

# Developing BANKS, a Nutrition Survey for Canadians

## Summary

This article provides an overview of the development and scientific validation of a survey to measure Canadians' nutrition behaviours and how these behaviours relate to their attitudes and knowledge around nutrition. This survey is called the Canadian BANKS (Behaviours, Attitudes and Nutrition Knowledge Survey).

## Key Terms

The **Behaviours, Attitudes and Nutrition Knowledge Survey (BANKS)** collects information from Canadians about their nutrition behaviours, attitudes, and knowledge. The survey is currently in development.

The **Diet and Health Knowledge Survey (DHKS)** has a similar purpose but a different audience. It collects information from Americans about their food choices and knowledge of the U.S. government's diet guidelines.

**Reliability** refers to the consistency of the above surveys. Reliability can range between 0 and 1. A score of 1 would mean a survey provides the exact same measure over time no matter who takes the survey.

**Validity** means the survey is truthful and measures what it is supposed to measure. Reliability is a component of validity.

**Lynne Lafave, PhD, Assistant Professor, & Mark Lafave, PhD, Associate Professor, Mount Royal Faculty of Health and Community Studies, Department of Physical Education and Recreation Studies**

People who eat five or more servings of fruits and vegetables a day have lower rates of chronic diseases such as heart disease and cancer. They are also less likely to be obese than those who eat fewer than three servings per day (Khaw et al., 2008; Statistics Canada, 2004).

Yet over half of Canadians still eat less than the daily fruit and vegetable intake recommended by *Canada's Food Guide* (Garriguet, 2006).

To help Canadians achieve healthy eating habits, the government has produced educational materials such as *Canada's Food Guide* and the Healthy U website. But do these initiatives increase Canadians' knowledge about food? If so, does this knowledge result in people making better food choices?

A survey that collected this type of data would be important in dietary and obesity research. Dietitians and other health professionals could use the survey to identify gaps in the nutrition knowledge of Canadians and also to evaluate the effectiveness of materials such as *Canada's Food Guide*.

However, no such survey for the Canadian population is currently available.

## The U.S. Diet and Health Knowledge Survey (DHKS)

The U.S. Department of Agriculture developed the Diet and Health Knowledge Survey (DHKS) to collect information from Americans about the factors that influence their food choices as well as their knowledge and attitudes about the U.S. government's Dietary Guidelines for Americans (Obayashi, Bianchi, & Song, 2003).

Questions in the DHKS look at:

- behaviours related to fat intake, food safety, and food label use
- attitudes about food intake and the importance of certain nutrients
- knowledge related to diet, health, fat, and food labels

Researchers have used the survey to see if Americans were aware of diet guidelines on fat intake and to see how well they were following the guidelines (Capps, Cleveland, & Park, 2002). Researchers have also used the survey to see if a three-hour education program could improve college students' nutrition knowledge and eating patterns (Pires, Pumerantz, Silbart, & Pescatello, 2008).

## Could We Use the American DHKS in Canada?

A survey is only useful if its validity (truthfulness) and reliability (consistency) have been demonstrated. Without this, we are left to wonder if the survey provides trustworthy findings.

The DHKS was found to be sufficiently valid and reliable for use in the U.S., but that doesn't mean it is equally valid and reliable for use in Canada. While we Canadians are similar to Americans, there are subtle differences that make us unique such as our views around health policy and different messaging in our governments' food guides.

## Developing the Canadian BANKS (Behaviours, Attitudes and Nutrition Knowledge Survey)

An important task of our research was to scientifically validate a survey similar to the DHKS for use in Canada, a survey that collects information on Canadians' food choice behaviours, attitudes towards nutrition, and nutrition knowledge. (Continued on page 4)

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This survey is the Canadian BANKS (Behaviours, Attitudes and Nutrition Knowledge Survey). Before we could test the BANKS for validity and reliability, we had to develop the survey. We chose the DHKS as a model and adapted it for Canadian use.

Adapting the DHKS for Canadians involved experts across the country. These experts were members of the Dietitians of Canada and also represented academic institutions from Nova Scotia, Ontario, Manitoba, Saskatchewan, and Alberta. The experts evaluated, adapted, corrected, and deleted questions. They also added new questions. By the last stage of development, 65% of the original DHKS questions had been deleted or changed.

### What Information Can the BANKS Give Us?

The BANKS collects information on Canadians' *behaviours* having to do with purchasing food, using food labels, consuming food and water, and physical activity patterns.

BANKS questions addressing *attitudes* ask respondents to agree or disagree with statements about healthy eating and nutrient-disease relationships.

A comprehensive set of *nutrition knowledge* questions asks respondents about their knowledge of *Canada's Food Guide*; food sources for key nutrients; food labels; the interrelationships between health, nutrition, and physical activity; and guidelines for consuming fluid.

### Testing BANKS

To confirm the validity and reliability of the BANKS, 209 college students participated in survey testing.

The BANKS was found to be valid and reliable for the students, but further research is required to evaluate the survey for use with other Canadian populations (e.g., children, older adults, people with specific chronic diseases, etc.). When the survey has been tested in many different populations and circumstances, its trustworthiness will be strengthened.

### Practical Implications

Carefully consider what surveys or information-collecting tools you use. Does the tool suit your audience? The team of Canadian experts who worked on the BANKS found that the American DHKS was not a useful measurement of nutrition knowledge for Canada. Canadian values, culture, government and laws differ from those of our American neighbour. 🍷

References for this article are available at: <http://www.centre4activeliving.ca/publications/research.html>

#### About the Authors

**Lynne Lafave**, PhD, is an assistant professor at Mount Royal in the Faculty of Health and Community Studies. She holds a PhD in nutrition science from the University of Manitoba and is an academic affiliate member of the Dietitians of Canada.

Her research focuses on the relationship between nutrition education and health. Specifically, she has been examining the factors influencing food choice behaviours as well as tools (such as the BANKS) to measure these factors. She is also investigating the potential role of nutrition education in the management of stress.

**Mark Lafave**, PhD, is an associate professor at Mount Royal in the Faculty of Health and Community Studies. He holds a PhD in kinesiology from the University of Calgary. His research interests are in the field of measurement and evaluation with a particular focus on practical, performance-based examinations in athletic therapy. He created an online assessment tool that can be used in a wireless environment to assess athletic therapy students working on clinical internships. The validity and reliability of the tool was statistically established as well as the tool's effectiveness as a teaching instrument.



#### About the Organizations

Research and scholarship are an integral part of **Mount Royal's** mission. Faculty are engaged in research that creates cutting-edge knowledge, focuses heavily on interdisciplinary work and external partnerships, and benefits our communities—local, provincial and national.

**Dietitians of Canada** is a national professional association that represents almost 6,000 members who are recognized leaders in advancing health through food and nutrition.



**Dietitians of Canada**  
**Les diététistes du Canada**