Background: In the past 20 years, the dairy market in North America has not experienced the kind of growth which has characterized most other sectors in the agri-food business. In Canada, the consumption of some products such as cheese, has remained constant, while other products, such as butter and ice cream, have shown a decline per capita consumption. Despite this increase in the consumption of skim and 1% milk, total milk consumption has declined. The only dairy product in Canada to have a striking increase in per capita consumption since 1996 is yogurt. This trend has also been noted in the US and some European countries. Given the decline in overall dairy consumption, it is not surprising that many Canadians do not consume adequate amounts of milk and alternatives in their diet, which are the main source of calcium and vitamins D, B₁₂, and B₉ in the Canadian diet. These changes in consumption over time could be impacting the overall health of the Canadian population, and could be a result of many factors, including demographic characteristics, health beliefs, and attitudes towards food technologies.

Data:

- An original national Canadian dairy survey was administered in January 2011.
- The survey collected self-reported milk and yogurt intake along with demographic information, the Health Belief Model (HBM) questions and the Food Technology Neophobia Scale (FTNS).
- Of the 1,705 respondents, 41 didn’t eat dairy at all while 179 claimed to never drink milk and 250 claimed to never eat yogurt, 52 of which were the same people.

Analysis:

- Probit regressions explain whether or not respondents typically purchase specialty yogurt or milk products (e.g., probiotics).
- Multinomial logit model is used to estimate willingness to pay (WTP) for specific milk and yogurt attributes (more nutritional information, Health Check™ logo, probiotic, etc).
- WTP measures are regressed on individual health beliefs and FTNS scores to identify key relationships.

Health Belief Model (HBM)

- Developed in 1956 by health psychologists to understand why some individuals may choose to use health services while others do not.
- The construct is based on the following aspects of health: perceived susceptibility, perceived seriousness, perceived benefits, perceived barriers, and self-efficacy.
- Several studies have used the HBM to predict eating behaviour since there is a direct link between diet and health outcomes.

Food Technology Neophobia Scale (FTNS)

- The FTNS, which was originally based on the Food Neophobia Scale, was developed in 2008 by Cox and Evans to evaluate consumers’ fears of novel technologies used in food production.
- Because many functional foods retain their familiar appearance but are produced with novel technologies, the FTNS may be a good predictor of the acceptance of functional foods.

To determine who consumes milk and yogurt, whether or not they are the same people, what their general demographic and health characteristics are, and their preferences for modifications to dairy products in the form of nutrient enhancement or nutritional accreditation.

To examine whether health beliefs or food technology neophobia are significant contributing factors to milk or yogurt intake.

Objectives:

- Health Belief Model (HBM)
- Developed in 1956 by health psychologists to understand why some individuals may choose to use health services while others do not.
- The construct is based on the following aspects of health: perceived susceptibility, perceived seriousness, perceived benefits, perceived barriers, and self-efficacy.
- Several studies have used the HBM to predict eating behaviour since there is a direct link between diet and health outcomes.

- Food Technology Neophobia Scale (FTNS)
- The FTNS, which was originally based on the Food Neophobia Scale, was developed in 2008 by Cox and Evans to evaluate consumers’ fears of novel technologies used in food production.
- Because many functional foods retain their familiar appearance but are produced with novel technologies, the FTNS may be a good predictor of the acceptance of functional foods.

- Vitamin Enhanced Attribute
- People who have higher perceived susceptibility of dairy products are more likely to pay extra to have vitamin enhanced or probiotic milk or yogurt. Individuals who have higher confidence in their ability to consume the daily recommended amount of dairy products and vitamin enhanced yogurt are significantly more likely to pay extra for yogurt with vitamin enhanced milk and yogurt as well as for probiotic milk.
- People who have higher perceived susceptibility of both dairy products and vitamin enhanced products are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived vulnerability are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived severity are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower perceived benefits are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived barriers are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived susceptibility to health risks are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower perceived severity to health risks are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have less confidence in their ability to consume the daily recommended amount of both dairy products and vitamin enhanced yogurt are significantly more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower confidence in their ability to consume the daily recommended amount of both dairy products and vitamin enhanced yogurt are significantly more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived vulnerability are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived severity are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower perceived benefits are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower perceived barriers are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived susceptibility to health risks are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower perceived severity to health risks are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have less confidence in their ability to consume the daily recommended amount of both dairy products and vitamin enhanced yogurt are significantly more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower confidence in their ability to consume the daily recommended amount of both dairy products and vitamin enhanced yogurt are significantly more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived vulnerability are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived severity are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower perceived benefits are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower perceived barriers are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived susceptibility to health risks are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower perceived severity to health risks are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have less confidence in their ability to consume the daily recommended amount of both dairy products and vitamin enhanced yogurt are significantly more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower confidence in their ability to consume the daily recommended amount of both dairy products and vitamin enhanced yogurt are significantly more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived vulnerability are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived severity are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower perceived benefits are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower perceived barriers are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived susceptibility to health risks are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower perceived severity to health risks are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have less confidence in their ability to consume the daily recommended amount of both dairy products and vitamin enhanced yogurt are significantly more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower confidence in their ability to consume the daily recommended amount of both dairy products and vitamin enhanced yogurt are significantly more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived vulnerability are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived severity are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower perceived benefits are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower perceived barriers are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived susceptibility to health risks are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower perceived severity to health risks are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have less confidence in their ability to consume the daily recommended amount of both dairy products and vitamin enhanced yogurt are significantly more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower confidence in their ability to consume the daily recommended amount of both dairy products and vitamin enhanced yogurt are significantly more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived vulnerability are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived severity are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower perceived benefits are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower perceived barriers are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived susceptibility to health risks are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower perceived severity to health risks are more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have less confidence in their ability to consume the daily recommended amount of both dairy products and vitamin enhanced yogurt are significantly more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have lower confidence in their ability to consume the daily recommended amount of both dairy products and vitamin enhanced yogurt are significantly more likely to pay extra for both dairy products and vitamin enhanced yogurt.
- People who have higher perceived vulnerability are more likely to pay extra for both dairy products and vitamin enhanced yoga