Researching Functional Food Consumption in Older Adults: Creation of a Toolkit for Knowledge Translation

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Presentation Outline

• Background

• Research Project on Functional Food Consumption in Older Adults

• Toolkit as Knowledge Translation Strategy
  • Development Process
  • Stakeholder Engagement
  • Content

• Take-away Summary Points
Research Background
Food and Health

• Relation of food and its constituents to health has evolved
  • Traditionally prevent deficiency disease
  • Now includes prevention of chronic disease
  • Evolution manifests in numerous policies

• Key example is advance of functional foods
  • Extension of how we relate food and food constituents to health
  • Major influence on research activity in food, nutrition and health
What are Functional Foods?

Simplest definition: Foods that may provide health benefits beyond basic nutrition

- Conventional food form
- Specific bioactive constituent
  - enhanced content in the food
  - added to the food
- Biological rationale to relate to health
A *functional food* is similar in appearance to, or may be, a conventional food that is consumed as part of a usual diet, and is demonstrated to have physiological benefits and/or reduce the risk of chronic disease beyond basic nutritional functions, i.e. they contain bioactive compound.
Functional Foods and Health: Relevance to Older Adults

• Functional foods have relevance to many areas of human health and this can apply to multiple life-stage and gender groups

• Among these life-stage groups, older adults emerge as a highly relevant beneficiary of FF
Analysis of Canadian’s demand for food products in support of health

Identified disease threat as a key driver and that this increases with age
Golden years shining brighter: Canadian seniors living longer, better

BY SHANNON PROUDFOOT, POSTMEDIA NEWS  OCTOBER 29, 2010  COMMENTS (21)

Canada’s seniors are living longer and are vastly less likely to struggle with poverty than they were three decades ago, but there’s work to be done in areas such as diagnosing and treating mental illness, reducing social isolation and combating the “mythology” of aging, Canada’s chief public health officer said. File photo.

Photograph by: Darren Stone/Victoria Times Colonist, Victoria Times Colonist

Canada.com, October 29, 2010

Dr. David Butler Jones’ Report: Canadians are living longer

2010 report on the State of Public Health in Canada focused on aging and seniors

- By 2050, more than 25% of population will be over 65 years old
- Life expectancy is rising at 78 for men, 83 for women
- Chronic health conditions:
  - 89% have >1
  - 25% have >4
- 37% taken steps to improve their health
Exploration of the consumption, awareness, understanding and motivating factors related to functional foods in older adults

- University of Guelph research project
- Investigators:
  - Alison Duncan, Judy Sheeshka
- Graduate and undergraduate students:
  - Meagan Vella, Laura Stratton, Hilary Dunn
  - Amanda Li, Sara Lum, Jennifer Wong
  - Kaitlyn Zorn
- Approved by University of Guelph Research Ethics Board (REB#10SE012)
Research Purpose and Objectives

Understanding FF in Health and Disease among Older Adults

Factors that PROMOTE consumption

Factors that DISCOURAGE consumption

Consumption and purchase patterns

Awareness in relation to HEALTH

Sources of information

Preferred FF targets for
- Health
- Bioactive
- Food matrix

Sample characteristics: medical, lifestyle, demographics
Research Results

- Generated multiple results related to functional foods and aging
- Focus on core concepts of functional foods bioactives, functional food matrices and relationship of functional foods to health

An increased awareness and knowledge about functional foods was the most frequently identified factor that would increase functional food consumption (85.5% of participants)
Research Stakeholders

- Registered Dietitians
  - Results will inform better interaction with older adult patients/clients in their navigation of daily food choices to manage health
  - Concepts could relate to patients/clients in other life stage groups as well
- Food Industry
- Older Adults
- Academic community
Stakeholder Dissemination

- Multiple dissemination strategies
- Decision to create a toolkit stemmed from creative dissemination planning
- Intent was clarified with funding agency from the start of the research process
- Appealing product to culminate research process and provide stakeholders with a resource
KT Strategy: Concept of a Toolkit

“Compilation of educational and practice-oriented resources”¹

“Knowledge tools or products...present knowledge in clear, concise, and user-friendly formats...provide explicit recommendations...to meet the stakeholders’ knowledge or informational needs”²

“Toolkits are sets of versatile, adaptable educational resources...offer choices...[users] can reconfigure to meet unique needs”³

Toolkit concept is very broad, and therefore easy to tailor to the context of our project

Toolkit Development

• Period of 4-6 months
• Weekly meetings with research team to:
  – Discuss literature
  – Identify knowledge gaps
  – Determine toolkit content and main messages
  – Inclusion of Dietetic Practice Points
  – Review and revise
• Completion of draft toolkit
Stakeholder Engagement

• Draft toolkit was presented to stakeholders at:
  • Health Professionals’ Day at the Royal Agricultural Winter Fair (November 2011)
  • Canadian Foundation for Dietetic Research Annual Meeting (November 2011)

• Attendees were invited to submit feedback via an open-ended comment box distributed using SurveyMonkey

• The information gathered was used to inform final content.
Functional Foods for Healthy Aging

A Toolkit for Registered Dietitians

September 2012

This toolkit provides guidance and materials to assist Registered Dietitians in communicating with older adults about functional foods for healthy aging.

Toolkit Purpose

To provide guidance and materials to assist Registered Dietitians in communicating with older adults about functional foods for healthy aging.
Toolkit Structure

• **Section 1:**
  o Understanding FF

• **Section 2:**
  o Relevance of Functional Foods for Healthy Aging

• **Section 3:**
  o Research Summary and Results

• **Appendices:**
  o Resource and Educational Materials
Section 1: Understanding FF

- **Functional Foods Defined**
  - Functional food definitions established by various countries and organizations
  - Common components of functional foods
  - Food forms
  - Bioactives
  - Relation to natural health products
Section 1: Understanding FF

• Functional Food Product Guidance
  • Summary table of guidance tool, regulatory notes and dietetic practice points
    • List of ingredients
    • Nutrition Facts table
    • Nutrient Content Claims
    • Additional Food-Related Claims
    • Health Claims
      • Disease Risk Reduction Claims
      • Therapeutic Claims
      • Function Claims (Nutrient Function, Probiotic)
      • General Health Claims (Front-of-Package labelling)
Section 1:
**FF Product Examples**

- Functional food guidance highlighted
- Dietetic practice points
- Product example sheets:
  - Cereal (oats)
  - Juice (plant sterols)
  - Margarine (omega-3)
  - Milk (omega-3)
  - Yogurt (probiotics)
- Views: top, front, back, side 1, side 2
Section 1: FF in the Canadian Marketplace

• Functional food sales revenue
• Functional foods industry growth
• Statistics Canada Functional Food and Natural Health Product Survey 2007
• Identifies need for research into consumer acceptability of functional foods
Section 2: Relevance of FF for Healthy Aging

• Role of FF in Canada’s aging demographic
  • Study of Canada’s aging demographic
  • Aging and increased disease risk
    • Focus on cancer, CVD risk and type 2 diabetes
  • Aging and increased health care expenditure
  • Potential for FF to contribute to healthy aging

• Role of RD in considering FF in practice
  • Review of current literature
Section 3: Summary and Results of University of Guelph Research Study

• Summary of research rationale
• Research purpose and objectives
• Study methods and objectives
• Study conference presentation abstracts
  – Canadian Nutrition Society 2012
  – Dietitians of Canada 2012
Inform and exemplify key functional food concepts:

- Functional food definition
- Functional food food forms
- Functional food bioactives
- Functional food health claims

Combination of text and pictures
What are they and what do they do?

Research Results: What health areas are older adults using them for?

Three review articles cited for further information.
Bioactive Resource Sheet EXAMPLE

Plant sterols and healthy aging

Key background notes about phytosterols

Results from FF research study

Key references for further information

Plant Sterols and Healthy Aging

What are they and what do they do?
- Plant sterols (or phytosterols) are phytochemicals found naturally in plants, including fruits, vegetables, nuts, seeds, grains, and legumes.
- Plant sterols are structurally similar to cholesterol but are not readily absorbed.
- Plant sterols compete and interfere with dietary and endogenous cholesterol absorption and effectively reduce circulating LDL and total-cholesterol, thereby reducing cardiovascular disease risk, at doses of 2 g/day.
- Plant sterols have also been linked to reduced risk of numerous cancers (lung, stomach, colon, breast, and prostate) and have demonstrated antioxidant, anti-inflammatory, and antiatherogenic properties.
- In May 2010, Health Canada approved a therapeutic claim for certain foods containing at least 0.65 grams of plant sterols per serving and blood cholesterol lowering. These claims can also state that high cholesterol is a risk factor for heart disease.

What health areas do older adults address by consuming functional foods with plant sterols?
A University of Guelph study that explored functional food consumption in a sample of 200 older adults asked participants to indicate the health areas that they do address or would consider addressing by consuming functional foods containing plant sterols. The following figure indicates the top five responses. Of note is that 72% of participants responded that they did not know.

Plant Sterol Review References
Toolkit Launch

• On January 16, 2013, webinar to 400 participants hosted by the Canadian Foundation for Dietetic Research

• PDF of the toolkit available for download on the following websites:
  – Agri-food for Healthy Aging (A-HA)
  – Canadian Foundation for Dietetic Research (CFDR)
  – Dietitians of Canada (DC)
  – Practice-based Evidence in Nutrition (PEN)

• Promoted through e-blasts and various social media outlets of A-HA, CFDR and DC
# Toolkit Evaluation

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<th>Research Impact</th>
<th>Evaluation Criteria</th>
<th>Methods</th>
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<tbody>
<tr>
<td>UPTAKE</td>
<td>Engagement</td>
<td>Numbers, web-use tracking</td>
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<tr>
<td>UPTAKE</td>
<td>Awareness, reaction</td>
<td>What participants say about the research, value, timeliness</td>
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<tr>
<td>USE</td>
<td>Capacity, Knowledge, Skills</td>
<td>Measures of individual and group changes in knowledge, abilities</td>
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<td>USE</td>
<td>Policy or Practice Change</td>
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<tr>
<td>IMPACT</td>
<td>End Outcomes</td>
<td>Measurement of impact on overall problem, ultimate goals</td>
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Toolkit Evaluation

• Download tracker
  – Only available on the Agri-food for Healthy Aging (A-HA) website
  – 100 + to date

• Evaluation survey
  – Url to an anonymous, 5 minute survey (via SurveyMonkey) included in the pdf copy of the toolkit
  – Mix of structured and open-ended questions
Please respond to the following statements about the toolkit on a scale of 1 to 5 (1 = strongly disagree; 5 = strongly agree):

• The toolkit provides new information (i.e., I learned something new).
• The information in the toolkit is relevant to my work.
• I will share the toolkit with colleagues.
• I will use the toolkit in my work/practice.

If you have been able to use the toolkit in your work/practice, please explain how you have been able to use it?
(i.e., I was able to use the Bioactive Resource Sheets when interacting with clients; Section 1 enhanced my knowledge about the Canadian regulatory framework).
Take-away Summary Points

• FFs are an exciting strategy to promote healthy aging as older adults are incorporating FF into their diets and are motivated to address multiple health concerns through FF consumption.

• KT takes time and is optimized by partner engagement early on in the process.

• The Functional Foods for Healthy Aging toolkit can be used as a knowledge transfer tool to aid Registered Dietitians in their interactions with older adult clients about FFs.
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