IN BRIEF

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The Impact of Economic Instruments That Promote Healthy Eating, Encourage Physical Activity and Combat Obesity: Literature Review

INTRODUCTION

Economic instruments that promote healthy eating and physical activity have recently been recommended as a means to combat obesity in Canada. These instruments include taxes, tax credits and subsidies (see examples in the table below). The argument behind these proposals is that the higher prevalence of obesity, which results from an increased disparity between caloric intake and caloric expenditure, has coincided with a decrease in the relative price of consuming a calorie over time and a rise in the opportunity cost of burning a calorie. Thus, economic instruments altering the price of food, and of sport and fitness equipment and activities, could affect food consumption and physical activity.

EXAMPLES OF ECONOMIC INSTRUMENTS	
Promoting Healthy Eating and Physical Activity	• Removing sales taxes on healthy foods • Subsidizing healthy foods (also called the "thin subsidy") • Subsidizing transportation of healthy foods in remote regions • Removing sales taxes on sport and recreation equipment • Subsidizing sport and recreation activities • Providing tax credits to encourage physical activity (gym membership, fitness classes, etc.)
Discouraging Unhealthy Eating	• Taxation of unhealthy foods (also called the "fat tax," "snack tax" or "junk food tax")

Would these proposals be effective policy instruments to prevent or reduce obesity in Canada? This paper summarizes the available evidence concerning the effectiveness of economic instruments in modifying eating habits and physical activity levels, and their potential impact on the prevention and control of obesity.

LITERATURE REVIEW

The purpose of economic instruments is to alter prices so as to influence consumption choices. Their impact depends on the size of the tax or subsidy or tax credit, and on consumer response to price changes. Consumer response to price changes, in turn, depends on the price elasticity of demand. When the demand is elastic, a small increase (decrease) in price leads to a large decrease (increase) in the quantity the consumer buys. In contrast, the demand is inelastic when a large increase (decrease) in price leads to only a small decrease (increase) in the quantity purchased. It follows that, in order to be effective, the size of a tax, subsidy or tax credit must be determined on the basis of the degree of price elasticity of demand.

There is little evidence on the impact of various economic instruments on healthy eating and physical activity or on their effectiveness in preventing and controlling obesity. Research to date has focused primarily on healthy eating; a literature search produced no analytical papers assessing the potential impact of economic instruments promoting physical activity. However, a brief review of the available literature suggests the following:

- Small to moderate taxes on unhealthy foods show minimal to no impact on consumption. This form of taxation is considered regressive, because low-income individuals and families spend a greater proportion of their income on food than higher-income earners. This situation could, however, be offset by offering tax rebates.

- Although small taxes on unhealthy foods have only a limited impact on consumption levels, they can generate significant government revenue. This revenue could be earmarked for health promotion programs (such as advertising

campaigns to encourage healthy eating in schools) or used to provide subsidies for healthy foods (notably fruits and vegetables) or for sport and fitness activities.

- Various proposals have been made for taxing unhealthy foods. One suggestion is to levy a tax on specific categories of food, such as snack foods. This form of tax could be viewed as a "sin tax" similar to alcohol and tobacco taxation. Another possibility is to tax the nutrient content of foods, such as those containing more fat, salt or sugar. It would be considerably more difficult to implement and administer a tax on nutrient content than a snack tax.

- Taxing unhealthy foods may provide an incentive to manufacturers to change their production processes to reduce the fat, salt or sugar content in order to maintain their market share.

- An American study found that the sale of healthy snacks from vending machines in multiple worksites, school settings and universities went up when prices were reduced while the prices of other food items were maintained.

- An evaluation of the Norwegian School Fruit and Vegetable Subsidy Program, which provides school children with free fruits and vegetables, found that children in schools participating in the program ate significantly more fruits and vegetables than children in other schools. The evaluation of a similar pilot program in the United States showed similar results.

- An evaluation of the Canadian Food Mail Program, which subsidizes the cost of transporting nutritious perishable foods to isolated communities, found that increasing the freight subsidy from 30 to 80 cents per kilogram for healthy products like fruits, vegetables and dairy as part of a pilot project in three communities resulted in a significant increase in the purchase of these products.

- Subsidizing healthy foods appears to be a more promising strategy than taxing unhealthy foods. Subsidies show greater benefits to low-income consumers, as they avoid the potential regressive effects of taxation.

The literature reviewed also indicates that no country has implemented an explicit tax on unhealthy foods, although taxation is not uniform among the various categories of foods. Moreover, there are no examples around the world of foods being directly taxed according to their fat content or other nutrient content. Therefore, most of the evidence to date is based only on simulation and not on empirical data (with the exception of the free fruit and vegetable programs in Norway and the United States, the food mail program in Canada, and the variation in price of products sold in vending machines).

No evaluations of tax deductions or tax credits that promote physical activity were identified in a literature search, although such measures were in effect for a number of years in some countries, including Australia and the United States.

RECENT DEVELOPMENTS IN CANADA

Since 2005, the Nova Scotia government has allowed a "Healthy Living Tax Credit" to help with the cost of registering children and youth in eligible sport or recreation activities that offer health benefits. This credit, which was based on a maximum annual spending of $150 per child when introduced, was raised to an annual maximum of $500 in January 2006. It is estimated that the tax credit costs the Nova Scotia government $2.2 million annually. In its 2006 Budget, the federal government introduced a similar economic incentive, the Children's Fitness Tax Credit. Under this tax credit, parents will be allowed to claim, starting in the 2007 taxation year, a non-refundable tax credit of up to $500 in eligible fees for the enrolment of a child under the age of 16 in an eligible program of physical activity. It is estimated that the federal tax credit will cost approximately $160 million per year. It would be interesting to undertake an evaluation of these tax credits' effectiveness, once sufficient data are available to assess their impact on physical activity and obesity.

In 2003, free fruits and vegetables were provided to children at three schools as part of a pilot project in Prince Edward Island, while similar pilot projects were launched in British Columbia in September 2005 and in Ontario in selected northern schools in September 2006. Since these subsidy programs are relatively new, they have not been subject to any evaluation.

CONCLUSION

More research is needed to assess the potential impact of economic instruments on healthy eating and physical activity, as well as on the prevention and control of obesity. Evaluating the use of economic

instruments recently introduced in Canada – including the new tax credits that encourage children to enrol in sports, and the subsidies to increase the consumption of fruits and vegetables by school-aged children – would provide useful empirical evidence which is currently lacking.

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