



FOOD LITERACY
FOR LIFE



A Call to Action for Healthy Eating:
Using a Food Literacy Framework
for Public Health Program Planning, Policy, and Evaluation

The Locally Driven Collaborative Project: Measuring Food Literacy in Public Health
July 2017

BRIEF INTRODUCTION

Food literacy is increasingly recognized as an important influence on eating patterns. ^(1, 2) Currently, there is no reliable tool to measure food literacy. The absence of a measurement tool along with a limited shared understanding of the comprehensive nature of food literacy makes it challenging for nutrition practitioners to assess the impact of food literacy programs or services on eating behaviours.

To inform the development of a measurement tool, the Locally Driven Collaborative Project (LDCP) team, consisting of members from 16 health units in Ontario, conducted a Scoping Review and a consensus building technique called Delphi to identify the key attributes of food literacy and to develop an evidence-informed definition and framework.



Food Literacy is a set of interconnected attributes organized into the categories of food and nutrition knowledge, skills, self-efficacy/confidence, food decisions, and other ecologic factors (external) such as income security, and the food system.

THE PURPOSE FOR THE CALL TO ACTION:

The Call to Action for Healthy Eating provides a rationale for and illustrates how food literacy can be used as a comprehensive, evidence-informed framework when planning, implementing, and evaluating programs and services that address healthy eating. This approach can be utilized to:

- Facilitate chronic disease prevention efforts;
- Promote healthy growth and child development; and,
- Contribute to the health of children and youth through working with schools and other community partners.

The Call to Action advocates for public health practitioners to adopt the food literacy framework as the foundation for healthy eating programs and services. This Call to Action recommends public health practitioners consider each of the evidence-informed attributes of food literacy as key elements that can reinforce or enhance programming.

A consistent application of the framework across the public health setting in Ontario helps establish the groundwork for a shared understanding of food literacy prior to the development, testing, implementation, and dissemination of a food literacy measurement tool.

THE CURRENT SITUATION: Healthy Eating, Food Literacy, and Population Health

Chronic diseases influence many of the primary causes of death and disability in Canada and across the globe. ⁽³⁻⁷⁾ Dietary risk factors are some of the most important contributors to mortality in Canada. ^(6,7) Unfortunately, the growing prevalence of large-scale and fast food retail outlets along with the modernization of the global food system have altered the food supply with respect to food availability, affordability, and quality. ^(8, 9) Consumers have greater access to low-cost, energy dense, and nutrient poor foods and beverages. ⁽⁴⁾

Additionally, there has been a decline in domestic food preparation skills (known as 'deskilling' in the literature) due to a lack of introduction to and opportunity for the acquisition of cooking skills from parents, grandparents, and/or school environments. ⁽¹⁰⁻¹⁵⁾ Independent of preparation skills, there are also several factors that drive an individual's food selection including physiology, food availability, taste, price, marketing, convenience, social norms and cues. ⁽¹⁶⁾ The foods people cook and the food preparation skills they utilize are all influenced by social, economic, and cultural contexts that are constantly changing. ^(17, 18)

Collectively these complex factors impact an individual's or population's food literacy. As a result, eating patterns do not always meet well-established and evidence-informed health and dietary recommendations. ^(19, 20) Because food literacy can have significant influence on eating patterns, this LDCP research and that of others highlights the interconnectivity among food, health, and the environment, in service of improving eating behaviour overall. ⁽²¹⁾



BACKGROUND: LDCP Research

In 2016, the LDCP team conducted a Scoping Review to identify the attributes of food literacy. A total of 19 peer-reviewed and 30 grey literature sources were systematically reviewed, leading to the classification of 15 food literacy attributes in five interrelated categories (Figure 1). A detailed discussion of the Scoping Review is published elsewhere. ⁽²⁹⁾

Subsequent to the Scoping Review, a consensus-building Delphi Technique with public health practitioners and other key stakeholders was completed to obtain input about the cogency, relevance, and importance of each of these attributes, within the public health context. This resulted in a final list of 11 interrelated key attributes that describe food literacy (Table 1). The attributes in each of the five interrelated categories are shown in a pictogram, which allows visualization of their interconnections and interdependence. ⁽³⁰⁾

Therefore, food skills as defined in the previous Ontario Public Health Standards (OPHS) Guidance Document ⁽²²⁾ (i.e., knowledge, planning, mechanic techniques of preparing food) may not be sufficient to achieve population-wide healthy eating outcomes. In this LDCP research, food skills is only one of the 11 attributes and is described primarily as the preparation of healthy and safe meals throughout the lifespan using basic mechanical skills.

It is confirmed that food literacy encompasses more than food skills. ^(1, 2, 9, 23, 24) The findings from the Delphi provide further evidence to confirm the broader scope of food literacy.

In 2018-2019, the LDCP Team will develop a measurement tool and evaluate how well this tool performs with identified priority populations. This research is integral to the proposed food literacy framework and will support public health program planning, policy work, and evaluation.

THE LINK BETWEEN FOOD LITERACY AND THE MODERNIZED ONTARIO PUBLIC HEALTH STANDARDS:

The modernized Ontario Public Health Standards (25) use a 'Policy Framework for Public Health Programs and Services' focused in four domains: Social Determinants of Health, Healthy Behaviours, Healthy Communities, and Population Health Assessment (Table 2). The food literacy framework, with its five categories and 11 attributes links with the four domains, three foundational standards, and five program standards of the modernized standards.

For example, the Social Determinants of Health was identified as an attribute of food literacy and has a direct connection to the Foundational Standard - Health Equity. Social and environmental conditions (e.g., inadequate income and education) can result in inequities in health status which can impact the capacity to make decisions about food and cooking.

Also, the food literacy categories of Food and Nutrition Knowledge, Food Skills, and Self-Efficacy and Confidence contribute to the domain of Healthy Behaviours. And finally, food literacy contributes to Foundational Standards–Population Health Assessment and Effective Public Health Practice, as shown with the recent LDCP research whereby the identified key attributes of food literacy will be used in the development and pilot testing of a tool to measure food literacy.

**Figure 1:
The Five Categories of Food Literacy**

Food and Nutrition Knowledge:

Relate to facts and information acquired through experience or education related to foods and nutrition, including the capacity to distinguish between “healthy” and “unhealthy” foods.

Self-Efficacy and Confidence:

Relate to one’s capacity to perform food skills in varied contexts and situations.

Food Decisions:

Includes dietary behaviour which pertains to the application of knowledge, information, and skills to make food choices.

Food Skills:

Focus on techniques related to food purchasing, preparation, handling, and storage throughout the life stages.

Ecologic Factors (External):

Capture factors operating beyond the individual (e.g., socio-cultural influences, socio-economic status) and their interactions with food decisions and behaviours.

Table 1: Categories and Key Attributes of Food Literacy

<p>FOOD & NUTRITION KNOWLEDGE</p>		<p>FOOD KNOWLEDGE To know the variety of foods within all food groups. To know where food comes from and what is in it. To make an informed decision on food choices including what is available locally.</p> <p>NUTRITION KNOWLEDGE To understand the nutrients in food and how these can affect health and wellbeing.</p> <p>FOOD AND NUTRITION LANGUAGE To understand commonly used words to describe characteristics of nutrition in food (e.g., high fibre, low sodium) and preparation of food (e.g., sauté, fold).</p>
<p>FOOD SKILLS</p>		<p>FOOD SKILLS To be able to prepare meals throughout the life span using basic skills like chopping, measuring, reading recipes, and being food safe.</p>
<p>SELF-EFFICACY & CONFIDENCE</p>		<p>NUTRITION LITERACY To be able to distinguish between credible and false nutrition information. Knowing how to find reliable nutrition information and how to make sense of it (e.g., reading a food label).</p> <p>FOOD AND NUTRITION SELF-EFFICACY To believe in one's ability to apply food and nutrition-related knowledge to make healthy choices in a complex food environment.</p> <p>COOKING SELF-EFFICACY To have confidence in one's ability to use cooking equipment and prepare tasty meals with available food.</p> <p>FOOD ATTITUDE To understand one's attitude towards food and trying new foods. Having the desire to choose and prepare healthy and safe food to enjoy at all times.</p>
<p>ECOLOGIC FACTORS (External)</p>		<p>FOOD AND OTHER SYSTEMS To have an understanding of how the broader food system and society as a whole impacts an individual's decisions about food and how an individual's food choices impacts the broader food system (e.g., buying local food and the impact on the local farms or food industry).</p> <p>SOCIAL DETERMINANTS OF HEALTH To understand the social and environmental conditions (e.g., inadequate income and education) that can result in inequities in health status (e.g., adequate income) which can impact the capacity to make decisions about food and cooking.</p>
<p>FOOD DECISIONS</p>		<p>DIETARY BEHAVIOUR To be able to apply knowledge and skills to make healthy food choices.</p>

Table 2: How Food Literacy Aligns with a Policy Framework for Public Health Programs and Services

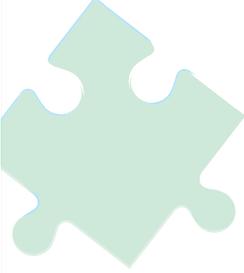
GOAL	To Improve and Protect the Health and Well-being of the Population of Ontario and Reduce Health Inequities			
DOMAINS	Social Determinants of Health	Healthy Behaviours	Healthy Communities	Population Health Assessment
OBJECTIVES	To reduce the negative impacts of social determinants that contribute to health inequities	To increase knowledge and opportunities that lead to healthy behaviours	To increase policies and practices to create safe, supportive and healthy environments	To increase the use of population health information to guide the planning and delivery of programs and services in an integrated health system
FOOD LITERACY CATEGORY	<ul style="list-style-type: none"> • Ecologic Factors (External) <ul style="list-style-type: none"> - Social Determinants of Health 	<ul style="list-style-type: none"> • Food and Nutrition Knowledge • Food Skills • Self-Efficacy and Confidence • Food Decisions 	<ul style="list-style-type: none"> • Ecologic Factors (External) <ul style="list-style-type: none"> - Food and Other Systems 	<ul style="list-style-type: none"> • Food and Nutrition Knowledge • Food Skills • Self-Efficacy and Confidence • Food Decisions • Ecologic Factors (external)
PROGRAMS AND SERVICES	GOALS Associated with Food Literacy			
	<ul style="list-style-type: none"> • To increase the use of public health knowledge and expertise in the planning and delivery of programs and services within an integrated health system • To reduce health inequities with equity focused public health practice • To increase the use of current and emerging evidence to support effective public health practice • To improve behaviours, environments, and policies that promote health and well-being • To improve growth and development for infants, children, and adolescents 			
PROGRAMS AND SERVICES ADDRESSING FOOD LITERACY	Five Program Standards: <ul style="list-style-type: none"> • Chronic Disease and Injury Prevention, Wellness and Substance Misuse • Food Safety • Healthy Environments • Healthy Growth & Development • School Health 		Three Foundational Standards: <ul style="list-style-type: none"> • Population Health Assessment • Health Equity • Effective Public Health Practice 	
	Potential Measurable Outcomes of Food Literacy (Desjardins et al, 2013⁽⁹⁾)			
<ul style="list-style-type: none"> • Increased preparation of healthier and safe meals • Increased likelihood of consuming a healthier diet • Feeling better, physically and mentally • Increased connectedness to others with respect to food and eating • Feelings of satisfaction in preparing food for oneself and others • Increased knowledge, food skills, and self-efficacy for culinary job opportunities; and • Improved access to healthy foods attributable to more income 				

Adapted from Ontario Ministry of Health and Long-Term Care "Standards for Public Health Programs and Services Consultation Document", February 17, 2017 (page 5).

FOOD LITERACY AND PUBLIC HEALTH PRACTICE

The goal of the recommendations below (Table 3), is to use the food literacy framework as an evidence-informed approach for public health programs, services, and policies that address healthy eating. All the recommendations contribute to a culture of quality and continuous improvement to public health.

Table 3: A Call to Action for Healthy Eating Recommendations, Rationale and Public Health Actions

<p>RECOMMENDATION #1: Support and adopt the research findings.</p>	
<p>SPHPS ⁽¹⁾</p>	<ul style="list-style-type: none"> • Foundational: Effective Public Health Practice (EPHP)
<p>RATIONALE</p> 	<ul style="list-style-type: none"> • Ensures all programs and services are informed by evidence (EPHP, Requirement 5).
	<ul style="list-style-type: none"> • Fosters knowledge exchange on current food literacy research that may contribute to improved dietary behavior and population health through evidence informed practice (EPHP, Requirement 6).
	<ul style="list-style-type: none"> • Contributes to a consistent language and understanding of food literacy (EPHP, Requirement 9) - to establish the groundwork prior to the completion of a food literacy measurement tool; and to increase the generalizability of findings for future evaluation efforts.
<p>ACTION</p>	<ul style="list-style-type: none"> • Communicate the comprehensive food literacy definition and its 11 attributes broadly with relevant public health staff and community partners. • Advocate and champion a change in the language used to describe “food skills” programming to that of “food literacy” programming.
<p>RECOMMENDATION #2: Use food literacy as a comprehensive framework to identify attributes addressed in current and new programs, services, or policy when planning, implementing and evaluating healthy eating initiatives in public health.</p>	
<p>SPHPS</p>	<p>Foundational: Effective Public Health Practice (EPHP); Health Equity (HE) Program: Chronic Disease and Injury Prevention, Wellness and Substance Misuse (CD), Food Safety (FS), Healthy Growth and Development (HGD)</p>
<p>RATIONALE</p> 	<ul style="list-style-type: none"> • Supports the use of a systematic process when planning, implementing and evaluating public health programs (EPHP, Requirement 1 & 3; CD, Requirement 2).
	<ul style="list-style-type: none"> • Improves the implementation and potential effectiveness of programs by assessing gaps and/or enhancements (EPHP, Requirement 2 & 3).
	<ul style="list-style-type: none"> • Assists alignment with the needs of specific priority populations (i.e., youth and young females with children) assessed by previous research (Desjardins et. al., 2013) ⁽⁹⁾ (HE, Requirement 1 & 2; CD, Requirement 2; HGD, Requirement 2d).
	<ul style="list-style-type: none"> • Supports individuals and families with increased knowledge about healthy eating and food safety, food skills and access to external resources related to healthy growth and development to effectively manage the different life stages and their transitions (HGD Program Outcome and Requirement 2; FS, Requirement 4).

⁽¹⁾ Standards for Public Health Programs and Services (SPHPS)

RECOMMENDATION #2:

Continued

ACTION



- Review current public health and community healthy eating programs through the lens of a comprehensive food literacy framework to identify gaps and opportunities for improvements. If public health programs or policies are not reflective of all food literacy attributes, consider feasible changes or enhancements.
- Consider other programs and services in your organization that address any of the attributes of food literacy (e.g., social determinants of health, healthy environments, etc.) and engage with relevant public health staff and community partners to ensure a comprehensive approach and to promote consistency.

RECOMMENDATION #3:

Use the comprehensive food literacy framework to implement healthy eating programs in schools.

SPHPS

Foundational: Effective Public Health Practice (EPHP)
Program: School Health (SH)

RATIONALE

- Contributes to the health of children and youth (SH, Requirement 3, 5; EPHP, Requirement 5).

ACTION

- See recommendation #2. Engage with public health staff working in school health, school boards and schools.

RECOMMENDATION #4:

Support the development and testing of a tool for measuring food literacy.

SPHPS

Foundational: Population Health Assessment (PHA); Effective Public Health Practice (EPHP);
Program: Chronic Disease and Injury Prevention, Wellness and Substance Misuse (CD),
School Health (SH)

RATIONALE



- Provides a means to understand the relevance of food literacy to diet and health (PHA, Requirement 3).
- Supports research efforts to address a gap in the availability of evaluated measurement tools ^(1, 2, 9, 23, 24) (EPHP, Requirement 7 & 8; CD 2b; SH 2b).
- Supports public health research activities in collaboration with other public health units and provincial organizations; and fosters relationships with academic partners and PHO (EPHP, Requirement 7 & 8).

Allows public health practitioners to:

- Identify gaps in programs and services;
- Identify, assess, and monitor food literacy needs in local populations;
- Tailor, target, and evaluate comprehensive food literacy programs;
- Engage in advocacy efforts and appropriately allocate resources; and,
- Advance knowledge and measure food literacy locally;
(PHA, Requirement 3, 5; EPHP, Requirements 2-5; CD 2b, SH 2b).

ACTION

- Provide in-kind contribution of staff time to advise the work on tool development, partake in knowledge exchange opportunities and participate in training opportunities for adopting the tool in practice.

RECOMMENDATION #5:

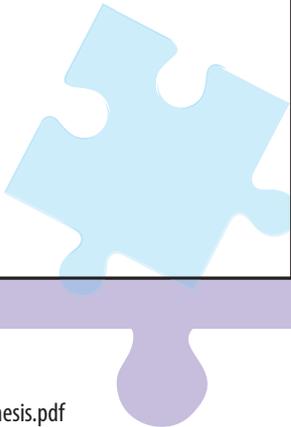
Work with community partners to rebrand and promote relevant community-based food programs (e.g., community gardens, community kitchens, Good Food Box) as 'food literacy programs' rather than programs that address household food insecurity or food security.

SPHPS	Foundational: Effective Public Health Practice (EPHP)
RATIONALE	<ul style="list-style-type: none">• Clarifies misconceptions and minimizes confusion about the impact of community-based food programs on income levels and ensures all programs and services are informed by evidence (EPHP, Requirement 5). <p>Although these types of programs may help to improve food access, food knowledge, cooking self-efficacy, and dietary behaviour (key attributes of food literacy) evidence shows that they do not address/improve household food insecurity (i.e., income).^(27, 28)</p>
ACTION	<ul style="list-style-type: none">• Develop and implement a knowledge exchange plan to share food literacy research with community partners (EPHP, Requirement 6).
	<ul style="list-style-type: none">• Support the Ontario Society of Nutrition Professionals in Public Health (OSNPPH) Position Statement on Responses to Food Insecurity.⁽²⁸⁾



Appendix A: Examples of Food Literacy in Action within the Public Health Context

PROGRAM EXAMPLE	PROGRAM DESCRIPTION	FOOD LITERACY ATTRIBUTES ADDRESSED	WHAT COULD BE STRENGTHENED
<p>Recreation Program</p>	<p>Recreation canteen program with healthier items placed on the menu using pricing and purchasing strategies. Promotional campaign and activities conducted. Web-based nutrition information developed by an RD. Sample of new menu items provided. Sales of healthier food items increased and other recreation centers motivated to start a similar program.</p>	<ul style="list-style-type: none"> • Food Knowledge • Nutrition Knowledge • Food and Nutrition Language (e.g., high fiber, low sodium) • Nutrition Literacy • Food Attitude • Dietary Behaviour <p>How? Promotional and awareness raising activities (e.g., posters, website, point of purchase nutrition information, brochures) and taste-testing.</p>	<p>Food Skills & Cooking Self-Efficacy</p> <ul style="list-style-type: none"> • Recreation settings may be a great space to provide practical, hands-on food skills workshops for children and youth and as part of after school programs and summer camps. <p>Food and Other Systems</p> <ul style="list-style-type: none"> • More awareness about where food comes from and promotion of a sustainable food system. Link with local farmers and have fresh local produce available that is reasonably priced and strategically placed.
<p>Train-the Trainer for Indigenous People</p>	<p>Funding for the Diabetes Prevention Project that focuses on the Aboriginal population and on physical activity and healthy eating. Partnership with many First Nations Reservations and Indigenous Friendship Centres. Partners see benefit of connecting with their clients around food. Community kitchens modules developed and partners trained to host community kitchens in their communities.</p>	<ul style="list-style-type: none"> • Food Knowledge • Nutrition Knowledge • Food and Nutrition Language • Food Skills • Nutrition Literacy • Food & Nutrition Self-Efficacy • Cooking Self-Efficacy • Social Determinants of Health <p>How? Hands-on activities increase food and nutrition knowledge including how to read food labels; hands-on learning in preparing and cooking food and practicing new techniques; information provided on how to create a supportive, positive environment for clients and for sharing food. Grocery gift cards provided for programs.</p>	<p>Food and Other Systems</p> <ul style="list-style-type: none"> • Change in food systems-making healthy and culturally appropriate food accessible. <p>Food Attitude</p> <ul style="list-style-type: none"> • Food attitude cannot change until people feel safe embracing and practicing their culture. <p>Social Determinants of Health</p> <ul style="list-style-type: none"> • Funds cannot be used for infrastructure (staff, kitchen equipment) and other basic needs (e.g., clean water, access to a living wage, mental health supports).
<p>Healthy Babies Healthy Children (HBHC)</p>	<p>HBHC staff recognized their need for resources and training to support their clients who face a range of barriers to food literacy. A policy and procedure (which includes training and resources) were developed which allows staff to tailor food literacy support to their clients needs. This policy aims to enable HBHC clients to become more food</p>	<ul style="list-style-type: none"> • Food Knowledge • Nutrition knowledge • Food Nutrition Language • Food Skills • Nutrition Literacy • Food & Nutrition Self-Efficacy • Cooking Self-Efficacy • Social Determinants of Health <p>How? Staff are trained with hands on cooking, attend a grocery store tour, and use the HBHC Food Literacy Questionnaire with its resources to</p>	<p>Food and Other Systems & Social Determinants of Health</p> <ul style="list-style-type: none"> • Clients have limited funds for transportation to locally grown foods and other foods used in cooking. <p>Cooking Self-Efficacy & Dietary Behaviour</p> <ul style="list-style-type: none"> • Home visitor may not be able to see changes in dietary behaviour and cooking self-efficacy as a result of this

PROGRAM EXAMPLE	PROGRAM DESCRIPTION	FOOD LITERACY ATTRIBUTES ADDRESSED	WHAT COULD BE STRENGTHENED
Healthy Babies Healthy Children (HBHC) <i>(Continued)</i>	literate and improve self-efficacy as a vital life skill.	increase client knowledge. The policy allows for the provision of funds for resources that aid in food skill development such as slow cookers, Basic Shelf Cookbooks, and basic kitchen implements.	program due to capacity issues and an inability to have sufficient follow-up with each client.
Municipality Food Strategy	A multi-year strategy that includes the entire food system to set the direction for resource allocation and decisions for how the municipality and community will address food issues. One of the four goals are to increase food literacy to promote healthy eating and empower residents. Food literacy training is provided to community partners.	<ul style="list-style-type: none"> • Food Knowledge • Nutrition Knowledge • Food Skills • Food and Nutrition Language • Nutrition Literacy • Food & Nutrition Self-Efficacy • Cooking Self-Efficacy • Food and Other Systems • Social Determinants of Health <p>How? Training on Canada's food guide; understanding nutrition labels; food safety; ingredient substitutions; and practical applications of how to lead healthy eating and cooking workshops.</p> <p>Sustainable food system is a goal and linking to local food programs; and all residents are a target, especially youth and low income.</p>	<p>Food and Other Systems</p> <ul style="list-style-type: none"> • Continue efforts to ensure people know the local food system and they make connections with growing, cooking, eating. <p>In General</p> <ul style="list-style-type: none"> • To collaborate more with community partners to ensure all programs in the municipality address food literacy in a fulsome way. 

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