****This questionnaire is to be completed by the parent who knows the child's eating and TV viewing habits the best.**

Many of the questions in this questionnaire have many possible answers. Choose the answer best suited to your personal situation.

Questions either require you to circle the answer best suited to your personal situation and/or to fill in the blank.

Answer to the best of your knowledge. There are no right or wrong answers.

We ask that you choose only one answer for each question except when stated otherwise.

If you have difficulty understanding any of the questions or would like further information on this study, please call Monique Potvin Kent at the University of Ottawa.

1. **What is your relationship with the selected child?**
 01. Mother
 02. Father
 03. Step-mother
 04. Step-father
 05. Parent in a foster home
 06. Other → **please specify** _____

2. **What is your marital status?**
 01. Married
 02. Living common-law
 03. Widowed
 04. Separated
 05. Divorced
 06. Single, never married

3. **How many people live in the household where the child usually lives?**
 (Include people who may be absent because of studies, travel, hospitalization etc. but who normally live with the child)

 Number of people including the child: _____

4. **Indicate which of the following people live in the household with the selected child including yourself.**

 → **Circle as many as required**
 01. Child's mother (biological or adoptive)
 02. Child's father (biological or adoptive)
 03. Spouse of child's mother
 04. Spouse of child's father
 05. Guardians → **please specify number** _____
 06. Parents in a foster home → **please specify number** _____
 07. Child's sister(s) → **please specify number** ____ **and age(s)** ____ ____
 08. Child's brother(s) → **please specify number** ____ **and age(s)** ____ ____
 09. Child's step-sister(s)
 → **please specify number** ____ **and age(s)** ____ ____ ____
 10. Child's step-brother(s)
 → **please specify number** ____ **and age(s)** ____ ____ ____
 11. Children of a parent's spouse
 → **please specify number** ____ **and age(s)** ____ ____ ____
 12. Children in a foster home → **please specify number** _____
 13. Other relative(s) → **please specify number** _____
 14. Other person (s) → **please specify number** _____

5. Does the child currently live with both of his/her biological or adoptive parents?

- 01. Yes → **If yes, please go to question 7**
- 02. No

6. With which parent does the child *currently* live?

- 01. Mother only
- 02. Father only
- 03. Most of the time with his/her mother
- 04. Most of the time with his/her father
- 05. Equal times with mother and father
- 06. Other

7. What is the language that the child first learned at home and can still understand?

- ☐ English
- ☐ French
- ☐ Other

8. What language do you use most often when speaking with the selected child at home?

- ☐ English
- ☐ French
- ☐ Other

9. Does the child's other parent speak the same language as you do when speaking to the selected child at home?

- 01. Yes
- 02. No → **If NO, please specify which language they speak to the child?**

- ☐ English
- ☐ French
- ☐ Other

This next question is on your personal situation and that of the spouse or partner you are currently living with. If you don't have a spouse or partner, answer the questions with regards to yourself.

- 10. What is the highest level of education that you and your spouse/partner have completed?**

→ **Indicate only one level per person**

	Me	Your Spouse/Partner
No formal schooling		
Some primary school		
Primary school		
Some high school		
High school certificate or equivalent		
Some trade, technical or vocational school		
Apprenticeship or trade, technical or vocational certificate or diploma		
Some college or CEGEP		
College, CEGEP or other non-university certificate or diploma		
Some university		
University diploma or degree		
University degree above bachelor's degree		
Don't know		

- 11. What are the first three digits of your postal code?**

- 12. How many working TV's are there in your home?**

- 13. Is there one in your child's room? (please circle)**

YES NO

14. How many televisions have cable or satellite service?

15. What cable or satellite service do you subscribe to? (i.e. Rogers, Videotron, Bell)

16. How many working computers are there in your home that your child could use?

17. How many of the computers in your home that your child can use have an Internet connection?

18. Please provide your evening telephone number should we require clarification on any of you or your child's responses.

Thank you for your participation!

Please place this questionnaire in the provided envelope and then drop in a mail box.

Questionnaire pour le parent

Instructions

*****Ce questionnaire doit être rempli par le parent qui connaît le mieux les habitudes alimentaires et de visionnement de la télévision de l'enfant.**

Plusieurs des questions dans ce questionnaire peuvent avoir différentes réponses. Choisissez la réponse la plus appropriée selon votre situation personnelle.

Pour répondre aux questions, vous devez soit cocher, soit encercler la réponse la plus appropriée selon votre situation personnelle, soit remplir les espaces blancs.

Répondez au meilleur de votre connaissance. Il n'y a pas de bonnes ou de mauvaises réponses.

Nous vous demandons de choisir seulement une réponse à chaque question, à moins de préciser autrement.

Si vous avez de la difficulté à comprendre certaines des questions ou si vous voulez de plus amples renseignements sur cette étude, prière de téléphoner à Monique Potvin Kent à l'Université d'Ottawa.

1. Quelle est votre lien avec l'enfant participant?

- 02. Mère
- 02. Père
- 03. Belle-mère
- 04. Beau-père
- 05. Parent dans une famille d'accueil
- 06. Autre → **veuillez préciser** _____

2. Quel est votre état matrimonial?

- 01. Marié
- 02. Union de fait
- 03. Veuf ou veuve
- 04. Séparé
- 05. Divorcé
- 06. Célibataire, jamais marié

3. Combien de personnes vivent dans le logement où vit habituellement l'enfant participant?

(Inclure les personnes qui sont absentes du ménage parce qu'elles sont aux études, en visite, en voyage ou à l'hôpital, mais qui demeurent habituellement ici)

Nombre de personnes incluant l'enfant : _____

4. Indiquer quelles sont les personnes qui vivent avec l'enfant participant dans ce logement y compris vous-même, en encerclant les chiffres appropriés.

Encercler autant de chiffres qu'il est nécessaire

- 01. Mère de l'enfant (biologique ou adoptive)
- 02. Père de l'enfant (biologique ou adoptif)
- 03. Conjoint de la mère de l'enfant
- 04. Conjoint du père de l'enfant
- 05. Tuteurs → **veuillez préciser le nombre** _____
- 06. Parents dans une famille d'accueil
→ **veuillez préciser le nombre** _____
- 07. Sœur(s) de l'enfant
→ **veuillez préciser le nombre** _____ **et l'âge** ____ ____ ____
- 08. Frère(s) de l'enfant
→ **veuillez préciser le nombre** _____ **et l'âge** ____ ____ ____
- 09. Demi-sœur(s) de l'enfant
→ **veuillez préciser le nombre** _____ **et l'âge** ____ ____ ____
- 10. Demi-frère(s) de l'enfant
→ **veuillez préciser le nombre** _____ **et l'âge** ____ ____ ____
- 11. Enfant(s) du conjoint du parent
→ **veuillez préciser le nombre** _____ **et l'âge** ____ ____ ____
- 12. Enfants dans une famille d'accueil → **veuillez préciser le nombre** _____

13. Autre(s) personne(s) parente(s)→ **veuillez préciser le nombre** ____
14. Autre(s) personne(s) → **veuillez préciser le nombre** ____

5. L'enfant vit-il actuellement avec ses deux parents biologiques ou adoptifs?

01. Oui →**Si oui, veuillez passer à la question 7**
02. Non

6. Avec lequel de ses parents l'enfant participant habit-t-il(elle) actuellement?

01. Avec sa mère seulement
02. Avec son père seulement
03. La plupart du temps avec sa mère
04. La plupart du temps avec son père
05. Également avec sa mère et son père
06. Autre

7. Quelle est la première langue que l'enfant participant a apprise à la maison et qu'il peut encore comprendre?

- ☐ français
☐ anglais
☐ autre langue

8. Quelle langue parlez-vous le plus souvent avec l'enfant participant à la maison?

- ☐ français
☐ anglais
☐ autre langue

9. L'autre parent de l'enfant participant parle-t-il la même langue que vous en parlant à l'enfant participant à la maison?

01. Oui
02. Non →Si NON, veuillez préciser dans quelle langue il parle à l'enfant?

- ☐ français ☐ anglais ☐ autre langue

La prochaine question porte sur votre situation personnelle et celle de votre conjoint ou du partenaire avec qui vous vivez actuellement. Si vous n'avez pas de conjoint ou de partenaire, répondez aux questions par rapport à vous-même.

11. Quel est le plus haut niveau de scolarité que vous et votre conjoint(e)/partenaire avez complété?

→ Indiquez un seul choix par personne

	Moi	Mon conjoint/ partenaire
	Aucune instruction officielle	
	Un peu d'école primaire	
	École primaire	
	Un peu d'école secondaire	
	Diplôme du secondaire ou l'équivalent	
	Un peu d'école de métiers ou d'école technique	
	Certificat ou diplôme technique ou d'apprentissage ou de métier	
	Un peu de collège ou de CEGEP	
	Certificat ou diplôme collégial, de CEGEP ou autre certificat non universitaire	
	Un peu d'université	
	Diplôme ou universitaire	
	Diplôme universitaire de deuxième cycle ou plus	
	Ne sait pas	

12. Quels sont les trois premiers chiffres de votre code postal?

13. Combien de téléviseurs fonctionnels y a-t-il dans votre maison?

14. Y a-t-il un téléviseur dans la chambre de votre enfant? (veuillez encercler)

OUI NON

15. Combien de téléviseurs ont un service de câble ou de satellite?

16. À quel service de câble ou de satellite êtes-vous abonné? (p. ex. Rogers, Vidéotron, Bell)

17. Combien d'ordinateurs fonctionnels que votre enfant pourrait utiliser y a-t-il dans votre maison?

18. Combien de ces ordinateurs dans votre maison que votre enfant peut utiliser ont une connexion Internet?

19. Veuillez fournir un numéro de téléphone où on peut vous joindre en soirée s'il nous faut obtenir une clarification de vos réponses ou de celles de votre enfant.

Merci de votre participation!

S'il vous plait, mettez ce questionnaire dans l'enveloppe fournie et postez.

Appendix J

Subject number: _____

Questionnaire for Child

Instructions

***This questionnaire is to be answered by you with the help of the parent who knows your eating and TV viewing habits the best.

This questionnaire asks you questions about who you are, the foods that you eat and the activities that you like to do.

This is not a test. There are no right or wrong answers. Simply answer each question indicating what you really think.

Your name is not written on this questionnaire. No one, not even your teacher or principal, will ever know what you answered.

Answer each question.

To answer, make an X in the ☐, like follows ☐

Examples

1. You are...

☐ a boy

☐ a girl

2. In the past 7 days, how many times did you eat/drink the following foods and beverages?

For each food or beverage, mark only one "X" in each row.

Food/Beverage	5 times or more per day	3-4 times per day	1-2 times per day	5-6 times per week	3-4 times per week	1-2 times per week	Not once
Milk (as a beverage)	☐	☐	☐	☐	☐	☐	☐

General Information

1. **How old are you?**
_____ years old
2. **You are.....**
 - ☐ a boy
 - ☐ a girl
3. **What grade are you in?**
 - ☐ grade 5
 - ☐ grade 6
4. **What language do you usually speak with your friends?**
 - ☐ English
 - ☐ French
 - ☐ Other

Your Health

5. **In general, is your health....**
 - ☐ excellent
 - ☐ quite good
 - ☐ not very good
6. **Do you think your body is...?**
 - ☐ Much too thin
 - ☐ A bit too thin
 - ☐ About the right size
 - ☐ A bit too fat
 - ☐ Much too fat

7. Are you currently trying to do anything about your weight?

- ☐ I'm trying to lose weight
- ☐ I'm trying to gain weight
- ☐ I'm not doing anything about my weight

Your Diet

8. On week days (Monday to Friday), how often do you usually have breakfast (more than a glass of milk or juice)?

- ☐ I never have breakfast during the week
- ☐ I usually have breakfast one day per week on week days
- ☐ I usually have breakfast two days per week on week days
- ☐ I usually have breakfast three days per week on week days
- ☐ I usually have breakfast four days per week on week days
- ☐ I usually have breakfast five days per week on week days

9. On weekends (Saturday and Sunday), how often do you usually have breakfast (more than a glass of milk or juice)?

- ☐ I never have breakfast during the weekend
- ☐ I usually have breakfast on only one day of the weekend (Saturday **OR** Sunday)
- ☐ I usually have breakfast on both weekend days (Saturday **AND** Sunday)

Now let's talk about every day of the week.

10. In the past 7 days, how many times did you eat dinner (your evening meal)....

	Never	1 or 2 times	3 to 5 times	6 or 7 times
A. alone?	☐	☐	☐	☐
B. with people in your family?	☐	☐	☐	☐
C. with your friends only?	☐	☐	☐	☐

11. How many times per week do you usually watch television or videos (DVD's etc.) during dinner (your evening meal)?

- ☐ 7 times per week
- ☐ 5 or 6 times per week
- ☐ 3 or 4 times per week
- ☐ 1 or 2 times per week
- ☐ Never

12. In the past 7 days, how many times....

	Never	1 or 2 times	3 to 5 times	6 or 7 times	More than 7 times
A. Did you eat a meal in a restaurant?	☐	☐	☐	☐	☐
B. Did you have a snack in a restaurant?	☐	☐	☐	☐	☐
C. Did you (or your family) have food delivered to your home or did you pick up food from a restaurant to eat at home?	☐	☐	☐	☐	☐

13. In the past 7 days, how many times did you eat restaurant food like McDonald's, Kentucky Fried Chicken, Pizza Pizza or other fast food places?

_____ times in the last 7 days or ☐ Not once

14. How often do you usually eat/drink the following foods and beverages?

For each food or beverage, mark only one “X” in each row.

Food/Beverage	5 times or more per day	3-4 times per day	1-2 times per day	5-6 times per week	3-4 times per week	1-2 times per week	Not once
Milk (as a beverage)	☐	☐	☐	☐	☐	☐	☐
Cheese	☐	☐	☐	☐	☐	☐	☐
Yogurt	☐	☐	☐	☐	☐	☐	☐
Raw vegetables and salad	☐	☐	☐	☐	☐	☐	☐
French fries	☐	☐	☐	☐	☐	☐	☐
Potatoes cooked other ways (mashed, boiled, baked)	☐	☐	☐	☐	☐	☐	☐
Cooked vegetables (excluding potatoes)	☐	☐	☐	☐	☐	☐	☐
Pure fruit juices 100% juice (orange, apple)	☐	☐	☐	☐	☐	☐	☐
Fruit-flavored drinks not 100% juice (Sunny Delight, Frutopia, Five Alive)	☐	☐	☐	☐	☐	☐	☐
Fruit (fresh fruit, canned, frozen or cooked fruit)	☐	☐	☐	☐	☐	☐	☐
Breakfast Cereal (cold)	☐	☐	☐	☐	☐	☐	☐
***What type of breakfast cereal did you eat most often? _____	☐	☐	☐	☐	☐	☐	☐
White bread, bagels, pita or other types of white bread	☐	☐	☐	☐	☐	☐	☐
Whole wheat, 12 grain, rye or other types of brown bread	☐	☐	☐	☐	☐	☐	☐
Pasta or noodles of any kind	☐	☐	☐	☐	☐	☐	☐
Rice	☐	☐	☐	☐	☐	☐	☐
Pizza	☐	☐	☐	☐	☐	☐	☐
Hot dogs, hamburgers	☐	☐	☐	☐	☐	☐	☐
Fish and seafood of any kind	☐	☐	☐	☐	☐	☐	☐

Food/Beverage	5 times or more per day	3-4 times per day	1-2 times per day	5-6 times per week	3-4 times per week	1-2 times per week	Not once
Chicken, turkey	☐	☐	☐	☐	☐	☐	☐
Beef, pork, veal, lamb	☐	☐	☐	☐	☐	☐	☐
Frozen easy-to-prepare meals (pogos, chicken nuggets, wings, pizza pockets, microwave dinners etc)	☐	☐	☐	☐	☐	☐	☐
Candy like chocolate, jujubes or ring pops etc...	☐	☐	☐	☐	☐	☐	☐
Snacks like potato chips, tortilla chips, Doritos, Bugles, Cheesies etc.)	☐	☐	☐	☐	☐	☐	☐
Desserts like cookies, cake, brownies, Joe Louis etc..	☐	☐	☐	☐	☐	☐	☐
Regular soft drinks (Coke, Sprite etc...) and sports drinks (Gatorade etc...)	☐	☐	☐	☐	☐	☐	☐
Diet soft drinks (Diet Coke, Diet Sprite etc...)	☐	☐	☐	☐	☐	☐	☐

Physical Activity

Physical activity is any activity that makes your heart beat faster and makes you get out of breath some of the time. Physical activity can be done in sports, in school activities such as gym class, while playing with friends or while walking to school. Some examples of physical activity are running, rollerblading, biking, dancing, playing soccer or hockey, and swimming. For these next two questions, add up all the time you spend in physical activity each day.

15. Over the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?

- | | |
|---|---------------------------------|
| ☐ None (zero days) | ☐ 4 days |
| ☐ 1 day | ☐ 5 days |
| ☐ 2 days | ☐ 6 days |
| ☐ 3 days | ☐ 7 days |

16. **Over a typical or usual week, on how many days are you physically active for a total of at least 60 minutes per day?**

- | | |
|---|---------------------------------|
| ☐ None (zero days) | ☐ 4 days |
| ☐ 1 day | ☐ 5 days |
| ☐ 2 days | ☐ 6 days |
| ☐ 3 days | ☐ 7 days |

Media Use

17. **During weekdays (Monday to Friday) about how many hours per day do you usually watch television or videos (DVD's) in your free time?**

- | | |
|---|--|
| ☐ None at all | ☐ About 4 hours a day |
| ☐ About 30 minutes a day | ☐ About 5 hours a day |
| ☐ About 1 hour a day | ☐ About 6 hours a day |
| ☐ About 2 hours a day | ☐ About 7 hours or more a day |
| ☐ About 3 hours a day | |

18. **During weekends (Saturday and Sunday) about how many hours per day do you usually watch television or videos (DVD's) in your free time?**

- | | |
|---|--|
| ☐ None at all | ☐ About 4 hours a day |
| ☐ About 30 minutes a day | ☐ About 5 hours a day |
| ☐ About 1 hour a day | ☐ About 6 hours a day |
| ☐ About 2 hours a day | ☐ About 7 hours or more a day |
| ☐ About 3 hours a day | |

19. Which of the following best describes how you usually watch TV?

- ☐ I mainly watch one program or channel at a time
- ☐ I mainly switch back and forth between two channels
- ☐ I mainly channel surf between many channels

20. During weekdays (Monday to Friday) about how many hours per day do you usually use a computer (for playing games, e-mailing, chatting, surfing the Internet or watching TV shows/videos) in your free time?

- | | |
|---|--|
| ☐ None at all | ☐ About 4 hours a day |
| ☐ About 30 minutes a day | ☐ About 5 hours a day |
| ☐ About 1 hour a day | ☐ About 6 hours a day |
| ☐ About 2 hours a day | ☐ About 7 hours or more a day |
| ☐ About 3 hours a day | |

21. During weekends (Saturday and Sunday) about how many hours per day do you usually use a computer (for playing games, e-mailing, chatting, surfing the Internet or watching TV shows/videos) in your free time?

- | | |
|---|--|
| ☐ None at all | ☐ About 4 hours a day |
| ☐ About 30 minutes a day | ☐ About 5 hours a day |
| ☐ About 1 hour a day | ☐ About 6 hours a day |
| ☐ About 2 hours a day | ☐ About 7 hours or more a day |
| ☐ About 3 hours a day | |

22. During weekdays (Monday to Friday) about how many hours per day do you usually use video game consoles like X-BOX or PlayStation or hand-held video games like Game Boy or PSP?

- | | |
|---|--|
| ☐ None at all | ☐ About 4 hours a day |
| ☐ About 30 minutes a day | ☐ About 5 hours a day |
| ☐ About 1 hour a day | ☐ About 6 hours a day |
| ☐ About 2 hours a day | ☐ About 7 hours or more a day |
| ☐ About 3 hours a day | |

23. During weekends (Saturday and Sunday) about how many hours per day do you usually use video game consoles like X-BOX or PlayStation or hand-held video games like Game Boy or PSP?

- | | |
|---|--|
| ☐ None at all | ☐ About 4 hours a day |
| ☐ About 30 minutes a day | ☐ About 5 hours a day |
| ☐ About 1 hour a day | ☐ About 6 hours a day |
| ☐ About 2 hours a day | ☐ About 7 hours or more a day |
| ☐ About 3 hours a day | |

Thank you for your participation!

Please place this questionnaire in the provided envelope and then drop in a mail box.



Questionnaire pour l'enfant

Instructions

*****Tu dois répondre à ce questionnaire avec l'aide du parent qui connaît le mieux tes habitudes alimentaires et tes habitudes de visionnement de la télévision.**

Ce questionnaire te pose des questions sur qui tu es, les aliments que tu manges et les activités que tu aimes faire.

Ce n'est pas un test. Il n'y a pas de bonne ou de mauvaise réponse. Réponds tout simplement à chaque question en indiquant ce que tu penses vraiment.

Ton nom n'est pas écrit sur ce questionnaire. Personne, même pas ton enseignant ou enseignante ou le directeur ou la directrice de ton école ne saura jamais ce que tu as répondu.

Réponds à chaque question.

Pour répondre, fais un X dans la case qui correspond à ta situation, comme ça ☒

Exemples :

1. Es-tu...

☐ un garçon

☐ une fille

2. Dans les derniers 7 jours, combien de fois as-tu mangé ou bu les aliments et boissons suivants?

Pour chaque aliment ou boisson, met seulement un 'X' par rangée.

Aliment/Boisson	5 fois ou plus par jour	3-4 fois par jour	1-2 fois par jour	5-6 fois par semaine	3-4 fois par semaine	1-2 fois par semaine	Pas une fois
Lait (en tant que boisson)	☐	☐	☐	☐	☐	☐	☐

Information générale

1. **Quel âge as-tu?**
_____ ans
2. **Es-tu.....**
☐ un garçon
☐ une fille
3. **En quelle année es-tu?**
☐ 5^e année
☐ 6^e année
4. **Quelle langue parles-tu le plus souvent avec tes amis (amies)?**

☐ français
☐ anglais
☐ autre langue

Ta santé

5. **En général, est-ce que ta santé est...**
☐ excellente
☐ plutôt bonne
☐ pas très bonne
6. **Penses-tu que ton corps est...?**
☐ Beaucoup trop maigre
☐ Un peu trop maigre
☐ À peu près la bonne taille
☐ Un peu trop gros
☐ Beaucoup trop gros

7. Actuellement, que fais-tu concernant ton poids?

- ☐ J'essaie de perdre du poids
- ☐ J'essaie de gagner du poids
- ☐ Je ne fais rien concernant mon poids

Ton régime

8. Pendant les jours de semaine (du lundi au vendredi) comment souvent est-ce que tu déjeunes (ceci veut dire plus qu'un verre de lait ou de jus)?

- ☐ Je ne déjeune jamais pendant la semaine
- ☐ Je déjeune habituellement une fois pendant la semaine
- ☐ Je déjeune habituellement deux fois pendant la semaine
- ☐ Je déjeune habituellement trois fois pendant la semaine
- ☐ Je déjeune habituellement quatre fois pendant la semaine
- ☐ Je déjeune habituellement cinq fois pendant la semaine

9. Pendant les fins de semaine (samedi et dimanche) comment souvent est-ce que tu déjeunes (ceci veut dire plus qu'un verre de lait ou de jus)?

- ☐ Je ne déjeune jamais pendant la fin de semaine
- ☐ Je déjeune habituellement seulement une fois pendant la fin de semaine (samedi **OU** dimanche)
- ☐ Je déjeune habituellement deux fois pendant la fin de semaine (samedi **ET** dimanche)

Parlons maintenant de tous les jours de la semaine.

10. Au cours des 7 derniers jours, combien de fois as-tu soupé...

	Aucune fois	1 ou 2 fois	3 à 5 fois	6 ou 7 fois
A. seul (seule)?	☐	☐	☐	☐
B. avec un ou plusieurs membres de ta famille?	☐	☐	☐	☐
C. avec tes amis (amies) seulement?	☐	☐	☐	☐

11. Combien de fois pendant la semaine est-ce que tu regardes la télévision ou des vidéos (DVD etc.) pendant ton souper?

- ☐ 7 fois par semaine
- ☐ 5 ou 6 fois par semaine
- ☐ 3 ou 4 fois par semaine
- ☐ 1 ou 2 fois par semaine
- ☐ Jamais

12. Au cours des 7 derniers jours, combien de fois...

	Aucune fois	1 ou 2 fois	3 à 5 fois	6 ou 7 fois	Plus de 7 fois
A. As-tu mangé un repas au restaurant?	☐	☐	☐	☐	☐
B. As-tu pris une collation au restaurant?	☐	☐	☐	☐	☐
C. Avez-vous fait livrer un repas du restaurant à la maison?	☐	☐	☐	☐	☐

13. Au cours des 7 derniers jours, combien de fois as-tu mangé des aliments de restos comme McDonald's, Poulet Frit Kentucky, Pizza Pizza ou de la nourriture venant d'autres restaurants à service rapide ou casse-croûte?

_____ fois dans les derniers 7 jours ou ☐ Aucune fois

14. Comment souvent manges-tu ou bois-tu les aliments et boissons suivants?
Pour chaque aliment ou boisson, met seulement un 'X' par rangée.

Aliment/Boisson	5 fois ou plus par jour	3-4 fois par jour	1-2 fois par jour	5-6 fois par semaine	3-4 fois par semaine	1-2 fois par semaine	Aucune fois
Lait (comme breuvage)	☐	☐	☐	☐	☐	☐	☐
Fromages	☐	☐	☐	☐	☐	☐	☐
Yogourt	☐	☐	☐	☐	☐	☐	☐
Légumes crus et salades	☐	☐	☐	☐	☐	☐	☐
Pommes de terre frites	☐	☐	☐	☐	☐	☐	☐
Autres pommes de terre (pilées, bouillies, au four)	☐	☐	☐	☐	☐	☐	☐
Légumes cuits (en excluant les pommes de terre)	☐	☐	☐	☐	☐	☐	☐
Jus de fruits purs à 100 % jus (orange, pomme)	☐	☐	☐	☐	☐	☐	☐
Boissons à saveur de fruits mais pas à 100 % jus (Sunny Delight, Frutopia, Five Alive)	☐	☐	☐	☐	☐	☐	☐
Fruits (fruits frais, en conservation, gelés ou cuits)	☐	☐	☐	☐	☐	☐	☐
Céréales (froides) ***Quelle sorte de céréales as-tu mangé le plus souvent : _____	☐	☐	☐	☐	☐	☐	☐
Pain blanc, bagel, pita ou autres types de pain blanc	☐	☐	☐	☐	☐	☐	☐
Pain à grain entier, 12 grains, de seigle ou d'autres types de pain brun	☐	☐	☐	☐	☐	☐	☐
Pâtes ou nouilles de toutes sortes	☐	☐	☐	☐	☐	☐	☐
Riz	☐	☐	☐	☐	☐	☐	☐
Pizza	☐	☐	☐	☐	☐	☐	☐
Hot-dogs, hamburgers	☐	☐	☐	☐	☐	☐	☐
Poisson et fruits de mer de toutes sortes	☐	☐	☐	☐	☐	☐	☐

Aliment/Boisson	5 fois ou plus par jour	3-4 fois par jour	1-2 fois par jour	5-6 fois par semaine	3-4 fois par semaine	1-2 fois par semaine	Aucune fois
Poulet, dinde	☐	☐	☐	☐	☐	☐	☐
Bœuf, porc, veau, agneau	☐	☐	☐	☐	☐	☐	☐
Mets commerciaux congelés faciles à réchauffer (pogos, croquettes ou ailes de poulet, pochettes pizza, repas au micro-ondes, etc.)	☐	☐	☐	☐	☐	☐	☐
Bonbons de toutes sortes, comme du chocolat, des jujubes ou des sucettes, etc.	☐	☐	☐	☐	☐	☐	☐
Grignotines comme des croustilles, des tortillas, Doritos, Bugles, Cheesies, etc.	☐	☐	☐	☐	☐	☐	☐
Desserts comme des biscuits, des gâteaux, des carrés au chocolat, des Joe Louis, etc.	☐	☐	☐	☐	☐	☐	☐
Boissons gazeuses régulières (Coke, Sprite etc.) et des boissons sportives (Gatorade etc.)	☐	☐	☐	☐	☐	☐	☐
Boissons gazeuses «diète» (Diet Coke, Diet Sprite, etc.)	☐	☐	☐	☐	☐	☐	☐

Activités physiques

Toute activité qui fait battre ton cœur plus vite que et qui t'essouffle un peu une partie du temps est une activité physique. On en fait en pratiquant des sports, pendant le cours d'éducation physique à l'école, en jouant avec des amis ou en marchant à l'école. La course, le patin à roue alignée, la bicyclette, la danse, le soccer, le hockey et la natation sont des exemples d'activités physiques. Pour les deux prochaines questions, additionne tout le temps que tu passes à faire des activités physiques chaque jour.

15. Au cours des derniers 7 jours, quel est le nombre de jours où tu as été physiquement actif pour au moins 60 minutes par jour en tout?

- | | |
|---|----------------------------------|
| ☐ Aucun (zéro jours) | ☐ 4 jours |
| ☐ 1 jour | ☐ 5 jours |
| ☐ 2 jours | ☐ 6 jours |
| ☐ 3 jours | ☐ 7 jours |

16. Au cours d'une semaine typique ou habituelle, quel est le nombre de jours où tu es physiquement actif pour au moins 60 minutes par jour en tout?

- | | |
|---|----------------------------------|
| ☐ Aucun (zéro jours) | ☐ 4 jours |
| ☐ 1 jour | ☐ 5 jours |
| ☐ 2 jours | ☐ 6 jours |
| ☐ 3 jours | ☐ 7 jours |

Utilisation des médias

17. Les jours de semaine (lundi au vendredi), quel est le nombre d'heures par jour environ où tu regardes la télévision ou des vidéos/DVD (films) pendant ton temps libre?

- | | |
|--|--|
| ☐ Pas du tout | ☐ Environ 4 heures par jour |
| ☐ Environ 30 minutes par jour | ☐ Environ 5 heures par jour |
| ☐ Environ 1 heure par jour | ☐ Environ 6 heures par jour |
| ☐ Environ 2 heures par jour | ☐ Environ 7 heures par jour ou plus |
| ☐ Environ 3 heures par jour | |

18. Les fins de semaine (samedi et dimanche), quel est le nombre d'heures par jour environ où tu regardes la télévision ou des vidéos/DVD (films) pendant ton temps libre?

- | | |
|--|--|
| ☐ Pas du tout | ☐ Environ 4 heures par jour |
| ☐ Environ 30 minutes par jour | ☐ Environ 5 heures par jour |
| ☐ Environ 1 heure par jour | ☐ Environ 6 heures par jour |
| ☐ Environ 2 heures par jour | ☐ Environ 7 heures par jour ou plus |
| ☐ Environ 3 heures par jour | |

19. Dans ce qui suit, qu'est-ce qui décrit le mieux comment tu regardes la télévision d'habitude?

- ☐ Je regarde surtout un programme ou un poste à la fois
- ☐ Je change surtout entre deux postes, d'un poste à un autre
- ☐ Je me promène surtout parmi plusieurs postes, d'un poste à l'autre

20. Les jours de semaine (lundi au vendredi), quel est le nombre d'heures par jour environ où tu utilises l'ordinateur pour faire des devoirs, jouer des jeux, envoyer des courriels, clavarder, surfer l'Internet, pour regarder des émissions de télévision/vidéos ou autres?

- | | |
|--|--|
| ☐ Pas du tout | ☐ Environ 4 heures par jour |
| ☐ Environ 30 minutes par jour | ☐ Environ 5 heures par jour |
| ☐ Environ 1 heure par jour | ☐ Environ 6 heures par jour |
| ☐ Environ 2 heures par jour | ☐ Environ 7 heures par jour ou plus |
| ☐ Environ 3 heures par jour | |

21. Les fins de semaine (samedi et dimanche), quel est le nombre d'heures par jour environ où tu utilises l'ordinateur pour faire des devoirs, jouer des jeux, envoyer des courriels, clavarder, surfer l'Internet, pour regarder des émissions de télévision/vidéos ou autres?

- | | |
|--|--|
| ☐ Pas du tout | ☐ Environ 4 heures par jour |
| ☐ Environ 30 minutes par jour | ☐ Environ 5 heures par jour |
| ☐ Environ 1 heure par jour | ☐ Environ 6 heures par jour |
| ☐ Environ 2 heures par jour | ☐ Environ 7 heures par jour ou plus |
| ☐ Environ 3 heures par jour | |

22. Les jours de semaine (lundi au vendredi), quel est le nombre d'heures par jour environ où tu utilises des consoles de jeu comme X-BOX ou PlayStation ou des consoles portables comme Game Boy ou PSP?

- | | |
|--|--|
| ☐ Pas du tout | ☐ Environ 4 heures par jour |
| ☐ Environ 30 minutes par jour | ☐ Environ 5 heures par jour |
| ☐ Environ 1 heure par jour | ☐ Environ 6 heures par jour |
| ☐ Environ 2 heures par jour | ☐ Environ 7 heures par jour ou plus |
| ☐ Environ 3 heures par jour | |

23. Les fins de semaine (samedi et dimanche), quel est le nombre d'heures par jour environ où tu utilises des consoles de jeu comme X-BOX ou PlayStation ou des consoles portables comme Game Boy ou PSP?

☐ Pas du tout

☐ Environ 4 heures par jour

☐ Environ 30 minutes par jour

☐ Environ 5 heures par jour

☐ Environ 1 heure par jour

☐ Environ 6 heures par jour

☐ Environ 2 heures par jour

☐ Environ 7 heures par jour ou

plus

☐ Environ 3 heures par jour

Merci de ta participation!

S'il vous plait, mettez ce questionnaire dans l'enveloppe fournie et postez.



Appendix K



MEDIA DIARY

INSTRUCTIONS

This diary asks you to fill-in the names of all the TV shows you watch over the next week. This diary is to be filled in every day **starting at Thursday March 26, 2009 for a full week up to and including Wednesday April 1, 2009.**

For every day of the week, the diary is divided up into 30 minute periods. Your job is to **write down every time you watch TV at the time you were watching it**, the name of the TV show you were watching, and the channel number or the station name.

*** Please **don't change the way you normally watch TV** during the week of the Media Diary (i.e. try not to watch more or less TV during that week than you would normally watch).



IMPORTANT:

1. If you watch only a few minutes of a TV show, **DO NOT** include this show in the diary. **Only include a TV show if you watched at least 15 minutes of it in the 30 minute period.**
2. **If a show starts at a time that is not listed in the Media Diary (like 8:10am or 7:40pm), write down the TV show in the time that is the closest.** For instance, a TV show that starts at 8:10am would be written in the Media Diary at 8:00am and a show that starts at 7:40pm would be written in the Media Diary at 7:30pm.
3. If you watch a movie or a TV show that you bought or rented or if you watch a TV show or movie that you recorded earlier (either on a VCR, DVD player or PVR- personal video recorder) then write the title under "Name of the Television Show" and write VCR, DVD or PVR under the "Channel Number or Station Name" column.
4. **Fill in the Media Diary as you go through your day.** Leave the diary in a spot that will help you remember to fill it out. For example, close to the TV that you normally watch.



DO'S AND DON'TS OF THE MEDIA DIARY



INCLUDE ALL TV SHOWS, SPORTS PROGRAMS AND MOVIES THAT YOU WATCH ON TV.

BUT,



DON'T include video games that you play on TV.



DON'T include TV programs or movies that you watch on the Internet or your computer.

*****IF YOU NEED ANY HELP FILLING OUT THE DIARY, ASK YOUR MOM OR DAD.**



REMEMBER



it is very important to **fill this diary in every day** as you go through your day!

START Thursday March 26, 2009



Here is an example to show you how to fill out the Media Diary:

SATURDAY Morning March 28, 2009		
	Name of the Television Show	Channel Number or Station Name*
6:00-6:30 am		
6:30-7:00 am	Batman Returns	48
7:00-7:30 am	Hannah Montana	51
7:30-8:00 am		
8:00-8:30 am		
9:00-9:30 am	Madagascar	DVD
9:30-10:00 am	Madagascar	DVD

*If you watch a bought or rented movie or pre-recorded program print VCR, DVD or PVR in this column

Please start your diary on
Thursday March 26, 2009.



THURSDAY Morning March 26, 2009		
	Name of the Television Show	Channel Number or Station Name*
6:00-6:30 am		
6:30-7:00 am		
7:00-7:30 am		
7:30-8:00 am		
8:00-8:30 am		
8:30-9:00 am		
9:00-9:30 am		
9:30-10:00 am		
10:00-10:30 am		
10:30-11:00 am		
11:00-11:30 am		
11:30-12:00 pm		

*If you watch a bought or rented movie or pre-recorded program print VCR, DVD or PVR in this column



THURSDAY Afternoon March 26, 2009		
	Name of the Television Show	Channel Number or Station Name*
12:00-12:30pm		
12:30-1:00 pm		
1:00-1:30 pm		
1:30-2:00 pm		
2:00-2:30 pm		
2:30-3:00 pm		
3:00-3:30 pm		
3:30-4:00 pm		
4:00-4:30 pm		
4:30-5:00 pm		
5:00-5:30 pm		
5:30-6:00 pm		

*If you watch a bought or rented movie or pre-recorded program print VCR, DVD or PVR in this column



THURSDAY Evening		
Name of the Television Show		Channel Number or Station Name*
March 26, 2009		
6:00-6:30 pm		
6:30-7:00 pm		
7:00-7:30 pm		
7:30-8:00 pm		
8:00-8:30 pm		
8:30-9:00 pm		
9:00-9:30 pm		
9:30-10:00 pm		
10:00-10:30 pm		
10:30-11:00 pm		
11:00-11:30 pm		
11:30-12:00 am		

*If you watch a bought or rented movie or pre-recorded program print VCR, DVD or PVR in this column

Thank you for your participation!

Please place this Media Diary in
the provided envelope and then
drop in a mail box.





JOURNAL MÉDIATIQUE

INSTRUCTIONS

Tu dois inscrire dans ce journal, le nom de toutes les émissions de télé que tu regardes au cours de la prochaine semaine. Tu dois remplir ce journal chaque jour à partir du **jeudi 26 mars 2009, jusqu'au mercredi 1^{er} avril 2009**.

Pour chaque jour de la semaine, le journal médiatique est divisé en périodes de 30 minutes. Ton travail consiste à **écrire, au moment où tu regardes la télévision**, le nom de l'émission et le numéro ou le nom de la chaîne que tu regardes.

***Durant la semaine du journal médiatique, **ne change pas ta manière de regarder la télé** (n'essaie pas de regarder moins ou plus de télé cette semaine que tu ne le fais d'habitude).



IMPORTANT:

1. Si tu regardes une émission de télé pour quelques minutes seulement, **n'inclus pas** cette émission dans le journal médiatique. **Inscris seulement les émissions que tu regardes pour 15 minutes ou plus dans la période de temps de 30 minutes appropriée.**
2. Si une émission ne débute pas exactement à une heure qui figure dans le journal médiatique (par exemple 8 h 10 ou 19 h 40), **inscris l'émission dans la période de temps qui est la plus proche.** Par exemple, une émission qui débute à 8 h 10 s'inscrit dans le journal médiatique à 8 h, une émission débutant à 19 h 40 s'inscrit dans la case 19 h 30, etc.
3. Si tu regardes un film ou une émission de télévision que tu as acheté, loué ou enregistré auparavant (avec un magnétoscope VHS, un lecteur DVD ou enregistreur vidéo personnel- EVP), inscris le titre du film/ de l'émission sous « Nom de l'émission de télévision » et écris VHS, DVD ou EVP sous « Numéro ou nom de la chaîne »
4. **Remplis le journal médiatique au fur et à mesure de la journée.** Laisse le journal dans un endroit bien visible; par exemple proche de la télévision qui est la plus souvent utilisée.



Les choses à faire et ne pas faire quand tu remplis le journal médiatique



À faire :

Inclus toutes les émissions (séries, sports, films, etc.) que tu regardes à la télé.

Mais à ne pas faire :



N'inclus pas les jeux vidéos auxquels tu joues sur la télévision.



N'inclus pas les émissions télé ou les films que tu regardes sur Internet ou sur l'ordinateur.

*****SI TU AS BESOIN D'AIDE POUR REMPLIR LE JOURNAL, DEMANDE À TA MÈRE OU À TON PÈRE.**



RAPPELLE-TOI



qu'il est très important de remplir quotidiennement ce journal au fur et à mesure de la journée

DÉBUT JEUDI, 26 MARS 2009



Voici un exemple pour te montrer comment remplir le journal:

SAMEDI Matin	Nom de l'émission de télévision	Numéro du canal ou nom du poste*
28 mars 2009		
6 h à 6 h 30		
6 h 30 à 7 h	Classe des Titans	44
7 h à 7 h 30	Hannah Montana	25
7 h 30 à 8 h		
8 h à 8 h 30		
8 h 30 à 9 h	Madagascar	DVD
9 h à 9 h 30	Madagascar	DVD

* Si tu regardes un film ou une émission de télévision que tu as acheté, loué ou enregistré auparavant (avec un magnétoscope VHS, un lecteur DVD ou enregistreur vidéo personnel-EVP), inscris VHS, DVD ou EVP dans cette colonne.

Veuillez commencer votre journal
jeudi le 26 mars 2009.



JEUDI		
Matin	Nom de l'émission de télévision	Numéro du canal ou nom du poste*
26 mars 2009		
6 h à 6 h 30		
6 h 30 à 7 h		
7 h à 7 h 30		
7 h 30 à 8 h		
8 h à 8 h 30		
8 h 30 à 9 h		
9 h à 9 h 30		
9 h 30 à 10 h		
10 h à 10 h 30		
10 h 30 à 11 h		
11 h à 11 h 30		
11 h 30 à 12 h		

* Si tu regardes un film ou une émission de télévision que tu as acheté, loué ou enregistré auparavant (avec un magnétoscope VHS, un lecteur DVD ou enregistreur vidéo personnel- EVP), inscris VHS, DVD ou EVP dans cette colonne.



JEUDI		
Après-midi	Nom de l'émission de télévision	Numéro du canal ou nom du poste*
26 mars 2009		
12 h à 12 h 30		
12 h 30 à 13 h		
13 h à 13 h 30		
13 h 30 à 14 h		
14 h à 14 h 30		
14 h 30 à 15 h		
15 h à 15 h 30		
15 h 30 à 16 h		
16 h à 16 h 30		
16 h 30 à 17 h		
17 h à 17 h 30		
17 h 30 à 18 h		

* Si tu regardes un film ou une émission de télévision que tu as acheté, loué ou enregistré auparavant (avec un magnétoscope VHS, un lecteur DVD ou enregistreur vidéo personnel- EVP), inscris VHS, DVD ou EVP dans cette colonne.



JEUDI Soir	Nom de l'émission de télévision	Numéro du canal ou nom du poste*
26 mars 2009		
18 h à 18 h 30		
18 h 30 à 19 h		
19 h à 19 h 30		
19 h 30 à 20 h		
20 h à 20 h 30		
20 h 30 à 21 h		
21 h à 21 h 30		
21 h 30 à 22 h		
22 h à 22 h 30		
22 h 30 à 23 h		
23 h à 23 h 30		
23 h 30 à 24 h		

* Si tu regardes un film ou une émission de télévision que tu as acheté, loué ou enregistré auparavant (avec un magnétoscope VHS, un lecteur DVD ou enregistreur vidéo personnel- EVP), inscris VHS, DVD ou EVP dans cette colonne.



Merci de ta participation!

**S'il vous plaît, déposez ce
questionnaire dans l'enveloppe
fournie et postez-le.**



Appendix L

Parent Recruitment Letter

January 2009

Dear Parent or Guardian,

My name is Monique Potvin Kent and I'm a PhD student at the University of Ottawa completing research on children's exposure to junk food advertising on television under the direction of Dr. Lise Dubois. I'm interested in determining whether there is a link between junk food advertisements directed at children and children's food intake and weight. Such information is tremendously important given that childhood obesity rates have doubled over the past 25 years and given that junk food advertising is viewed as one potential factor that is contributing to childhood weight and food intake problems.

I would like to invite you and your child to participate in this study. It would involve a 15 to 20 minute time commitment on your part and would take up about 30 to 40 minutes of class time for your child. In addition, your child would be required to keep a *Media Diary* of their television viewing for a one week period in April 2009 which would take approximately 10 to 15 minutes per day.

In order to compensate the children and teachers for their time and effort, the school would be given \$350 to be spent on educational materials or an activity of its choice. In addition, the school will be provided with aggregate (not individual) research results once the research is complete. These results will then be passed on to children's parents.

This study has been funded by the Canadian Institutes of Health Research and has been approved by the Ottawa Hospital Research Ethics Board. In addition, your child's school board and principal have approved this study.

I've outlined my study and the details of participation in the attached *Information Sheet and Consent Form for Parents*. Please read and sign this form at your earliest convenience and return it to school.

If you have any questions or concerns about his study, please contact me.

Thank you for your time.

Yours sincerely,

Monique Potvin Kent
PhD Candidate in Population Health
University of Ottawa

janvier 2009

Cher parent ou tuteur,

Mon nom est Monique Potvin Kent et je suis étudiante au doctorat à l'Université d'Ottawa. Je suis en train de faire une étude, sous la direction de Lise Dubois PhD, sur l'exposition des enfants aux publicités à la télévision sur la 'malbouffe', c'est-à-dire les aliments vides ou sans grande valeur nutritive. Je veux voir s'il y a un lien entre les publicités sur la malbouffe destinées aux enfants, les aliments qu'ils mangent, et leur poids. Ces renseignements sont extrêmement importants étant donné que les taux d'obésité chez les enfants ont doublé depuis 25 ans et que les publicités sur la malbouffe sont perçues comme un des facteurs possibles contribuant aux problèmes de poids et d'alimentation chez les enfants.

J'aimerais vous inviter, vous et votre enfant, à participer à cette étude. Elle exigerait une participation de 15 à 20 minutes de votre part et votre enfant participerait pendant environ 30 à 40 minutes en salle de classe. De plus, il faudrait que votre enfant tienne un *Journal médiatique* du temps qu'il a passé à regarder la télévision pendant une période d'une semaine en avril 2009, ce qui lui prendrait environ 10 à 15 minutes par jour.

Afin de dédommager votre enfant pour son temps et ses efforts, l'école de votre enfant recevra 350 \$ à dépenser pour du matériel pédagogique ou une activité de son choix. De plus, l'école recevrait les résultats globaux (pas les résultats individuels) une fois l'étude terminée. Ces résultats seraient ensuite transmis aux parents des enfants.

Cette étude est financée par les Instituts de recherche en santé du Canada et a été approuvée par le Conseil d'éthique en recherche de l'Hôpital d'Ottawa ainsi que par le Conseil scolaire et le directeur ou la directrice de l'école de votre enfant.

Le *Feuillet d'information et formulaire de consentement pour les parents* ci-joint présente les grandes lignes de mon étude et le détail de la participation à l'étude. Vous êtes prié de lire et de signer ce formulaire dans les meilleurs délais et de le retourner à l'école.

Pour toute question ou préoccupation au sujet de cette étude, veuillez communiquer avec moi.

Je vous remercie de l'attention que vous portez à ma requête et vous prie d'agréer mes sentiments reconnaissants.

Monique Potvin Kent
Étudiante au doctorat en Santé des populations
Université d'Ottawa

Appendix M

Questionnaire Cover Letter

February/March 2009

Dear Parent or Guardian,

Thank you for agreeing to participate in the study entitled *Food Advertising, Food Intake, and Obesity in Anglophone and Francophone Children in Ontario and Quebec* and for allowing your child to participate as well.

Attached you will find:

- (1) the *Questionnaire for Parent* which is a short questionnaire about your education level, marital status etc. and your child's language and media access; and
- (2) the *Questionnaire for Child* which is about your child's food intake and media use.

Please have the parent who knows the participating child's eating and TV viewing habits best fill out the *Questionnaire for Parent*, and please assist your child in filling out the *Questionnaire for Child*. Both questionnaires can then be returned to me by mail in the provided envelope.

If you have difficulty understanding any of the questions or if you have concerns about either the *Questionnaire for Parent* or *Questionnaire for Child* please contact me.

Thank you for your time,

Yours sincerely,

Monique Potvin Kent
PhD Candidate in Population Health
University of Ottawa

Février/Mars 2009

Cher parent ou tuteur,

Merci d'avoir accepté de participer à l'étude intitulée *Publicités sur les aliments, l'alimentation et l'obésité chez les enfants francophones et anglophones en Ontario et au Québec* et de permettre à votre enfant d'y participer.

Vous trouverez ci-joint :

- (1) Le *Questionnaire pour le parent*, un bref questionnaire au sujet de votre niveau d'instruction, votre état matrimonial, la ou les langues utilisées par votre enfant et son accès aux médias;
- (2) le *Questionnaire pour l'enfant* qui porte sur l'alimentation de votre enfant et son utilisation des médias.

Veuillez voir à ce que le parent qui connaît le mieux les habitudes alimentaires et de visionnement de la télé de l'enfant participant remplisse le *Questionnaire pour le parent*, et veuillez aider votre enfant à remplir le *Questionnaire pour l'enfant*. Les deux questionnaires peuvent ensuite être retournés par la poste dans l'enveloppe scellée fournie.

Si vous avez de la difficulté à comprendre une ou des questions ou si vous avez des préoccupations au sujet du *Questionnaire pour le parent* ou le *Questionnaire pour l'enfant*, veuillez communiquer avec moi.

Merci pour le temps que vous consacrez à ce projet. Je vous prie d'agréer mes sentiments reconnaissants.

Monique Potvin Kent
Étudiante au doctorat en Santé des populations
Université d'Ottawa

Appendix N

Missing Questionnaires Reminder Letter

REMINDER

Re: **Research study entitled: *Food Advertising, Food Intake, and Obesity in Anglophone and Francophone Children in Ontario and Québec***

Research Study Questionnaires

Dear Parent or Guardian,

This is just to remind you to return the *Questionnaire for Parent* and the *Questionnaire for Child* that your child received in mid-February if you have not already done so. These can be returned in the addressed postage paid envelope which was provided.

If you require additional questionnaires or another postage paid envelope, please contact Alissa Wanless.

Thank you for your time and participation.

Yours sincerely,

Monique Potvin Kent
PhD Candidate in Population Health
University of Ottawa

RAPPEL

Objet: L'étude intitulée: *Publicités sur les aliments, l'alimentation et l'obésité chez les enfants francophones et anglophones au Québec et en Ontario.*

Questionnaires de la recherche

Cher parent ou tuteur,

Ceci est une lettre de rappel afin que vous retourniez le *Questionnaire pour le parent* et le *Questionnaire pour l'enfant* que votre enfant a reçus la semaine du 16 février 2009. Pour se faire, vous pouvez utiliser l'enveloppe pré-affranchie qui vous a été fournie.

Si vous avez besoin d'un autre questionnaire ou d'une autre enveloppe affranchie, veuillez me contacter.

Merci pour votre temps et participation.

Cordialement,

Monique Potvin Kent
Étudiant au doctorat en Santé des populations
Université d'Ottawa

Appendix O

Letter to Participants who Missed Television Viewing Diary Instructions

March 24, 2009

ATTENTION:

FROM: Monique Potvin Kent
University of Ottawa

Re: Research Study
Media Diary Instructions

On March 24, 2009 I met with all the students in your school who are participating in my research study. During my presentation, I went over the **NEW** instructions for the Media Diary.

Since you missed this presentation, **please re-read** the Media Diary instructions (on pages 1-3) very carefully as they have changed slightly from when I last talked to you.

Don't forget to fill in the Media Diary every day from March 26th through April 1st, 2009.

Thank you for your help.

Monique

Appendix P

Television Viewing Diary Package Cover Letter for Parents

March, 2009

Dear Parent or Guardian,

As you know, your child is participating in the study *Food Advertising, Food Intake, and Obesity in Anglophone and Francophone Children in Ontario and Quebec*, which will explore whether there is a link between junk food advertisements directed at children and children's food intake and weight.

Today your child was given a *Media Diary* by their teacher in which they will record their television viewing for 7 days beginning Thursday March 26, 2009 and ending Wednesday April 1, 2009. Your child has been given instructions on how to fill out the *Media Diary* in class. Written instructions are also on the first three pages of the *Media Diary* in case your child should need to review those instructions.

It is very important that the *Media Diary* be filled out every day so that we can accurately determine what children are watching on television. We would greatly appreciate it if you could remind your child every day to record all of their television viewing.

Once your child has completed the *Media Diary* please return it to me in the addressed postage paid envelope which has been provided.

If you have any questions or concerns about the *Media Diary*, please contact me.

Thank you for your time.

Yours sincerely,

Monique Potvin Kent
PhD Candidate in Population Health
University of Ottawa

Mars 2009

Cher parent ou tuteur,

Comme vous le savez, votre enfant participe à l'étude *Publicités sur les aliments, l'alimentation et l'obésité chez les enfants francophones et anglophones en Ontario et au Québec*, qui explore le lien possible entre les messages publicitaires dirigés aux enfants et l'alimentation et le poids des enfants.

Aujourd'hui, votre enfant a reçu un *journal médiatique* de son enseignant ou enseignante, dans lequel il va enregistrer ce qu'il regarde à la télé pendant 7 jours, à partir du jeudi 26 mars 2009 jusqu'au mercredi 1 avril 2009. Votre enfant a reçu en classe des instructions sur la manière de remplir son *journal médiatique*. Des instructions écrites sont aussi incluses sur les trois premières pages du *journal médiatique* si votre enfant a besoin de revoir ces instructions.

Il est très important de remplir le *journal médiatique* chaque jour pour que nous puissions déterminer avec précision ce que les enfants regardent à la télé. Ce serait très apprécié si vous pouviez rappeler à votre enfant chaque jour d'inscrire ce qu'il a regardé à la télé.

Lorsque votre enfant aura terminé de remplir son *journal médiatique*, s'il vous plait, mettez le dans l'enveloppe fournie et postez.

Si vous avez des questions ou des préoccupations au sujet du *journal médiatique*, veuillez communiquer avec moi.

Merci pour le temps que vous consacrez à ce projet. Je vous prie d'agréer mes sentiments reconnaissants.

Monique Potvin Kent
Étudiante au doctorat en Santé des populations
Université d'Ottawa

Appendix Q

Missing Television Viewing Diary Reminder Letter

REMINDER

Re: Research study entitled: *Food Advertising, Food Intake, and Obesity in Anglophone and Francophone Children in Ontario and Québec*

Media Diary

Date: April 21, 2009

Dear Parent or Guardian,

This is just to remind you to return the *Media Diary* that your child completed in late March if you have not already done so. This *Diary* can be returned in the addressed postage paid envelope which was provided.

If your child was unable to complete the *Media Diary* between March 26th and April 1st, 2009, it is not necessary to return this diary.

Thank you for your time and participation.

Yours sincerely,

Monique Potvin Kent
PhD Candidate in Population Health
University of Ottawa

RAPPEL

Objet: Etude intitulée: *Publicités sur les aliments, l'alimentation et l'obésité chez les enfants francophones et anglophones au Québec et en Ontario.*

Journal médiatique

Date : le 21 avril 2009

Cher parent ou tuteur,

Ceci est une lettre de rappel afin que vous retourniez le *Journal médiatique* que votre enfant a rempli à la fin du mois de mars si vous ne l'aviez pas déjà fait. Pour ce faire, vous pouvez utiliser l'enveloppe pré-affranchie qui vous a été fournie.

Si votre enfant n'a pu compléter le *Journal médiatique* pendant la semaine du 26 mars au 1 avril 2009, ce n'est pas nécessaire de retourner ce journal.

Merci pour votre temps et participation.

Cordialement,

Monique Potvin Kent
Étudiant au doctorat en Santé des populations
Université d'Ottawa

Appendix R

Debriefing Form for Children

May 2009

Dear student,

I wanted to thank you very much for participating in my study called *Food Advertising, Food Intake, and Obesity in Anglophone and Francophone Children in Ontario and Quebec* about the amount of junk food advertising kids your age see on television. By analyzing the questionnaires and the *Media Diary* you filled out, I will be able to see whether junk food advertising is related to the foods that you eat and your health.

The results of this research are important to many people and groups in Canada whom are interested in children's health. Also, my results may help the government of Canada to decide whether companies should advertise junk foods to kids on television.

If you would like more information about the results of the study, please feel free to contact me.

Thank you again for participating and all of your time.

Yours sincerely,

Monique Potvin Kent
PhD Candidate in Population Health
University of Ottawa

Formulaire de débriefage pour l'enfant

mai 2009

Cher élève, chère élève,

Je te remercie énormément d'avoir participé à l'étude *Publicités sur les aliments, l'alimentation et l'obésité chez les enfants francophones et anglophones en Ontario et au Québec* au sujet du nombre de messages publicitaires sur la malbouffe que les enfants de ton âge voient à la télévision et sur Internet. En analysant les questionnaires et le *Journal médiatique* que vous avez remplis, je vais pouvoir déterminer si les publicités sur la malbouffe sont liées aux aliments que les enfants mangent et à leur santé.

Les résultats de cette recherche sont importants pour de nombreuses personnes et de nombreux groupes au Canada qui se préoccupent de la santé des enfants. Mes résultats pourraient aussi aider le gouvernement du Canada à décider si les compagnies devraient diffuser des publicités sur la malbouffe aux enfants à la télévision et sur Internet.

Si tu aimerais plus de renseignements sur les résultats de cette étude, n'hésites pas à communiquer avec moi.

Je te remercie encore de ta participation et du temps que tu as consacré à ce projet.

Monique Potvin Kent
Étudiante au doctorat en Santé des populations
Université d'Ottawa

Appendix S

Debriefing Form for Parents

May 2009

Dear Parent or Guardian,

I wanted to thank you very much for your participation in the study entitled *Food Advertising, Food Intake, and Obesity in Anglophone and Francophone Children in Ontario and Quebec*. I also wanted to thank you for allowing your child to participate in this study.

The purpose of the study is to determine the amount of junk food advertising that children in Ontario and Quebec are exposed to on television and to determine whether this advertising is related to their food consumption and weight. Such information is tremendously important given that childhood obesity rates have doubled over the past 25 years and given that junk food advertising is viewed as one potential factor that is contributing to childhood weight and food intake problems. The reason, I am looking at English and French speaking children in both Ontario and Quebec is because advertising is regulated differently in these provinces.

What I predict is that Anglophone children will be exposed to significantly more junk food advertising than Francophone children and that children who watch public television more often will be exposed to significantly less junk food advertisements than those who watch commercial television stations. I also think that children exposed to more junk food advertising will have higher rates of obesity and poorer food intake.

The outcome of this research has the potential to impact advertising policy development in Canada. Currently, policy regarding advertising directed at children is on the agenda of multiple stakeholders including the federal government, and the Heart and Stroke Foundation of Canada.

If you would like more information about the results of the study, please feel free to contact me.

If you want to express concern about this research, you can contact my supervisor Dr. Lise Dubois. If you have any questions about the ethical conduct of this research study, you can contact the Chairperson of the Ottawa Hospital Research Ethics Board.

Thank you again for your participation.

Yours sincerely,

Monique Potvin Kent
PhD Candidate in Population Health
University of Ottawa

Formulaire de débriefage pour les parents

mai 2009

Cher parent ou tuteur,

Je vous remercie énormément d'avoir participé à l'étude *Publicités sur les aliments, l'alimentation et l'obésité chez les enfants francophones et anglophones en Ontario et au Québec*. Je veux aussi vous remercier d'avoir permis à votre enfant de participer à cette étude.

L'étude vise à déterminer le nombre de messages publicitaires sur la 'malbouffe' auxquels les enfants de l'Ontario et du Québec sont exposés à la télévision et sur Internet et de voir si ces publicités influencent leur consommation d'aliments et leur poids. Ces renseignements sont extrêmement importants étant donné que les taux d'obésité chez les enfants ont doublé depuis 25 ans et que les publicités sur la malbouffe sont perçues comme un des facteurs possibles contribuant aux problèmes de poids et d'alimentation chez les enfants. J'étudie les enfants francophones et anglophones tant en Ontario qu'au Québec parce que les messages publicitaires sont réglementés différemment dans chacune de ces provinces.

J'ai l'impression que les enfants anglophones sont exposés à beaucoup plus de publicités sur la malbouffe que les francophones et que les enfants qui regardent la télévision publique sont exposés à beaucoup moins de messages sur la malbouffe que ceux qui regardent les postes de télévision commerciaux. Je prévois aussi que les enfants qui sont exposés à plus de messages publicitaires sur la malbouffe auront des taux d'obésité plus élevés et une moins bonne alimentation.

Les résultats de cette étude pourraient avoir des répercussions sur le développement des politiques sur les messages publicitaires au Canada. Présentement, les politiques sur les publicités visant les enfants font partie des préoccupations de nombreux intéressés, dont le gouvernement fédéral et la Fondation des maladies du cœur du Canada.

Pour de plus amples renseignements sur les résultats de cette étude, n'hésitez pas à communiquer avec moi.

Pour toute préoccupation au sujet de cette étude, vous pouvez communiquer avec ma directrice de recherche, Lise Dubois, PhD. Pour toute question au sujet de l'éthique de ce projet de recherche, veuillez communiquer avec le président du Conseil d'éthique en recherche de l'Hôpital d'Ottawa.

Encore une fois, merci de votre participation. Veuillez agréer l'expression de mes sentiments les plus reconnaissants.

Monique Potvin Kent
Étudiante au doctorat en Santé des populations
Université d'Ottawa

Appendix T

The Top 30 Hours of Preferred Television Viewing for Ontario English, Quebec French and Quebec English Children

The top 30 hours of preferred television viewing for Ontario English children

	Program name	Date	Time	Station
1.	iCarly	Friday	6:00 pm	YTV
2.	Drake and Josh	Thursday	6:00 pm	YTV
3.	iCarly	Thursday	6:30 pm	YTV
4.	iCarly	Sunday	10:30 am	YTV
5.	American Idol	Thursday	8:00 pm	CTV
6.	American Idol	Thursday	8:30 pm	CTV
7.	Hannah Montana	Friday	5:30 pm	Family
8.	Amazing Race	Sunday	8:30 pm	CTV
9.	iCarly	Monday	6:30 pm	YTV
10.	Amazing Race	Sunday	8:00 pm	CTV
11.	American Idol	Tuesday	8:00 pm	CTV
12.	Sponge Bob Square Pants	Thursday	5:30 pm	YTV
13.	Fairly Odd Parents	Friday	5:00 pm	YTV
14.	Suite Life of Zack and Cody	Saturday	8:00 am	Family
15.	Wizards of Waverly Place	Saturday	10:30 am	Family
16.	Phineas and Ferb	Monday	7:30 am	Family
17.	Hannah Montana	Monday	5:30 pm	Family
18.	American Idol	Tuesday	8:30 pm	CTV
19.	Phineas and Ferb	Thursday	4:30 pm	Family
20.	The Mighty Bee	Friday	4:30 pm	YTV
21.	Suite Life of Zack and Cody	Friday	5:00 pm	Family
22.	Sponge Bob Square Pants	Friday	5:30 pm	YTV
23.	Sponge Bob Square Pants	Saturday	8:00 am	YTV
24.	Zoey 101	Saturday	8:30 am	Family
25.	Suite Life of Zack and Cody	Monday	5:00 pm	Family
26.	Hannah Montana	Monday	7:30 pm	Family
27.	Hannah Montana	Wednesday	5:30 pm	Family
28.	Fairly Odd Parents	Thursday	5:00 pm	YTV
29.	She's the Man (movie)	Friday	7:00 pm	YTV
30.	She's the Man (movie)	Friday	7:30 pm	YTV
31.	She's the Man (movie)	Friday	8:00 pm	YTV
32.	That's So Raven	Saturday	9:30 am	Family
33.	Life is Ruff (movie)	Saturday	12:30 pm	Family
34.	Life with Derek	Sunday	8:00 pm	Family
35.	Drake and Josh	Monday	6:00 pm	YTV
36.	Wizards of Waverly Place	Monday	7:00 pm	Family
37.	Hannah Montana	Tuesday	5:30 pm	Family
38.	American Idol	Wednesday	9:00 pm	CTV

	Program name	Date	Time	Station
39.	American Idol	Wednesday	9:30 pm	CTV
40.	Recess	Thursday	4:00 pm	Family
41.	Wizards of Waverly Place	Thursday	7:00 pm	Family
42.	Phineas and Ferb	Friday	4:30 pm	Family
43.	Cory in the House	Saturday	9:00 am	Family
44.	Life is Ruff (movie)	Saturday	12:00 pm	Family
45.	Hannah Montana	Saturday	5:30 pm	Family
46.	Sponge Bob Square Pants	Monday	5:30 pm	YTV
47.	Zoey 101	Monday	6:00 pm	Family
48.	Sponge Bob Square Pants	Tuesday	4:00 pm	YTV
49.	Hannah Montana	Tuesday	7:30 pm	Family
50.	Phineas and Ferb	Wednesday	7:30 am	Family
51.	Fairly Odd Parents	Wednesday	5:00 pm	YTV
52.	Sponge Bob Square Pants	Wednesday	5:30 pm	YTV
53.	Prank Patrol	Wednesday	7:00 pm	YTV
54.	Suite Life of Zack and Cody	Wednesday	8:00 pm	Family
55.	Phineas and Ferb	Thursday	7:30 am	Family
56.	Sponge Bob Square Pants	Thursday	4:00 pm	YTV
57.	Suite Life of Zack and Cody	Thursday	5:00 pm	Family
58.	Hannah Montana	Thursday	5:30 pm	Family
59.	Phineas and Ferb	Friday	7:30 am	Family
60.	She's the Man (movie)	Friday	8:30 pm	YTV

The top 30 hours of preferred television viewing for Quebec French children

	Program Name	Date	Time	Station
1.	Star Académie	Sunday	8:00 pm	TVA
2.	Star Académie	Sunday	7:30 pm	TVA
3.	Star Académie	Sunday	8:30 pm	TVA
4.	Tactik	Thursday	6:30 pm	Télé-Québec
5.	Star Académie	Monday	7:30 pm	TVA
6.	Les frères Scott	Tuesday	6:00 pm	Vrak
7.	Cory est dans la place	Thursday	4:30 pm	Vrak
8.	Kaboum	Thursday	6:00 pm	Télé-Québec
9.	La vie de palace de Zack et Cody	Friday	7:00 am	Vrak
10.	Une grenade avec ça?	Monday	4:00 pm	Vrak
11.	La vie de palace de Zack et Cody	Monday	4:30 pm	Vrak
12.	La vie de palace de Zack et Cody	Tuesday	4:30 pm	Vrak
13.	Kaboum	Tuesday	6:00 pm	Télé-Québec
14.	Les frères Scott	Tuesday	6:30 pm	Vrak
15.	La vie de palace de Zack et Cody	Thursday	7:00 am	Vrak
16.	Une grenade avec ça?	Thursday	4:00 pm	Vrak
17.	Tactik	Friday	6:30 pm	Télé-Québec
18.	Kaboum	Monday	6:00 pm	Télé-Québec
19.	Une grenade avec ça?	Wednesday	4:00 pm	Vrak

	Program name	Date	Time	Station
20.	Il était une fois dans le trouble	Thursday	8:00 pm	Vrak
21.	LNH (match d'hockey)	Saturday	7:30 pm	RDS
22.	Il était une fois dans le trouble	Monday	5:00 pm	Vrak
23.	Hannah Montana	Monday	5:30 pm	Vrak
24.	La vie de palace de Zack et Cody	Tuesday	7:00 am	Vrak
25.	Une grenade avec ça?	Tuesday	5:00 pm	Vrak
26.	Ramdam	Tuesday	6:30 pm	Télé-Québec
27.	Star Académie	Tuesday	7:30 pm	TVA
28.	Kaboum	Wednesday	6:00 pm	Télé-Québec
29.	Bob l'éponge	Thursday	3:30 pm	Vrak
30.	Une grenade avec ça?	Thursday	7:00 pm	Vrak
31.	Cory est dans la place	Friday	4:30 pm	Vrak
32.	Phinéas et Ferb	Sunday	9:00 am	Vrak
33.	Star Académie	Sunday	9:00 pm	TVA
34.	La vie de palace de Zack et Cody	Wednesday	7:00 am	Vrak
35.	Hannah Montana	Wednesday	5:30 pm	Vrak
36.	Ramdam	Wednesday	7:00 pm	Télé-Québec
37.	Star Académie	Wednesday	7:30 pm	TVA
38.	Star Académie	Thursday	7:30 pm	TVA
39.	LNH (match d'hockey)	Thursday	8:00 pm	RDS
40.	Bob l'éponge	Friday	3:30 pm	Vrak
41.	Endurance	Saturday	9:30 am	Vrak
42.	Il était une fois dans le trouble	Monday	8:00 pm	Vrak
43.	Ramdam	Wednesday	6:30 pm	Télé-Québec
44.	Buzz Mag	Thursday	5:00 pm	Vrak
45.	LNH (match d'hockey)	Thursday	7:30 pm	RDS
46.	Une grenade avec ça?	Friday	4:00 pm	Vrak
47.	Bob l'éponge	Saturday	8:30am	Vrak
48.	La vie de palace de Zack et Cody	Monday	7:00 am	Vrak
49.	Ramdam	Monday	6:30 pm	Télé-Québec
50.	Hannah Montana	Tuesday	5:30 pm	Vrak
51.	Bob l'éponge	Wednesday	3:30 pm	Vrak
52.	H2O	Wednesday	6:00 pm	Vrak
53.	Derek	Wednesday	6:30 pm	Vrak
54.	La Classe de 5 ^e	Thursday	8:00 pm	TVA
55.	Tes désirs sont désordres	Saturday	8:00 am	Vrak
56.	LNH (match d'hockey)	Saturday	9:30 pm	RDS
57.	Endurance	Saturday	9:30 am	Vrak
58.	Bob l'éponge	Monday	3:30 pm	Vrak
59.	Cory est dans la place	Tuesday	7:30 am	Vrak
60.	Une grenade avec ça?	Wednesday	7:00 pm	Vrak

The top 30 hours of preferred television viewing for Quebec English children

	Program name	Date	Time	Station
1.	iCarly	Tuesday	6:30 pm	YTV
2.	Zoey 101	Saturday	7:30 pm	Family
3.	iCarly	Wednesday	6:30 pm	YTV
4.	The Weekenders	Friday	3:30 pm	Family West
5.	Hannah Montana	Friday	5:30 pm	Family
6.	Zoey 101	Friday	6:00 pm	Family
7.	Open Season (movie)	Sunday	6:30 pm	YTV
8.	Open Season (movie)	Sunday	7:00 pm	YTV
9.	Emperor's New School	Monday	3:30 pm	Family
10.	American Idol	Tuesday	8:00 pm	CTV
11.	American Idol	Tuesday	8:30 pm	CTV
12.	Iggy Arbuckle	Wednesday	6:30 pm	Teletoon
13.	Wizards of Waverly Place	Wednesday	7:00 pm	Family
14.	Hannah Montana	Wednesday	7:30 pm	Family
15.	6Teen	Wednesday	8:00 pm	Teletoon
16.	Recess	Thursday	7:00 am	Family
17.	Pokemon	Thursday	3:30 pm	YTV
18.	Sponge Bob Square Pants	Thursday	4:00 pm	YTV
19.	Fairly Odd Parents	Thursday	4:30 pm	YTV
20.	The Simpsons	Thursday	5:00 pm	CBC
21.	Fairly Odd Parents	Thursday	5:00pm	YTV
22.	Hannah Montana	Thursday	5:30 pm	Family
23.	Sponge Bob Square Pants	Thursday	5:30 pm	YTV
24.	Zoey 101	Thursday	6:00 pm	Family
25.	Hannah Montana	Thursday	7:30 pm	Family
26.	American Idol	Thursday	8:00 pm	CTV
27.	6Teen	Thursday	8:00 pm	Teletoon
28.	Futurama	Thursday	8:30 pm	YTV
29.	Iggy Arbuckle	Friday	6:30 am	YTV
30.	Sponge Bob Square Pants	Friday	4:00 pm	YTV
31.	The Suite Life of Zack and Cody	Friday	5:00 pm	Family
32.	Sponge Bob Square Pants	Friday	5:30 pm	YTV
33.	iCarly	Friday	6:00 pm	YTV
34.	The Latest Buzz	Friday	6:30 pm	Family
35.	6Teen	Friday	8:00 pm	Teletoon
36.	She's the Man (movie)	Friday	8:00 pm	YTV
37.	6Teen	Friday	8:30 pm	Teletoon
38.	The Suite Life of Zack and Cody	Saturday	8:00 am	Family
39.	Sponge Bob Square Pants	Saturday	8:00 am	YTV
40.	Prank Patrol	Saturday	7:30 pm	YTV
41.	Fairly Odd Parents	Sunday	9:00 am	YTV
42.	Open Season (movie)	Sunday	7:30 pm	YTV

	Program Name	Date	Time	Station
43.	Sponge Bob Square Pants	Monday	4:00 pm	YTV
44.	Phineas and Ferb	Monday	4:30 pm	Family
45.	6Teen	Monday	8:00 pm	Teletoon
46.	Iggy Arbuckle	Tuesday	6:30 am	Teletoon
47.	The Bugs Bunny and Tweety Show	Tuesday	7:00 am	Teletoon
48.	Fairly Odd Parents	Tuesday	5:00 pm	YTV
49.	Hannah Montana	Tuesday	5:30 pm	Family
50.	Zoey 101	Tuesday	6:00 pm	Family
51.	The Emperor's New School	Wednesday	3:30 pm	Family
52.	Sponge Bob Square Pants	Wednesday	4:00 pm	YTV
53.	American Dragon: Jake Long	Wednesday	4:00 pm	Family West
54.	The Suite Life of Zack and Cody	Wednesday	5:00 pm	Family
55.	Totally Spies	Wednesday	7:00 pm	Teletoon
56.	Total Drama Island	Wednesday	7:30 pm	Teletoon
57.	The Bugs Bunny and Tweety Show	Thursday	7:00 am	Teletoon
58.	Roxy Hunter: The Myth of the Mermaid (movie)	Sunday	12:30 am	Family
59.	Fairly Odd Parents	Wednesday	5:00 pm	YTV
60.	The Suite Life of Zack and Cody	Wednesday	8:00 pm	Family