**Food Literacy: A Call to Action**

*“Food Skills” – A requirement for Ontario Public Health Units*

Food skill development and healthy eating practices are requirements for the promotion of health and prevention of chronic disease in the 2008 Ontario Public Health Standards (OPHS) (1). Specifically, health units in Ontario are required to provide opportunities for skill development in the areas of food skills and healthy eating practices for priority populations (1).

In the Ministry of Health Promotion’s Guidance Document: *Healthy Eating, Physical Activity and Healthy Weights* (2), food skills is defined as a “complex, interrelated, person-centred set of skills that are necessary to provide and prepare safe, nutritious, and culturally-acceptable meals for all members of one’s household” (3). This definition was based on Short’s qualitative study with 30 domestic cooks living in England which derived a systematic framework for domestic cooking. According to Short (3), food skills encompass the following five general categories:

- **Knowledge** (nutrition, label reading, food safety, food varieties, ingredients, substitution);
- **Planning** (organizing meals, budgeting, food preparation, teaching food skills to children);
- **Conceptualizing food** (creative thinking about leftovers, adjusting recipes);
- **Mechanical techniques** (preparing meals, chopping/mixing, cooking, following recipes); and,
- **Food perception** (using your senses – texture, taste, when foods are cooked).

**The importance of food skills**

Food skills have been cited in the literature to be important for several reasons with respect to health including knowledge, empowerment, engagement, culture, food security and fun (4-7). There is some evidence that healthy eating, cooking skills, and health are linked (4-7), however, the assumption is often made that increased or enhanced food skills and greater food preparation from raw ingredients can lead to improved health outcomes. To date, there is limited high quality research to demonstrate this direct cause and effect (8). Nutrition education alone is likely not adequate to improve dietary intake, in fact, In 2010, Health Canada reported that “food skills interventions may be a useful starting point for initiating dietary change” (9)

**The decline in food skills or “deskilling”**

In North America, cooking skills are eroding, or at the very least, are in transition. That is, the foods people cook, the food preparation skills they use, and where they cook are influenced by social, economic, and cultural contexts (5, 6, 11), which are constantly changing. The reported decline in food skills in North America (12) could be attributed to several factors including but not limited to: an increase of and normalization of pre-prepared, packaged and convenience foods (9), as well as a high consumption of processed foods (e.g., foods that are packaged and more highly processed than their whole state and as a result are higher in fat, sugar, sodium, and/or preservatives) that are generally associated with poorer health outcomes (13, 14-16).
Eating away from home has replaced cooking in the home as Canadians are reporting eating in restaurants or take-out two to three times weekly (17, 18). In addition, the amount of time spent to prepare meals has been declining significantly since the early 1900s (19, 20) as an eight-fold decrease (from six hours to 45 minutes) has been observed in the average daily time spent on meal preparation (19, 20). Although modern conveniences, such as microwaves ovens, have helped to reduce food preparation times, the predominant change in eating patterns and meal preparation culture can be attributed to other factors. The main influencers of the erosion of food skills include the majority of adults working outside of the home, a general increase in work-week hours, busier lifestyles, and a change in social norms, values, and attitudes (19, 20).

As well, some researchers contend that a decline in domestic food preparation skills has resulted in a “deskilling”, due to a lack of introduction and opportunity to acquire cooking skills from parents, grandparents, or school environments (3, 5, 11, 21). This is supported by the recent research conducted in Ontario with youth and young parents whereby participants who had greater food skills had learned them primarily from parents, grandparents, siblings, or relatives (22). Learning these skills at an earlier age (seven to 12 years of age) was also found to contribute to a greater confidence in food preparation in later years (22). Over half of the participants in a study by Desjardins and colleagues (22) also indicated that the best way for young people to learn food skills if they did not learn at home were cooking classes, both in school and in the community.

Some experts also theorize that other factors such as changes in the physical environment, food system, and types of food available have an impact on perceived food skills (5). A few studies have examined food skills and/or literacy knowledge in the context of local farms and farmers’ markets including how the local food context facilitated the ability to select, prepare, cook, store, and enjoy foods prepared from raw ingredients or from ‘scratch’ (i.e., fresh ingredients that are not pre-packaged or prepared by a food manufacturer) (23, 24, 25).

**From food skills to food literacy**

In the Guidance Document: Healthy Eating, Physical Activity and Healthy Weights (2), the focus of food skills is on skill development and education, yet in reference to the food skills, it does state that “regardless of the definition, all interventions undertaken to build food skills must be in line with the target population’s level of access to healthy foods (2).” While describing cooking skills, Short contends that it is “incorporating more than just practical, technical ability” but rather a complex interrelationship among cooking practices and abilities, skills, approaches to cooking and that cooking equipment plays a role (3). Furthermore, a food skill is multidimensional and demands special attention when applied to unique populations such as youth, low-income, and pregnant or post-partum women (3). Though the term “food literacy” is not used, cooking is referred to as a complex interrelationship between cooking skills and approaches. Reference is being made to a broader context that needs to be considered in this field. Previous literature also cites that there are various personal, social, and economic factors, including attitudes, beliefs, and confidence, that impact food choice and preparation (8).
The information above illustrates two things. First, that there is no explicit or widely agreed upon definition for the concept of “food skills” or an expanded concept like food literacy. Authors in most of the literature prior to 2011 use terms such as “cooking skills” (3, 11) or “culinary skills” (8), and others discuss “food preparation” (3, 13, 26, 27) or “food skills” (2, 9). Secondly, although the term “food literacy” is not used explicitly in the previous cited literature, there is some hint or tendency towards the concept of food literacy because there is the mention of other external or environmental factors (e.g., access to healthy foods, cooking equipment, social and economic factors, confidence, etc.) that impact cooking or food skills at an individual level and that needs to be considered.

The word ‘literacy’ is more than the ability to read or interpret the written word. In the health context, it is being redefined to include a broader set of attributes that enable people to understand, navigate and function within various environments in a health-enhancing way. A systematic review of definitions and models of health literacy found that “enhancing health literacy can allow for great autonomy and empowerment, leading towards greater quality of life” (28). Health literacy builds on the idea that both health and literacy are critical resources for everyday living and that our level of health literacy directly affects our ability to not only to act on health information but also to take more control of our health as individuals, families and communities.

The term “food literacy” has emerged in the literature and from practice based research mostly since 2011 as a relatively new concept. A Locally Driven Collaborative Research Project (LDCP) with eight health units in Ontario was conducted with at-risk youth (teens aged 16 to 19 years, and young parents including pregnant women aged 16 to 25 years) to understand the meanings and practices of food skills (22). The findings generated a definition and a conceptual model of “food literacy” that can inform both policy development and public health as well as school-based and community programming (Figure 1).

The definition of food literacy proposed by the LDCP research team is as follows (22):

- Food literacy is a set of skills and attributes that help people sustain the daily preparation of healthy, tasty, affordable meals for themselves and their families;
- It builds resilience, because it includes food skills (techniques, knowledge and planning ability), the confidence to improvise and problem-solve, and the ability to access and share information; and,
- It requires external support with healthy food access and living conditions, broad learning opportunities, and positive socio-cultural environments.
The aforementioned systematic review on health literacy showed an overlap between health systems and the individual’s food capacity skills (28), suggesting that the broader environment may impact on people’s ability to prepare and cook food. As depicted in the above model, food literacy involves both personal factors such as nutrition knowledge, organizational, and mechanical skills but also broader environmental factors which determine if individuals are able to prepare and cook healthy, safe, affordable tasty food for themselves and others.

These findings are supported by a number of recent studies and papers that have explored the concept of food literacy (24, 25, 29-32). These studies have been geographically dispersed and independent of each other, yet their results, models, and conclusions have overlapped considerably. Some have defined food literacy as more knowledge-based, such as the ability to choose healthier options from retail environments (34), but observations based on interviews with non-industry, community-based groups additionally have recognized the technical, social, and psychological elements of food literacy that are essential to healthy food preparation (24, 32). Other organizations have identified food literacy components like food system awareness, knowledge about growing food, and network-building around
food (35). Overall, the recent research on food literacy supports several personal and environmental dimensions that operate synergistically to promote a culture of healthy eating. A summary of current definitions of food literacy from various groups worldwide are listed in Table 1 (Appendix A).

**Food Literacy: A Call to Action**

As identified here, food skills are part of the broader definition of food literacy and fall within the mandate of Public Health, therefore, it is essential that health units in Ontario respond to this identified need to enhance food literacy for all Ontarians. There is an important role for the **Food Literacy Workgroup** of the **Ontario Society of Nutrition Professionals in Public Health** to support Ontario Public Health units to implement food literacy programs and services in their respective jurisdictions. To achieve this, **Public Health must advocate for:**

- Age-appropriate programs and classes at elementary, alternatives, and high schools, as well as after-school and community programs that enhance food literacy and align with the curriculum topics;
- Programs to be practical, experiential, confidence-building, skill-related, and learning-level-related;
- Adequate funds to cover expenses for equipment, facilities, leaders’ wages, and food;
- Funding for safe, approved kitchens for community use – e.g., in schools universities, community venues, shelters and community food hubs or community food centres;
- Additional and newly developed affordable housing with functional kitchens;
- Affordable public transportation, healthy corner stores, Good Food Box, mobile markets, community gardens; and,
- Living wages and an adequate food allowance for social assistance.

**Public Health can work with partners to:**

- Create/nurture strong social networks to share food skills and use the Youth Engagement Principles to promote peer-led food skill programs;
- Include food literacy as part of resiliency skill building activities in Public Health programs focused on youth;
- Promote eating and cooking together and healthy food prep as a normal life skill for all in school and community food programs;
- Train teachers and food skills facilitators to combine food literacy programs with self-esteem building, body weight acceptance, and referral for counseling if necessary;
- Provide training and support for facilitators re food skills, youth engagement training, sensitivity training (e.g., for teachers, public health Registered Dietitians, public health nurses, Healthy Babies Healthy Children home visitors, peers workers, and community workers);
- Provide Registered Dietitian-led grocery store tours with priority groups;
- Implement the Community Food Advisor program or similar programs across Ontario, targeted specifically to youth;
- Ensure that community programs are offered in rural areas;
- Provide resources that aid food skill development such as slow cookers, Basic Shelf Cookbooks (37), spice kits, grocery hampers with ingredients, “meals in a bag” including kitchen implements;
- Create programs that build job skills, e.g. incubator kitchens, culinary training, food service, catering, food handler courses;
- Assist with establishing free or low cost community kitchen programs; and,
- Help with establishing meal programs at hostels & shelters for youth who are homeless, in transition, upgrading, or finishing high school.

References


32. Topley A. At the table: A case for food literacy coordination. Victoria, BC, Canada: Greater Victoria Food Literacy Working Group; 2013. https://mail.google.com/mail/u/0/?ui=2&ik=14f4dc246b&view=att&th=13fab6fa0b29ac06&attid=0.2&disp=safe&zw.

33. Thomas HM. Planning, implementation, and formative evaluation of a food literacy program. Western University; 2011.


Appendix A: Definitions of food skills and food literacy

<table>
<thead>
<tr>
<th>Source</th>
<th>Definition and components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ontario Ministry of Health Promotion (2010) <em>Healthy Eating, Physical Activity &amp; Healthy Weights Guidance Document</em> (Short, F., 2003a and Vanderkooy, 2009)</td>
<td><strong>Food Skills</strong>: <em>Knowledge</em> (nutrition, label reading, food safety, food varieties, ingredients, substitution); <em>Planning</em> (organizing meals, budgeting, food preparation, teaching food skills to children); <em>Conceptualizing food</em> (creative thinking about leftovers, adjusting recipes); <em>Mechanical techniques</em> (preparing meals, chopping/mixing, cooking, following recipes); <em>Food perception</em> (using your senses – texture, taste, when foods are cooked).</td>
</tr>
<tr>
<td>Short, F. (2006) <em>Kitchen Secrets: The Meaning of Cooking in Everyday Life</em> (Berg, Oxford)</td>
<td>The types of skills involved in today’s cooking are mechanical, technical, perceptual, conceptual, organizational and academic. “Rather than our technical skills, it is our approach to cooking that influences what and how we cook”, i.e. “the attitudes and beliefs about cooking that we share with others, our personal identifications as people who cook and our confidence in cooking and the degree to which we find it an effort, arising in part from our tacit, unseen skills and academic knowledge.”</td>
</tr>
<tr>
<td>City of Hamilton Expert Panel – Delphi process</td>
<td><strong>Food skills</strong> comprise: 1. <em>Food and nutrition knowledge</em>: Canada’s Food Guide, label reading, nutrient-rich healthy choices, where food comes from; 2. <em>Planning</em>: Meal planning, budgeting, grocery list, meal organization per family size; 3. <em>Preparation including mechanical and cooking techniques</em>: Cutting, washing, measuring, cooking, following recipes, use of leftovers, time management, safe knife practices, use of utensils, ingredient substitution, cooking times; 4. <em>Food safety and storage</em>: cross contamination, shelf life, expiry dates, sanitizing measures, safe cooking and storage temperatures, waste management; 5. <em>Self-Efficacy</em>: Confidence in the kitchen, recognizing areas of improvement/skill enhancement opportunities, how to seek assistance, ability to teach cooking skills, food perceptions.</td>
</tr>
<tr>
<td>Vanderkooy (April 2011) TOPHC conference presentation</td>
<td><strong>Food skills</strong>: “A complex, interrelated, person-centred set of skills necessary to provide and prepare safe, nutritious, culturally acceptable meals for all members of one’s household”.</td>
</tr>
<tr>
<td>Vidgen &amp; Gallegos (2011) <em>What is Food Literacy and Does It influence What We Eat: A Study of Australian Experts</em></td>
<td><strong>Food literacy</strong>: “the relative ability to basically understand the nature of food and how it is important to you, and how able you are to gain information about food, process it, analyse it and act upon it”</td>
</tr>
<tr>
<td>Vidgen &amp; Gallegos (2012) <em>Defining Food Literacy, Its Components, Development and Relationship to Food Intake: A Case Study of Young</em></td>
<td><strong>Food literacy</strong>: “A collection of inter-related knowledge, skills and behaviours required to plan, manage, select, prepare and eat foods to meet needs and determine food intake.” “<strong>Food literacy</strong> is the scaffolding that empowers individuals,”</td>
</tr>
</tbody>
</table>
## Appendix A: Definitions of food skills and food literacy

<table>
<thead>
<tr>
<th>Source</th>
<th>Definition and components</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>People and Disadvantage (Australia)</em></td>
<td>households, communities or nations to protect diet quality through change and support dietary resilience over time”.</td>
</tr>
<tr>
<td>Sustain Ontario Backgrounder (2012), 4 pages</td>
<td><strong>Food literacy</strong> means &quot;understanding where food comes from, the impacts of food on health, the environment and the economy, and how to grow, prepare, and prefer healthy, safe and nutritious food&quot;. It is &quot;a valuable tool in reducing the incidence of childhood obesity and other diet-related illnesses in their future&quot;.</td>
</tr>
<tr>
<td>Topley,A. (2013) <em>At the Table: A Case for Food Literacy Coordination</em>, Victoria, BC,36 pages</td>
<td>The term ‘<strong>Food Literacy</strong>’ captures 3 ideas: 1. <strong>Food Confidence</strong> -- an individual’s knowledge, skills, ability and belief to be food self-reliant; 2. <strong>Food Savvy</strong> -- the applicability and importance of food from personal, community and environmental perspectives; 3. <strong>Food Connections</strong> -- the appreciation that food serves social, community and cultural needs.</td>
</tr>
<tr>
<td>European Commission <a href="http://www.food-literacy.org">www.food-literacy.org</a></td>
<td><strong>Food Literacy</strong> is the ability to organize one’s everyday nutrition in a self-determined, responsible and enjoyable way.</td>
</tr>
</tbody>
</table>
### Appendix B: Recommended Interventions & Supports for the Health Unit Level

<table>
<thead>
<tr>
<th>Determinant Area 1</th>
<th>Barriers to Food Literacy</th>
<th>Interventions/supports to overcome challenges to food literacy</th>
</tr>
</thead>
</table>
| **Social and psychological environment** | Social isolation  
Lack of role models for healthy food preparation  
Weight concerns, depression, stress, lack of self-esteem | • Promote strong social networks to share food skills  
• Use the *Youth Engagement Principle* to promote peer-led food skill programs (e.g. cooking, gardening)  
• Include food literacy as part of resiliency skill building activities in Public Health programs focused on youth  
• In school and community food programs, promote eating and cooking together and healthy food prep as a normal life skill for all  
• Train teachers and food skills facilitators to combine food literacy programs with self-esteem building, body weight acceptance, and referral to counseling if necessary. |
| **Determinant Area 2** | **Barriers to Food Literacy**  
Low literacy, numeracy  
Food classes are absent, are poorly taught, or are not geared to needs or interests | • Advocate for programs and classes (at school and in the community) that  
  • enhance food literacy  
  • are practical, experiential, confidence-building, skill-related, learning-level-related.  
  • align with curriculum topics  
• Provide training and support for facilitators re food skills, youth engagement training, sensitivity training (e.g. for teachers, PH RDs, PHNs, HBHC home visitors, peers, community workers)  
• Provide Registered Dietitian-led grocery store tours with priority groups  
• Implement the *Community Food Advisor* program across Ontario  
• Ensure that community programs are offered in rural areas. |
| **Determinant Area 3** | **Barriers to Food Skills**  
Poor housing with limited cooking and food storage facilities  
Lack of implements & ingredients for | **Engage with community partners to:**  
• advocate for funding for kitchens for community use – e.g. in schools, universities, community venues, shelters, and community food hubs or centres  
• provide resources that aid food skill development such as: |

---

Food Literacy: A Call to Action (July 15, 2015)  
Page 11
<table>
<thead>
<tr>
<th>Determinant Area 4</th>
<th>Barriers to food skills</th>
<th>Interventions/supports to overcome challenges to food literacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living conditions</td>
<td>Low income, unemployment, household food insecurity</td>
<td><strong>Work with community partners to:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• create programs that build job skills, e.g. incubator kitchens, culinary training, food service, catering, food handler courses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• establish free or low cost community kitchen programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• establish meal programs at hostels &amp; shelters for youth who are homeless, in transition, or upgrading or finishing high school</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• advocate for living wages for people and adequate food allowance for social assistance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• provide vouchers to buy food at farmers markets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• promote school and community gardens</td>
</tr>
</tbody>
</table>

Poor access to healthy food

- slow cookers
- Basic Shelf Cookbooks
- spice kits
- grocery hampers with basic shelf ingredients
- “meals in a bag” including kitchen implements
- advocate for more affordable housing with functional kitchens
- advocate for affordable public transportation, healthy corner stores, Good Food Box, mobile markets
- Promote school and community gardens

Food literacy: A Call to Action (July 15, 2015)