Researching functional food consumption in older adults: exploration of a toolkit as a knowledge translation strategy

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Presentation Outline

• Research Project on Functional Food Consumption in Older Adults
  • Background/Rationale
  • Purpose/Objectives
  • Methods/Progress Update

• Relevance of Knowledge Translation of Research Results

• Toolkit as Knowledge Translation Strategy
  • Development Process
  • Content
  • Next Steps
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
- Undergraduate students
- Approved by University of Guelph Research Ethics Board (REB#10SE012)
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.
What are Functional Foods?

Food

Addition of component(s)

Removal of component(s)

Concentration of component(s)

Modification of component(s)

Functional Food
Functional Foods: A Catalyst for Innovation

- Academics
  - Multiple research efforts
- Industry
  - Product development and merchandising
  - Increasing revenue from sales
- Government
  - Regulatory framework to allow for claims
- Health care
  - Incorporation into prevention and management of patient/client care
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**
Aging is Becoming More Common

- Aging of the population will ACCELERATE over the next 3 decades
- The number of Canadian adults >65 years old is projected to increase from 4.2 to 9.8 million between 2005 and 2036
- The “older adults” share of the population will increase from 13.2 to 24.5%
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
Relevance of FF to Older Adults

• FF can address many nutrition and health related needs that face the aging older adult

• Basic Health and Nutrition-Related Needs
  • Physical changes that challenge basic consumption
  • Physiological changes in nutrient utilization
  • Social considerations
  • Need for nutrient-dense foods

• Optimal Health and Nutrition-Related Needs
  • Increased incidence of chronic diseases

• To realize these benefits through FF, need to first understand current consumption, perception, attitudes, beliefs
• UK has identified the need to examine perception of FF in older consumers
  • Article identifies that there is evidence for efficacy of FF but limited evidence regarding whether older adults consume them
• Limited information on this in Canada
CFDR-Funded Research Project

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Research Objectives

Understanding FF in Health and Disease among Older Adults

Factors that PROMOTE consumption

Consumption and purchase patterns

Factors that DISCOURAGE consumption

Awareness in relation to HEALTH

Sources of information

Preferred FF targets for
- Health
- Bioactive
- Food matrix

Sample characteristics: medical, lifestyle, demographics
Research Study Design

Understanding FF in Health and Disease among Older Adults

Mixed methods approach

BREADTH

Phase ONE:
Researcher-administered Questionnaire

DEPTH

Phase TWO:
Focus Groups (informed from questionnaire results)
Research Participants

• Older adults ≥ 60 years old
  • Community dwelling
  • Not utilizing meal-assisted services
  • Able to complete questionnaire or focus group
  • Able to provide written consent
Research Progress

- Questionnaire data collection completed as of last week
- Focus group data collection to be completed by end of fall semester
- Looking forward to next steps
  - Data entry, analysis and statistics
  - Results interpretation, summaries
  - Manuscript and presentation constructions
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
Knowledge Translation (KT) to Stakeholders

• Key phase of research process

• Knowledge translation defined as:
  • Transformation of knowledge into use through synthesis, dissemination, and exchange among researchers and research users (OMAFRA 2011).

• Numerous knowledge translation strategies to disseminate research results to stakeholders
Toolkit as a Knowledge Translation Strategy

• Toolkits are flexible and adaptable educational resources that target one issue and/or one audience (Monroe 2000).

• Can be constructed to address research results content along with relevant background information

• Allows for creative thinking in organization and presentation of content
Toolkit as a KT Strategy

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

Development
- Weekly meetings with toolkit team to:
  - Discuss literature
  - Identify knowledge gaps
  - Determine toolkit content and main messages
  - Review and revise

Stakeholder engagement
- Present toolkit to stakeholders to:
  - Seek feedback
  - Inform final version
  - RAWF Health Prof. Forum
  - CFDR AGM
  - Colleague extension
Toolkit Structure

- **Section 1:**
  - Understanding FF

- **Section 2:**
  - Relevance of Functional Foods for Healthy Aging

- **Section 3:**
  - Research Summary and Results

- **Appendices:**
  - 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 results will be included (when ready)
Inform and exemplify key functional food concepts:
  • Functional food definition
  • Functional food bioactives
  • Functional food food forms
  • Functional food health claims
• Combination of text and pictures
Appendices:
Bioactive Resource Sheets

Antioxidants
Dietary Fibre
Omega-3 Fatty Acids

Plant Sterols
Prebiotics
Probiotics

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.
Appendix H: Functional Food Bioactives for Healthy Aging Resource Sheet: PLANT STEROLS

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 anti-atherogenic 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: Next Steps

- Consider and incorporate feedback from stakeholders
- Include research study results once available
- Submit to funding partners for consideration
- Disseminate to stakeholders
- PDF format to allow for online distribution
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- Research Participants