



“MAKING SOMETHING OUT OF NOTHING”

FOOD LITERACY AMONG YOUTH, YOUNG PREGNANT WOMEN AND YOUNG PARENTS WHO ARE AT RISK FOR POOR HEALTH

A LOCALLY DRIVEN COLLABORATIVE PROJECT FUNDED BY PUBLIC HEALTH ONTARIO, 2013 TECHNICAL REPORT

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This technical report, as well as a four-page summary document, is available at
<http://www.osnpvh.on.ca/resources/index.php>

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EXECUTIVE SUMMARY

BACKGROUND

Food deskilling in the general population has been identified as an impediment to healthy eating, in great part because it has generated reliance on convenience foods that are high in saturated fat, salt and sugar, and because it has added strain to limited food budgets. There is concern that lack of opportunities to develop food skills and prepare healthy food has put some population groups at higher dietary risk. This concern is coupled with the awareness, among health professionals and community workers, that designing effective programs to reach these “at-risk” groups and support successful change requires more knowledge about what they do and how they currently think about food preparation – as well as what they want to learn.



PURPOSE

This Locally Driven Collaborative Research Project (LDCP), representing eight health units in Ontario, identified two target groups with highest priority, namely teens aged 16 to 19 years, and young parents and pregnant women aged 16 to 25 years, each group having at least one social determinant of health risk factor. For these groups, this project aimed to (1) explore the meanings of food skills and develop a working definition; (2) identify the barriers and facilitators to food skills acquisition and practice; and (3) use the findings to inform programs and policies that could improve healthy food preparation among young people at risk for poor health.

METHODS

In the fall of 2012, 85 individual interviews were conducted at five different public health units that reflected north/south and rural/urban differences in Ontario. An ethnographic, one-on-one interview approach was used to elicit food skills experience, meanings, challenges and strategies from the perspective of participants. Interviews were professionally transcribed, and qualitative analysis was done based on Grounded Theory, using NVivo10 software. In all stages of data collection and analysis, the research team worked collaboratively.

RESULTS

This study utilized a strength-based (or assets-based) approach. Analysis showed that food skills meanings and practices among the young people in our study encompassed not only technical ability and knowledge for preparing food, but also the mental health components of confidence, social connectedness and resilience. This led to the definition of a broader concept of food literacy pertaining to these subgroups, building on other recent work in this area. Two conceptual models were generated from these data, illustrating the personal dimensions and the external determinants of food literacy. The research findings also informed the development of food skill categories for assessment and evaluation, based on the practices and food meanings of young people.

Food literacy was defined as a set of skills and attributes that help people sustain the daily preparation of healthy, tasty, affordable meals for themselves and their families. Food literacy 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. Food literacy is made possible through external support with healthy food access and living conditions, broad learning opportunities, and positive socio-cultural environments.

KEY FINDINGS

1. Opportunities for change

There was a broad range of food skills among teens at risk and young parents, both male and female,

and these skills evolved over time. Youth grow up in a food environment that normalizes and promotes highly processed food, and they learn to judge and navigate this environment as they become more independent, especially when they move to places where they pay for and prepare their own food in circumstances of limited income, and when they become parents themselves. They are motivated to become more food literate because of:

- cost – when they realize they cannot afford to eat out and buy pre-prepared meals on a limited income;
- taste – when they become bored with lack of variety and want to experiment;
- personal health – when they link a steady diet of processed foods with weight gain, risk during pregnancy, lethargy or onset of diabetes or other conditions;
- child health – when new parents realize a sense of responsibility for their child's welfare;
- feelings of independence and control in uncertain circumstances; and
- the pleasure of creativity and cooking for and with others, when the opportunity arises.

2. Ways of learning

The majority of young people in this study said that food preparation is an important life skill for everyone. We learned from them that:

- direct experiential learning through family and relatives, including grandparents, was the most-common way of learning. Many young parents were engaged in passing skills to their children;
- school is an important place to learn these skills, but classes need to go beyond theory and include shopping for healthy food and preparing basic foods at home with limited resources;
- community cooking programs were considered very helpful, especially for people who were more motivated to learn food skills when they were living independently or entering parenthood;
- culinary programs leading to job opportunities were welcomed by those who had access to them;
- the internet was not a useful substitute for inter-personal teaching of food preparation skills;
- recipes were not a helpful learning method for novices in the kitchen, but were most useful for

those who already had experience with food preparation as well as facility with math and reading.

3. Determinants of healthy food preparation

The majority of young people in this study had the skills to prepare meals at a moderate or advanced level, as defined in this study. However, what they knew how to make and what they actually prepared on a daily basis depended upon psycho-social, environmental and financial circumstances or determinants. For example:

- Stress, poor body image, depression or loneliness may deter home food preparation.
- Youth who acquired cooking skills at home or in a setting where others bought the food might still struggle with budgeting, planning and shopping for food when they live independently.
- Without money for food ingredients or access to an adequate kitchen, food skills cannot be applied.

4. Building resilience



...by improvising

Improvisation with ingredients in the kitchen was commonly mentioned as a highly valuable skill, involving flexibility, adaptability and creativity in working with existing resources, thereby enhancing resilience. Slow cookers and blenders facilitated improvisation.

...by developing an array of strategies

The majority of young people in this study said that food preparation from basic ingredients saved

them money. They articulated a number of personal strategies for managing on a limited income, including skills for food planning, shopping, storage and preparation. Building social networks was a common way to share knowledge and experience among peers.

5. Knowledge of food and nutrition

Among the majority of interviewees, there was a general understanding that “boxed foods” and fast foods are “not healthy” and that cooking with basic ingredients is better. Most knew that vegetables are healthy, and young parents usually prepared them for their children although they often avoided vegetables themselves. Reading food or nutrition labels was not common practice. Whole grains were not mentioned by anyone; but high cholesterol, fat, salt and sugar content was frequently given as a reason not to eat fast food in excess. Most participants said that they tried to prepare healthier foods some or most of the time, but that boxed convenience foods were usually an acceptable part of their diet as well. Food knowledge also included the skills needed for hunting and fishing, skills which some of the Aboriginal youth in our study told us most of their friends did not have.



RECOMMENDATIONS

Context: The ability to develop and act on food literacy is influenced by four external, environmental determinants that emerged from this study (listed below). Conversely, the absence or inadequacy of any of these determinant conditions can translate into barriers to food literacy. The recommendations in this study are organized according to these determinant areas; they provide strategies to

alleviate barriers to food literacy and enhance resilience in young people.

1. Social and psychological environment.

Barriers included: social isolation, lack of role models for healthy food preparation, weight concerns, depression, stress, lack of self-esteem

2. Learning environment.

Barriers included: low literacy and numeracy, food classes are absent, are poorly taught, or are not geared to needs or interests

3. Food, food preparation facilities and food environment.

Barriers included: poor housing with limited cooking and food storage facilities; lack of utensils and ingredients for home cooking; and poor access to healthy food

4. Living conditions.

Barriers included: low income, unemployment, household food insecurity

Food literacy must be recognized as an essential life skill. Recommended interventions and supports to overcome challenges to acquiring food literacy include the following:

- Ensure that food literacy opportunities (individual and group programs) are practical, experiential (hands-on), confidence-building, and appropriate to individual skills and learning-levels.
- Support social networks and peer-led programs that enhance all aspects of food literacy.
- Support food literacy development opportunities in schools (elementary, secondary, and alternative schools), including incorporation into curriculum, before and after school programs, adequate kitchen facilities, and community use of those facilities (e.g. schools as hubs).
- Utilize opportunities to enhance food literacy in new and existing community and public health programs. Building strong community partnerships and utilizing community resources.
- Provide adequate training and support for all teachers, food skills facilitators and workers who provide food skills (e.g., public health RDs, PHNS, HBHC home visitors, peers, etc.).
- Advocate for adequate facilities, equipment and associated funding, to provide resources that aid

in adopting newly learned food skills for those living on a low income.

- Create environments supportive of safe preparation of healthy foods and/or bringing home-made foods from home (e.g., refrigeration, microwave, sink, and other equipment/facilities).
- Support strategies to reduce poverty and food insecurity; advocate for adequate living wages, food allowance for social assistance, universal and emergency programs and supports.

The above recommendations are universal, but programs, services and policies should be tailored to each community's assets, barriers and inequities. Special attention should be paid to sufficient programs in rural areas, and affordable public transportation is key for accessibility of services. Community partnerships are an effective way to access kitchen facilities for programs and for outreach to groups at higher risk. Adequate funding is necessary to ensure free or low cost programs, support for training and compensation for facilitators. For cooking programs, teens and young parents can be recruited as effective peer leaders and mentors. Public health units play a key role in building community capacity for food literacy programs and partnerships.

Robust and relevant assessment tools are needed to determine the food preparation abilities and needs of young people, and to tailor the content of programs accordingly. One such tool is the *food skill levels* that emerged from this study, a tool which needs to be refined and validated.

CONCLUSION

This study provides an analysis of rich qualitative data about the food skills and meanings of teens at risk and young families and pregnant women in Ontario. Insights from the themes, narrative excerpts, conceptual frameworks, definitions, and a new method for assessing food skill levels can collectively inform both policy development and public health, school-based and community programming. The recommendations made in this study, if implemented, have the potential to improve nutritional and mental health in the groups studied. This study also demonstrates the value of collaborative research among public health units and community programs throughout the province.



INTRODUCTION

INTRODUCTION

Study Context, Objectives and Scope

“It’s a human necessity to eat, so if you learn how to make stuff from basically nothing, like just make it from different stuff that you have around the house, then you have something to eat.”

-Steve, age 18, Lindsay, ON

“I normally make something out of nothing, pretty much. If I have a piece of chicken in the freezer and I have a thing of pasta in the cupboard then it will be a chicken pasta or sometimes we’ll just leave out the vegetables and just have whatever we can find. I just make something new with what I have.”

-Melissa, age 21, Sudbury, ON

For most people, a key difference between being in control of what they eat or being dependent upon whatever ready-made food is accessible to them resides in their ability to prepare food at home. Yet, the importance of cooking skills has gradually diminished from what was once considered an important household skill to one of lesser significance due to the ubiquity and marketing of industrially-processed convenience food.

Food deskilling has reached a point where it is commonly assumed that the younger generation no longer knows how to manage in a kitchen.

What is the actual experience of young people with buying and preparing food, and their perceived value of food and food skills? What do they want to learn and how? This study aimed to shed light on these questions in a way that would effectively inform public health and community practitioners, policy makers and teachers interested in improving the diet and health of young people.

CONTEXT OF THIS STUDY

The context in which this study was initiated is three-pronged: first, a knowledge gap about existing food skills and meanings in response to a changing food environment; secondly, the requirement in the Ontario Public Health Standards (OPHS) to address food skills for healthy eating; and finally—to address both the knowledge gap and the OPHS requirement—a funded research opportunity in the form of a Locally Driven Collaborative Project (LDCP).

The food environment, food skills, dietary behaviour and health

Over the past six decades, the food environment in North America has changed significantly in terms of food retail size, its distribution in the community and the type of food available. In general, large-scale retail stores have become the dominant locations for food shopping, fast food franchises are widespread, and the majority of food and food ingredients are globally sourced as well as processed to various degrees. The increased industrialization of the food system has resulted in an abundant supply of relatively low cost foods, especially those based on mass-produced ingredients like corn, soy, wheat and cheese, and shelf life-enhancing processes like the hydrogenation of fats, salt-curing of meats and removal of the germ and bran from flour and rice (Winson, 2013). As well, the use of high fructose corn syrup in low cost soft drinks and many other foods has led to its widespread consumption and habituation to a high degree of sweetness. The hallmarks of these processed foods are low cost, convenience and taste dominated by fat, sodium and sugar; they have increasingly replaced home-prepared foods, fresh produce and milk as a beverage in the diet (Garriguet, 2007).

Diets of Canadians have changed concurrently, reflecting the higher amounts of fat, sugar and sodium that are provided in convenience foods, and a lower intake of fruit, vegetables and whole grains than what is recommended by *Canada’s Food Guide* (Garriguet, 2009). Eating behaviours have changed as well, in that Canadians tend to eat away from home more often than in the past,

consume high amounts of processed food and tend to eat together less often (Engler-Stringer, 2010b). In Canada, meals from fast-food restaurants account for about two thirds of out-of-home meals (NPD Group, 2013). There is now an indisputable link between this trend and the rising prevalence of diet-related chronic diseases and conditions, especially obesity, heart disease and type II diabetes (Langlois et al., 2009; Canadian Population Health Institute 2005). Although food banks have proliferated since the mid-1980s, food insecurity¹ persists in Canada (Tarasuk, 2013).

In terms of food preparation, the same time period has seen a “culinary transition”, or gradual trend of food “deskilling” among the population (Smith.L.P. et al., 2013; Lang & Caraher, 2001; Engler-Stringer, 2010a; Jaffe & Gertler, 2006; Larson et al. 2006). This culinary transition involved new ways of preparing food, made possible by microwave ovens, frozen pre-prepared foods and packaged mixes. While food skills were previously taught at school (mostly for girls), home economics and culinary skills have been curtailed in the Ontario school curriculum over the past three decades. A recent international report (FAO, 2013) shows a high prevalence of obesity in many countries in both the global north and south; it linked this trend to the gradual rejection of traditional diets in response to the “increased availability of highly processed packaged goods”. Conversely, there is some evidence that improved food preparation skills are related to improved diet quality (Brown & Hermann, 2005; Larson et al. 2006; McLaughlin et al., 2003; Meehan et al., 2008; Wrieden et al., 2007; Smith,K.J. et al., 2010; Hartmann et al. 2013), mostly due to the greater use of vegetables and minimally-processed ingredients.

A dearth of food skills is then arguably a factor in the connections between the supply of processed foods, dietary behaviour and health, since it can lead to dependence upon pre-prepared food. A gap in knowledge is the meanings, practice and nature of food skills, especially among population groups living in at-risk circumstances. In a review of the research about cooking skills and health, Engler-Stringer (2010:144) noted that “significant

limitations in understanding add to the difficulty of planning interventions and making suggestions for policy changes that might improve the health of populations”. Several others have also emphasized the urgency of conducting research in this area to identify effective strategies for encouraging the preparation of healthy meals (Chenhall, 2012; Daniels et al., 2012; Larson et al., 2006; Rose, 2007; Scholderer & Grunert, 2005; Short, 2003a;Ternier, 2010; Laska et al., 2012; Simmons & Chapman, 2011). More detail on the questions these authors posed for further research is listed in Appendix B.



Ontario Public Health Standards (OPHS) for Chronic Disease Prevention

The Ontario Ministry of Health and Long-Term Care, in the *Ontario Public Health Standards* (2008) mandates under the Chronic Disease and Injury Prevention Program Standard, requirement #8, that “The board of health shall provide opportunities for skill development in the areas of food skills and healthy eating practices for priority populations”. It adds that “this may include pregnant and postpartum women, individuals of low socio-economic status and youth.”²

Locally Driven Collaborative Projects (LDCP)

The LDCP is a new program model launched in January 2011 to support applied research and program evaluation, education and professional development, and knowledge exchange for public health. It directs provincial funds through *Public*

¹ See glossary, Appendix A for Community Food Security

² http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/ophs_2008.pdf (page 20)

Health Ontario to help health units meet the OPHS. As the name implies, collaboration among Ontario public health units is key for these projects, so that the findings can be applicable across the province.

OBJECTIVES OF THIS STUDY

This LDCP on food skills (2012-2014) was proposed by registered dietitians and other health professionals from eight Ontario public health units in 2011, within the context described above. This team, having conducted a thorough literature review, noted the gaps in knowledge about the meanings of food skills in specific population groups, as well as programs or strategies that would be effective with these groups. They noted from the literature that the development of food skills is multidimensional and demands special attention when applied to unique populations such as youth, low-income, and pregnant or post-partum women (Short, 2003a), and that more research is needed in this area.

The LDCP Food Skills project was funded in 2012 to address the following objectives:

1. to identify two priority populations for food skills research by conducting a literature review and consulting health units;
2. to explore the meaning of food skills and develop a definition of food skills;
3. to identify the barriers and facilitators to food skills acquisition and practice from the perspective of the two priority populations; and
4. to disseminate findings of the study to health units across Ontario for their use in local planning of opportunities for food skills development.

To meet the first objective, a second literature review and key informant survey was carried out in 2012.³ As a result, the following two priority groups were identified for the study: adolescents age 16 to 19 years; and pregnant women and parents age 16 to 25 years who have at least one social determinants of health (SDOH) risk factor that increased the risk for poor health outcomes. Throughout this report, the priority groups are referred to as youth at risk. For definitions of SDOH and youth at risk, see the glossary, Appendix A (page 82).

To meet the second and third objectives, the following research questions were posed:

- What are the meanings and dimensions of food and food skills among these two groups?
- What types of foods can they prepare and what do they commonly prepare?
- How are they learning about food skills? What do they want to learn?
- What strategies do they practice that promote resilience in the face of food insecurity and other challenges?
- What challenges are they facing in acquiring and practicing food skills?
- What types of supports would facilitate the acquisition and practice of healthy food skills?

To meet the fourth objective, this research will be disseminated through conference presentations, communication briefs, webinars and journal publications.

SCOPE OF THIS STUDY: FOOD SKILLS AND FOOD LITERACY

As this study progressed, it became evident that a lack of food skills becomes an impediment to healthy eating because it:

- encourages consumption of highly-processed convenience foods;
- adds strain to limited food budgets;
- reduces personal creativity and control over daily meals;
- reduces adaptability to changing circumstances; and
- inhibits awareness of the ingredients in foods and consequently their health value.

These consequences suggest a broader set of outcomes than missing the technical capacity to create home-made meals. As a result, the concept of “food literacy” was increasingly explored, since it embraces the related attributes of confidence, self-efficacy and resilience that are associated with the ability to access and prepare healthy, satisfying meals -- as well as the ability to manage a limited income and deal with life challenges as they inevitably arise. Thus, taking into account the expanded range of meanings of food skills that we

³ Summary Report: Identifying Priority Populations for the LDCP on Food Skills (2012) is posted at <http://www.osnpnh.on.ca/resources/index.php>

heard through our interviews, our study broadened its scope to develop models and recommendations that focused on food literacy.

In recent years, a number of studies and papers have explored the broader construct of food literacy (Vigden & Gallegos, 2011; Vigden & Gallegos, 2012; Thomas, 2011; Topley, 2013; Pendergast & Dewhurst 2012; Rawl et al. 2008; Smith, M.G. et al., 2009; Vileisis, 2007). These studies have been geographically dispersed and fairly independent of each other, yet their results, models and conclusions have overlapped significantly. Observations based on direct interactions or interviews have acknowledged the technical and cognitive aspects of food skills, but also the qualities of connectedness, confidence, enjoyment and motivation. These elements have been depicted in models either as part of the definition of food literacy, or as mediators between food literacy and a healthy diet (Vigden & Gallegos 2012; Short 2006a; Topley 2013). The variety and overlap of definitions of food skills and food literacy are listed for comparison in Table 1, page 14.

The concept of food literacy has emerged from the earlier use of the term health literacy. Nutbeam (2000) identified various stages of health literacy, ranging from basic everyday function to the application of social, personal and cognitive skills towards further individual empowerment over one's health. Thus, the meaning of literacy was broadened to both a skill and an enabler. This meaning was also accepted by the International Federation for Home Economics, that identified three components of health and food literacy as functional, interactive and empowering or transformational (Pendergast & Dewhurst, 2012). More recent work by Nutbeam (2008) conceptualized health literacy as a key component of health promotion focused on the development of skills and capacities that enable people to exert greater control over their health and the range of personal, social and environmental determinants of health. The World Health Organization (WHO) has similarly adopted a definition of health literacy that understands it as a range of complementary skills that enable people to participate more fully in society, and to exert a higher degree of control

over everyday events.⁴ The idea of “life skills that are formed through the lens of literacy” (Mandigo et al, 2009) can equally be applied to food literacy.

In this report, reference is also made to the concept of “resilience”. The use of this term is discussed in a review of the literature in section C2 (d), on *Strategies that Enhance Resilience* (page 50).

The conceptual models of the components of food literacy, as well as a definition proposed by the present study are in section D2 (pages 68-70).



⁴ WHO: Health Literacy and Health Behaviour <http://www.who.int/healthpromotion/conferences/7gchp/track2/en>

TABLE 1: DEFINITIONS OF FOOD SKILLS AND FOOD LITERACY

Source	Definition and components
Ont. Ministry of Health Promotion (2010) <i>Healthy Eating, Physical Activity & Healthy Weights Guidance Document</i> (Short, F., 2003a and Vanderkooy, 2009)	Food Skills: <i>Knowledge</i> (nutrition, label reading, food safety, food varieties, ingredients, substitution); <i>Planning</i> (organizing meals, budgeting, food preparation, teaching food skills to children); <i>Conceptualizing food</i> (creative thinking about leftovers, adjusting recipes); <i>Mechanical tech-niques</i> (preparing meals, chopping/mixing, cooking, following recipes); <i>Food perception</i> (using your senses – texture, taste, when foods are cooked).
Short, F. (2006) <i>Kitchen Secrets: The Meaning of Cooking in Everyday Life</i> (Berg, Oxford)	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 <i>approach</i> 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."
City of Hamilton Expert Panel–Delphi process (2011)	Food skills comprise: 1. Food and nutrition knowledge: Canada's Food Guide, label reading, nutrient-rich healthy choices, where food comes from; 2. Planning: Meal planning, budgeting, grocery list, meal organization per family size; 3. Preparation including mechanical and cooking techniques: Cutting, washing, measuring, cooking, following recipes, use of leftovers, time management, safe knife practices, use of utensils, ingredient substitution, cooking times; 4. Food safety and storage: cross contamination, shelf life, expiry dates, sanitizing measures, safe cooking and storage temperatures, waste management; 5. Self-Efficacy: Confidence in the kitchen, recognizing areas of improvement/skill enhancement opportunities, how to seek assistance, ability to teach cooking skills, food perceptions.
Vanderkooy (April 2011) TOPHC conference presentation	Food skills: "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."
Vidgen & Gallegos (2011) <i>What is Food Literacy and Does It influence What We Eat: A Study of Australian Experts</i>	Food literacy: "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."
Vidgen & Gallegos (2012) <i>Defining Food Literacy, Its Components, Development and Relationship to Food Intake: A Case Study of Young People and Disadvantage</i> (Australia)	Food literacy: "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." "Food literacy is the scaffolding that empowers individuals, households, communities or nations to protect diet quality through change and support dietary resilience over time."
Sustain Ontario Backgrounder (2013), <i>Food Literacy, Food Security, & Local Food Procurement in Ontario's Schools</i>	Food literacy means "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". Student Nutrition Programs and food literacy together provide essential life skills and reduce the incidence of diet-related illness.
Topley, A. (2013) <i>At the Table: A Case for Food Literacy Coordination</i> , Victoria, BC.	The term ' Food Literacy ' captures 3 ideas: 1. Food Confidence -- an individual's knowledge, skills, ability and belief to be food self-reliant; 2. Food Savvy -- the applicability and importance of food from personal, community and environmental perspectives; 3. Food Connections -- the appreciation that food serves social, community and cultural needs.
European Commission www.food-literacy.org	Food Literacy is the ability to organize one's everyday nutrition in a self-determined, responsible and enjoyable way.
Conference Board of Canada, Oct. 2013 (Centre for Food in Canada) <i>What's to Eat? Improving Food Literacy in Canada</i>	Food literacy is "an individual's food related knowledge, attitudes, and skills. It incorporates household perception, assessment and management of the risks associated with their food choices. It influences their food-related decisions, which ultimately impact their diet and health as well as the environment. It includes an individual's understanding of how food is produced, processed, distributed, purchased, and wasted, as well as how to interpret claims made in food marketing and advertising."

METHODOLOGY

Research collaboration

At all stages, this research used a coordinated, participatory, collaborative approach that integrated public health and community partners. The design, tools process and analysis were implemented with input from all study co-investigators.

Determination of priority groups

The design of the LDCP on food skills required that the project focus on two priority populations. Public health professionals from eight Ontario health units carried out a literature review and systematic consultations of public health staff (footnote, page 12), and concluded that the following two groups were both at highest risk for lack of food skills and potentially most likely to benefit from acquiring them: (1) high-school aged youth, at-risk, without children, 16 to 19 years of age; and (2) pregnant females, or young families with at least one child, 16 to 25 years of age, with at least one social determinant of health risk factor (see glossary, Appendix A).

Interview protocol

Ethics approval was received through Western University, Ontario. All participants were invited to read the information letter (Appendix C) and were asked for permission to have the interview audio-recorded. They were assured of their anonymity and that they did not have to answer any questions with which they felt uncomfortable. If they agreed, they signed two copies of the letter, one of which they kept, and which contained contact information if they wanted it.

Interview tool and process (Appendix D)

An ethnographic interview approach that informs Grounded Theory (Charmaz, 2006) was used to encourage open expression and reflection by each interviewee about his/her experience with food preparation and its context. A set of questions meant as a guideline for interviews was prepared; it aimed to take participants mentally through their daily routine, stimulate memory, and encourage reflection about practice and meaning by juxtaposing these in the past, present and future. The tool was pilot tested with eight subjects in London and Waterloo, to determine its effectiveness in making participants

express themselves comfortably and naturally. Except for the first question, which is where interviews started, the interview process was fluid and followed the train of thought of the respondent; i.e., questions were not asked in a prescribed order. The interviewer paid special attention to specific words, phrases and stories, asking respondents to describe and elaborate. As well, life turning points were areas of interest, revealing past shifts in behaviour or new strategies that were used. Demographic information was gathered at the end of the interview in a sensitive manner.

Recruitment of participants

Effort was made in the research design to recruit interviewees from a mix of rural and urban settings, and from northern and southern regions of Ontario, as Table 2 (page 16) indicates.

In the fall of 2012, 85 individual interviews were conducted to elicit food skills behaviours, meanings, challenges and solutions from subjects' own perspectives. Table 2 shows how interviews were distributed throughout the five health unit regions and two pilot sites.

Recruitment of participants was effectively accomplished by registered dietitians and nurses (co-authors of this study) and other public health staff, through their connections in the community. Community program staff, in addition to public health staff, were invaluable in facilitating this process, as they had rapport with the young people in their programs.

The interview procedure

Some interviews took place in respondents' homes, but most were done in community settings such as schools, program sites and community centres. For about half the interviews, appointments had been made; but recruitment was often done on the spot, offering interviews spontaneously to young people who happened to be present at a program. A \$20 gift card for a grocery or department store was provided for each 30 to 45 minute interview.

Transcription of audio-recordings

All interviews were professionally transcribed. They were coded by the principal investigator so that

the transcribed interviews could not be identified by respondents' names or any other identifying information. After the analysis was completed, all audio-recordings were deleted.

Analysis

Qualitative and quantitative analysis of the interviews was carried out using the principles of Grounded Theory to identify emergent themes and subthemes (Charmaz, 2006), with the help of NVivo10 software.

Trustworthiness of data and analysis

Procedures to optimize the reliability (Flick 2007, Pilnick & Swift, 2010) or trustworthiness (Guba & Lincoln, 1989, Williams & Morrow, 2009) of the data collected and its analysis were built into the study design. The interview guide was pilot-tested with similar target groups in Middlesex-London and the Region of Waterloo, and minor changes were made at that point to improve the fit of the questions with issues brought up by youth and young parents. During interviews, both the interviewer (principal investigator) and a member of the LDCP research team were present. Trustworthiness was ensured through member checking, i.e., the interviewer aimed to validate certain key responses during the interview by reiterating respondents' answers to ensure interpretations were correct and as complete as possible. Although the interviews were

taped, the LDCP team member who was present at the interview took notes as well. This enabled a discussion of key observations immediately after each interview, which was documented by the interviewer. After the initial analysis or categorization of the transcribed interview material into major themes, these themes with all pertinent quotes were sent in separate documents to the research team members. They were asked to comment on each theme and to list the most compelling subthemes that they thought emerged.

At every stage of analysis, meetings (in person and by teleconference) were held in order to deliberate the themes and key findings, the "levels of food preparation" tool, the definitions and the models, as well as how these should be named and represented. Throughout the project, research team members provided input and feedback into the interpretations of the study data based on their professional experience and knowledge; this was crucial due to the complexity and novel nature of this study. All members reviewed and helped edit the successive draft reports. An important next step is to more clearly define the criteria for, and test the validity of, the "levels of food preparation" tool, so that it can be used for assessment purposes with the socio-demographic groups with and for whom it was developed.

TABLE 2: GEOGRAPHICAL DISTRIBUTION OF THE STUDY GROUPS

Geographical area (Ontario Public Health Unit)	Teens	Young parents and pregnant women	Total
	Age 16-19	Age 16-25	
Middlesex-London (pilot)	2	2	4
Waterloo Region (pilot)	-	4	4
HKPR District	9	4	13
Sudbury District	8	8	16
City of Hamilton	6	7	13
Chatham-Kent	9	11	20
Windsor-Essex	8	7	15
Total	42	43	85

RESEARCH FINDINGS

RESEARCH FINDINGS

CHARACTERISTICS OF STUDY GROUPS

As shown in Table 3 below, the majority of the teens without children in this study lived with parents, relatives or other caregivers. Forty percent lived away from their childhood environment, namely, in a place where they were paying their own rent, or in a group home, or without personal address and staying temporarily with friends (“homeless”). Living situations for young parents and pregnant women were quite different, with only 12 percent living in the same home as parents or caregivers. Thirty-seven percent lived with a partner and another 44 percent lived alone.

Statistically, simply living as a “sole-support” adolescent or single parent constitutes greater risk than living in a situation with caregiver support; however, situations were often more complex. Some teens made reference in their interviews that they had left their family homes at a young age for reasons that included conflict, estrangement or neglect. Several talked about how they had felt dissatisfied about the type of food made available to them by their parents. There were examples of youth who, in the absence of parents or caregivers, had to cook for their younger siblings and/or themselves. Living on their own and paying their own rent generally meant becoming more food insecure; but for about a third of youth in this situation, this was mitigated by the availability of food from relatives when they themselves ran out.

“There was never much food in the fridge at home except after my dad got his paycheque. So like I kind of got used to eating things out of cans or I’d go to my grandma’s place if I could get there or even my friend’s place. So when I like saw the cooking shows on TV I always thought that would be nice to be able to make that kind of stuff like really good food. So I can’t wait to try that.”

“I was always cooking for me and my little brother and sister, that’s how I learned. They are twelve and six and they don’t really do a whole lot of cooking so I would cook for them whenever my parents weren’t home, which was quite a lot, sometimes for a few days.”

In other words, details related to food preparation and availability can help to clarify the level of risk inherent in a living situation. For example, a single parent may be coping admirably, while a teen living in a parental home can face inadequate food, abuse, the task of caring for siblings, or other challenges. Overall, a more useful assessment of risk in terms of living situations that support healthy eating should include the aspect of housing that includes cooking and food storage facilities, as well as social environment (support with accessing and preparing food and eating together). These are depicted as external determinants in Model B (page 69).

TABLE 3: LIVING SITUATION PROFILE OF STUDY PARTICIPANTS AT THE TIME OF INTERVIEW

Living situation	Teens age 16 – 19		Pregnant women and young parents age 16-25	
	Number	% of grp	Number	% of grp
With parents, relatives or other caregivers	25	60%	5	12%
With roommate(s), pay own rent	6	14%	3	7%
With partner, pay own rent			16	37%
Live alone, pay own rent	5	12%	19	44%
Homeless	3	7%		
Group home or halfway house	3	7%		
Total	42	100%	43	100%

TABLE 4: EDUCATION LEVEL OF FOOD SKILLS STUDY PARTICIPANTS AT THE TIME OF INTERVIEW

Education level	Teens age 16 – 19		Pregnant women and young parents age 16-25	
	Number	% of grp	Number	% of grp
In high school	31	74%	8	19%
Finished high school	2	5%	11	25%
Dropped out of school	9	21%	16	37%
Some post high school education			8	19%
Total	42	100%	43	100%

In terms of immigration or birth status, 77 percent of this study group was Canadian born, non-Aboriginal, and of a variety of ethnic backgrounds. Seven percent were Aboriginal or part Aboriginal, another seven percent had come to Canada as children, and nine percent were part of a recently-immigrated family (although we did not ask everyone how many years they lived here).

Overall, it was difficult to compare results in terms of participants' backgrounds, since several youth interviewed in cities had grown up in the countryside or on a Reserve, and 16 percent had immigrated to Canada with their families from diverse parts of the world (Sudan, Ethiopia, Egypt, Portugal, Russia and Afghanistan) and at various times in their lives. Some were born in Canada to newly-immigrated families, so were still influenced by two or more cultures.

It is important to note that, given the exploratory nature of this research and the recruitment strategy, a statistically representative sample was not the aim of this study.

EMERGENT THEMES AND ANALYSIS:

Meanings, Practices, Challenges

This study sought to identify meanings of food skills from the point of view of adolescents and young parents and pregnant women identified as at risk. The interviews were conducted in a way that let them guide the conversation by telling about their experience with food, and about how they managed and imagined it on a daily basis.

Meanings of food and food preparation develop from making choices and decisions several times per day, at different places, spontaneously and planned—choices based on cost, taste, health, body image, feeding others, time, resources, skills and experience, among other factors.

Over time, these meanings translate into food-related feelings, perceptions, degrees of confidence and future aspirations. They also lead to the mental categorization of food and its preparation in ways that are revealed by the language used.

In this section, the research findings are presented in five major themes, (a) to (e):

(a) Meanings of food and food preparation

- Feelings about food preparation
- Meanings of food based on perceived cost
- Meanings of “a good cook”
- The perceived importance of food skills

(b) Naming and categorizing food skills

- Naming foods
- Using recipes and instructions
- Categorizing food skills
- The question of food skill level and diet quality

(c) Ways of learning

- Past and present sources of learning
- Self-directed learning: Improvisation, adaptation and exploration
- What do young people want to learn?
- Confidence levels and age at which food skill learning started

(d) Strategies that enhance resilience: dealing with food insecurity, life change and parenting

- i. Preventing food insecurity and eating healthier
- ii. Responding to life changes
- iii. Parenting and food preparation

(e) Challenges

- i. Challenges with acquiring food skills
- ii. Challenges with preparing food in the home
- iii. Challenges with accessing food for home preparation

Some commonalities became apparent that clarified the context in which young people are learning to prepare food. For example, for those who were brought up in Canada, the food environment of convenience and fast foods near home and school was seen as the norm, not in terms of a changing historical context. Some young people in our study had been exposed to cooking from scratch at an early age; but those who had not, and had moved out on their own, talked about what different types of foods came to mean to them, and how they had figured out what to buy and prepare.

For youth living on their own, grandmothers or other members of previous generations often entered into the picture, newly discovered as reservoirs of knowledge and as patient teachers about food preparation. Learning trajectories in the kitchen came in great part from their own discoveries and decisions based on their own life realities, more than from a fixed curriculum or from fulfilling societal expectations. An exception to this was during pregnancy and early parenthood, which brought new obligations and nutritional guidelines into focus.

From the candid stories of 85 teens and young parents, a complex and diverse picture emerged that went far beyond a “needs assessment” or a reinforced stereotype of poor food skills and disadvantage. For example, the daily struggle to get meals on the table for themselves and others often became an exercise in empowerment as young people developed strategies and became adept at making ends meet. For most, the food skills they needed to survive evolved with the

help of social networks and programs, knowledge gleaned from trial and error, and resources they found to be essential (for example, a freezer or slow cooker). Many had gained a sense of confidence about their ability to manage with respect to food, and consequently with other life challenges as well.

As a result, the construct of “food literacy” more adequately described the overall developmental process surrounding food skills, linked with health, self-efficacy and resilience. The interviews revealed vulnerability and challenges as well, as described in the last section.

Meanings of food and food preparation

A main goal of this study was to understand meanings of food skills from the perspectives of our two priority groups. The data from our interviews were rich with meaning, as young people talked and reflected about food in their daily lives. These data informed us not only about their food skills, but gave us a broader understanding of the circumstantial factors necessary to develop and apply these skills. We integrated the individual and externally-determining components into a construct called “food literacy”. Overall, this construct fit closely with the elements and models of food literacy determined by other recent studies (Table 1, page 1). Food and food preparation were thus tied up with emotions, creativity, identity, self-esteem, social relations, perceptions of cost and health, and resilience in facing uncertainty and insecurity.

The following four sub-themes in this section show the complexity of meanings that emerged from our study. There is considerable overlap of meanings among these sub-themes, which indicates that different interview questions served as different pathways to similar responses.

- i. Feelings about food preparation**
- ii. Meanings of food based on perceived cost**
- iii. Meanings of “a good cook”**
- iv. The perceived importance of food skills**

FEELINGS ABOUT FOOD PREP



FEELINGS ABOUT FOOD PREPARATION

From what we heard from our study participants, planning and preparing meals every day in the context of a limited income and often limited kitchen facilities, while also facing choices about types of food, time and taste, became a meaning-laden task. Psychological layers originated from many situations, including making independent decisions after leaving home, preparing food for siblings or children, sometimes undergoing physical changes related to pregnancy, weight or energy levels, or having to manage schoolwork or a job.

The association of food preparation with positive or negative feelings can make a major difference in terms of what is practiced or not practiced, which our study participants articulated in many ways. As well, the effect of their behaviours and feelings on their self-esteem and self-efficacy (glossary, Appendix A) was undeniable, and we recognized this as part of the psycho-social dimension of food literacy. This study provides the first step of identifying meaning, but it will require further work to determine indicators that can be measured and acted upon.

The following selected quotes illustrate the variety of feelings associated with food preparation that emerged from the study group. Each separate quote represents a different respondent. For conversational quotes, “I” denotes the interviewer and “R” denotes the respondent.

Pride, satisfaction, confidence: (29 respondents)

“Yes, I like it (preparing food) because it gives me a sense of accomplishment and a sense that I can take care of us, do you know what I mean. And it helps me feel good when his (my child’s) whole plate is empty and he wants more or he is gobbling it up and ‘mmmmm’.”

“It makes me feel like I’ve accomplished something, almost like accomplishing a goal once you make a good dinner. After dinner all the time I will turn to my boyfriend and be like ‘was it good?’ and if he says...well usually he’s never said no, ‘cause I think he’s afraid because then he’d have to cook for himself...but he will look at me and be like ‘yeah, that was really good’. Like the first time I made the potatoes that’s when he was like ‘those potatoes were wicked’ and then the next time he’s like ‘do you want to make those wicked potatoes again’, so he has just continuously called them that. It does make you feel good when somebody enjoys what you have cooked.”

I: Do you like cooking for other people?

R: Oh yes. I like to see their face when they try my food, to see if they like it or not.

I: How does that feel?

R: It’s actually a good feeling knowing you can cook and can fend for yourself.

“I can have a really crappy day and as long as I have a really good plate of food in front of me on my table at the end of the day, like my day was pretty good. I ate really good and I am good. Food is an enjoyment. It is a pleasure as well as a demand.”

R: So I think like after people cook a lot they just feel more comfortable in the kitchen so they just kind of go with it.

I: So that might be the key thing, feeling comfortable?

R: Yes, because if you are not comfortable in the kitchen then you won’t make food and you won’t prepare stuff. So as long as you are comfortable in the kitchen you are okay, but if you are not it’s good to get used to it. And then like you know

what you are doing and you know everything you work with.

Enjoyable, creative, fun (25 respondents)

“Mainly because having children, like when we bake cookies at home they get to help, like having them in the kitchen stirring or my older one likes using the mixer and then shaping their own little cookies and things like that, it’s memories. It’s things that, like if I just went out and bought the Pillsbury little already-shaped cut-up cookies and popped them in the oven, I wouldn’t get all that time of the kids laughing and making a mess.”

“You get to make it your own. It’s not somebody else’s work or whatever, it is yours. You personalize it and make it your own so if we were making the same dish, mine would be different than yours because you put your own creativity into it and what you enjoy in there compared to mine.”

R: If you don’t enjoy it then I don’t think like you won’t put work into the cooking. So if you enjoy it your food is obviously going to taste good because you wanted to, not because you have to. It’s kind of like a lazy cook versus a passionate cooker.

I: What are you?

R: In between.

“What do I use most in my kitchen? I would say first of all the oven, second of all the crock pot because the crock pot we like to make roasts and stuff and my mom has like we have special recipes for our carrots and stuff so we put brown sugar and sweetening stuff into the bottom of it which is where all the carrots and the potatoes will soak it all up, put the big meat in the crock pot, cook all the stuff and then after it’s all in the crock pot and all the juices and everything is nice, put a little bit of the juice on the bottom to mix up with the other so it’s nice and sweet and then put the meat on top and then just let it cook. It is so good and the meat just falls apart in your mouth. It seriously does.”



Negative feelings (14 respondents)

“It’s like we’re baking stuff tomorrow for a little Christmas party at (my child’s) play group I go to in the afternoon. And to me it’s probably like ‘right now I want to do it’ but then I’ll probably eat all the cupcakes because I really want them. I’ve been wanting cupcakes for a little bit and I’m making cupcakes and I plan on making it today and I want to control myself. Because if they are cupcakes, they are individual whereas if it was a cake...if I was to make a cake, I know it would be easier not to eat, because if I cut it then it’s going to look weird bringing a cake in with a piece cut out of it.”

“When you are feeling rushed, it’s less enjoyable, you know, like I know when I get home sometimes it’s five o’clock and I’m ‘okay, I’ve got to feed and bath her and have her in bed at a decent time.’”

“Yes because if you are cooking and you are not enjoying yourself and you’re just like ‘this is stupid’ you are not going to try new things. You are not going to be like ‘let’s just be spontaneous and try this tonight.’ You are going to get stuck in a routine.”

“There’s actually nothing (that I want to learn to make). I don’t really like cooking anymore. I did it for a job so I’m over it now. I think mashing the potatoes with the hand blender thing is fun though.”

“I make grilled cheese, pasta, that’s OK. But there’s one time I made a whole dinner meal with like ham and sweet mashed potatoes and gravy and other stuff. That was hectic though, really hectic. That told me I never wanted to be a cook, having to pay attention to all that stuff at once.”

It's kind of like a de-stresser for me. If I am having a rough day usually I am in the kitchen cooking something. Because usually I have my mind on other things, and especially if I am mad it's a good time to be there (in the kitchen). Because I am busy doing all of that (cooking) and I don't have time to think about things.

Different from parent or caregiver (9 respondents)

"Well my mom, like I said, my mom made a lot of the boxed meals like Hamburger Helper, Kraft Dinner, macaroni salad, cans of chicken noodle soup. It was all simple stuff. There were six kids. Now I prefer homemade chicken noodle soup. I buy egg noodles, chicken breast with no bone it like just chicken breast and then we cook potatoes off to the side and then we put them in after they are cooked. We cut them in cubes. And carrots, broccoli, stuff like that."

R: I only started eating vegetables when I moved out. My mom cooked a lot of boxed food.

I: So something must have made you make that decision (to start eating vegetables)?

R: Meeting Paulette, like his mother. She cooks with a lot of fresh food and stuff like that.

I: What was it about that food that made you change?

R: It tasted better. And it was healthier for me. I know the boxed stuff has a lot of sodium and gross fatty stuff, too.



Sense of connectedness with others or another place (8 respondents)

"I actually do wish people would have the opportunity I did, like being able to talk with my mom and watch her cook and then help her do dishes after. Like that made me and her so much more close. That's what brought me and my mom – that's what made me who I am now."

R: I learned to cook at a young age, four or five, because in Sudan it's a different environment than here. I was six when I came to Canada. We make *bamia* with a kind of plant (okra) that you dry it and you grind it in the grinder and it's like powdery and then you mix it with some water and you let it cook and then it will turn greenish and then you put like salt and other things in the stew. We eat it with something called *asseeda* so that's just hot water, the water steams and then you put a little bit of flour, you mix it until it starts getting thicker and then you put more and then it gets really thick and then when it's done we just use our hand and we eat it. Or we eat it with *kisra*, a kind of flat bread. It makes me think of the Sudan. We also make *injera*, it's like a pancake with teff or any flour. That one is hard to make because if you do it the wrong way it doesn't turn out. It takes a lot of practice. My mom, like back home we have this flat small like oval plastic thing that we make it with so she just sweeps it back and forth. And it's like a motion that you do and then it gets flat, really, really thin, almost like a paper. We make lots of injera and people come to our house and we eat it together.

I: If you were alone in the kitchen could you do it?

R: No. I would need her to supervise because it's the type of food that if you were to do the wrong ingredients it won't turn out the way it usually tastes.

I: Could your brothers do it?

R: No. It's a tradition of the mom.

Healthy, feel better (8 respondents)

"And I think it's fun. Like when I was making the shepherd's pie I had never made it before. And I was so proud of myself because my boyfriend

actually doesn't like potatoes but he's like 'I like sweet potatoes' – so I made it healthier with sweet potatoes and he was eating it and he said 'I like it'. So I'm like 'all right, because if you were gagging I'd be mad'. So it feels good when you make something really healthy. You feel good after. You don't feel 'ugh'."

R: When we do make it at my mom's house like sometimes we make perogies or whatever, if we go to her house she's got a stove and you definitely feel better. You just feel better, yes.

I: Why do you think that is?

R: Because at my place the stove doesn't work and we are always eating junk food and stuff. As a kid you love junk food and everything because it tastes so good, but you get sick of it. It's too sweet and it makes you feel icky after a while.

"When you have to eat constant frozen TV dinners or canned vegetables and stuff like that eventually you can feel it. There's just that difference. When you eat fresh fruits and vegetables you feel more energetic, you feel healthier, your body feels clean. You just have that right amount of nutrients and vitamins going through you and it feels like your body is cleaning out everything bad."

Obligation or duty (7 respondents)

"I do like cooking but sometimes it's hard like when I am tired and get home from school and stuff but it's got to be done. You need to have dinner, right, especially with a two-year-old. You can't just be like 'oh, mommy's not cooking dinner tonight. I'm too tired'."

"It's the whole self thing. I mean if people are lazy they are probably not going to cook. It's easier to dial a number and say 'oh, can I get this?' or go to the place down the road or something. Even now, as a single person, if I didn't have 100% self-esteem I probably would opt to order in. But if I had poor self-esteem *and* a daughter, I would probably cook ...because I know I have my daughter's well-being at hand too, and I don't want to start bad habits with her at a young age."

These small but candid excerpts from interviews collectively give a sense of some of the feelings tied up with food preparation: the delights of letting children help; the kitchen as a de-stressing space for some; the many stories about cooking for others that gave a sense of accomplishment. Others felt less confident about their abilities, even afraid of the challenges ahead, such as one teen with no cooking experience who was about to move out of a group home:

I'm not a huge cook, like when I move out is when I'm starting to cook on my own. My dad always kind of like showed me, so just observing is like what got me into it a little bit, but no -- I've never tried anything. To me that's broadening my horizons quite a bit. But I'm getting there! I'm on a lot of medications because I just came out of an accident, and now I walk funny but I'm going to be OK. So now I found this little apartment and I figure I have only \$150 for food each month, and like I'm scared, man, holy crap. Like I was just starting to do my budgeting thing, and I'm just scared, I'm freaking myself out already, because I'm going to go out shopping (for food), and I need some pots and pans too. So I guess I'll use my cheque for that. Like there's pans in my dad's apartment but I don't want to take them and leave him with nothing, right, because then I'll feel bad. Yeah, I'm happy and scared at the same time. I wish my mom were still here...I wish.

A bottom line from this analysis is that feelings matter, and that they should be taken into account in food skill assessments and in planning programs. It brings food preparation beyond the domain of technical practicality and into the realm of everyday reality—both positive and negative—that is faced by those who need to feed themselves and others.

PERCEIVED COST

MEANINGS OF FOOD BASED ON PERCEIVED COST

From expressions of young people who bought their own food, it was apparent that cost influenced the meaning of food based on its affordability (making certain foods in or out of reach), but also, potentially, on its merit in terms of household food security (e.g. a large bag of rice that cost more but lasts for a month). “Expensive” could pertain to foods like cheese or fresh vegetables in the short term, but also to fast food if it was eaten regularly and caused a limited budget to be used up quickly.

A question put to all interviewees towards the end of the interview was, “There is a debate out there: some people think that buying ready-made food or fast food is cheaper, and others think that food you make at home from simple ingredients is cheaper. What do you think?”

Responses were as follows:

- **52% of respondents thought that making food from scratch from “bought ingredients” at home was cheaper.**
- **8% said that pre-prepared food was cheaper.**
- **17% said that “it depends” upon the brand or type of ingredients.**
- **23% did not know.**

Several respondents spontaneously gave examples of their experience with spending the same amount of money at the grocery store or for eating out.

It’s cheaper if you know how to cook, yes, because you can spend \$7 on one meal at a fast food restaurant, but I can spend that \$7 and get a lot of spaghetti and other stuff and cook for like two or three days rather than only one meal.

“The way I see it if I were to go out and buy Burger King I’ll eat it and I’m done, like my food is done. If I’m hungry I am going to have to buy it again. Whereas if I am at home and I’m hungry I am going to make a meal and if I am hungry again there’s still leftovers that I can eat. So it is cheaper to buy things the same worth of money that you would buying at Burger King, little stuff that is going to last you almost a week. So it’s easier if you just make it.”

“It’s definitely cheaper if you make it yourself. Fast food is not cheap at all, especially if you are going to eat it every day. There were weeks I have had that I would just eat junk food and luckily I have a friend, we sort of like help each other out with money. If I have money I help him out. If he has money he helps me out. There have been weeks where we just ate junk food and fast food and the money was gone. It’s definitely cheaper to go out and buy stuff from the grocery store and make it at home.”

Those who made the case that pre-prepared food was cheaper typically referred to the fact that ingredients most often came in amounts that were greater than were needed, such as having to spend a larger amount of money for a bag of flour than for a cake mix or even a ready-made cake. Also, some cited the common assumption that fresh ingredients are expensive.

“I took Food and Nutrition in high school and she told us that it’s best to shop from the outside of the store. I tried that for a little bit. It’s really expensive to do so. Because everything is fresh on the outside, right, because it’s like your veggies, and then it goes to your meat, your cheese. When you think about it you go buy a frozen family lasagna at ten or eleven bucks and then you buy the ingredients for the lasagna, like it’s going to cost you the same.”

“Eating healthy costs more, for sure. When you are buying your produce and your things it’s more expensive to go out and buy your carrots and your

salad and your tomatoes and whatever you are putting into your salad than it is to go and just buy a bag of salad. If something is already prepared, like you buy your pasta and your noodles in the bag, maybe it's like \$4 but you are buying your pasta, you are buying your sauce, you are buying your cheese or parmesan or whatever you put on your pasta it's going to cost more if you make it than if you are buying it already prepared."

"Subway is still cheaper compared to cooking on your own because they already have everything there for you and if you cook at home you have to go to different stores and get all the stuff. Like the (grocery) stores have bigger amounts like flour so it costs more at the beginning."

Others, however, had determined that investing in raw ingredients was worth it. The strongest cases that were made for spending money up front for basic ingredients, and then being able to make multiple meals out of it, were by young parents with a number of years of experience on a low income.

"I used to cook with Minute Rice but I kind of taught myself how to cook with regular rice. It's a lot cheaper. I paid \$8 for a bag that stands like this in an Arabic store and it's like \$8 – and I still have that bag. I think I bought it a couple of months ago and we eat a lot of rice and potatoes in the house."

"It's cheaper to cook food from scratch. Like when I buy chicken or something I buy it in bulk, so I can just like portion it off because there are just two of us right now eating the chicken so if I buy six chicken pieces that's three or four meals, right."

"If I don't have the money for snacks or something and I know that I am going to want a cookie or something, I'll be like 'well I have peanut butter, I have sugar, I have an egg so I can just make some cookies myself instead of going out and spending three dollars on bagged cookies because that's pointless'."

"I think it's cheaper to make food from scratch. Because if you are experimenting while you cook you can practically just cook with anything that you have in your house."

"I find that ready-made food is more expensive. I can go buy a little thing of (ready-made) pasta for two dollars but that's going to last me one meal and probably not get me to the next meal. But if I were to go buy my pound of hamburger for \$3, my bag of spaghetti for maybe \$2 and then my pasta sauce, I can get that on sale for \$1. I could probably make that last two days. I could eat it for supper one night and then have leftovers for lunch or whatever the next day so I guess it would be cheaper."

"Depending on how many meal items I need like one week I had to buy cornstarch, I had to buy this and that, I had to buy a whole bunch of different things but I don't have to buy it again the next week or even a month later."

Respondents who said "it depends" could reflect more upon the complexity of the issue, pointing out, for example, that frozen vegetables (especially French fries) were cheaper than fresh, and that sometimes buying unprocessed ingredients in bulk meant that they spoiled.

Teens who lived at home or in a group home or who ate frequently at meal programs and therefore did not shop for food were more likely to say they did not know which types of food cost less or more.

Overall, just over half of this study group was convinced of the economic benefit of choosing less processed ingredients for preparing their own food. This was driven largely by the constraints of limited food budgets, and reinforces previous findings that home food preparation is more prevalent among low income groups (Chenhall, 2012, Smith L.P. et al., 2013).



A GOOD COOK IS...



A GOOD COOK IS...

During interviews, when respondents mentioned someone they had learned food skills from or admired for their cooking ability, it was time to ask, “If, as you say, (this person) is a good cook, then what it is about them, or what they do, that makes them a good cook?” A follow-up question was, “Are you a good cook?” The first question was more about theoretical values, directed at another person, and led to revealing responses about the variety of meanings of food skills. The second one suggested a personal evaluation of themselves, and responses of either bravado or modesty sometimes overshadowed actual abilities; but most of the time their ideas came promptly.

In their interviews, study participants indicated that a good cook is:

Experienced, able, knowledgeable, caring, “not afraid” (23 respondents)

I: What makes a good cook?

R: Somebody who cares. She is really into what she is doing to help her family. I think someone that can just go into a cupboard and regardless of what’s in there and they can make a good meal.

“I guess (a good cook is) someone who can follow a recipe or do something on their own. I guess someone who is not afraid to be in the kitchen and to cook.”

I: What makes somebody a good cook?

R: I would say starting from scratch without

following the recipe. Putting in their own ingredients and stuff.

“I think what makes a good cook is knowing the right ingredients, you have to have first flavor and then taste and then texture. You can’t just have like all one kind of food, you’ve got to have certain different varieties and stuff. – you can’t just offer the same thing. You’ve got to be able to experiment and come up with new ideas.”

“It’s not just the quality of the food but also like how much there is for people to eat. So she (mother) will make a dish not just for like me and her. She’ll make it for the whole family and make enough for all the people to eat it, be full and be able to put it away and eat again. So I guess they (good cooks) know how much to make.”

“I have a history in the kitchen, right, because of working. I also worked at Arby’s. It’s not the same thing because that’s deep frying and stuff, but it still teaches you the practice of cleaning before you cook for other people and hairnets and stuff like that, the hats, all that.”

Creative, passionate (22 respondents)

“(To be a good cook) You have to be passionate, as in like something you love. You like to make it taste good. You want people to be able to say ‘wow, how did you make it?’ and it makes you feel good when someone loves your food.”

“I am a good cook. I love getting in the kitchen and I love having a nice sharp knife and a fresh clean area, a cutting board and just do it.”

“Nobody wants something that is bland, plain – a good cook makes it different. You know how you are always eating the same thing and you go somewhere else and you try something and you are like ‘ooo, what is it?’. You are like curious. You are like ‘I like that, I’ve never had that’ and wanting to have it again so like ‘oh ya, I’ll try that’. Or ‘ooo, that was good’.”



To be a good cook you have to have a little imagination. If you don't have a recipe in mind and you don't really have much and you have a few ingredients sitting in front of you like cans of stuff, and you go 'what can I do with this? And then you make something that is edible.

Patient, calm, in control (11 respondents)

"Patience matters. My mother's not a good baker but she's done things over and over again and I've done that too, where I've made things a couple of times that didn't taste like hers did, so I just switch it up a little the next time."

"Well, if you are cooking something like hamburgers, you need patience. A lot of the time with thick hamburgers you have to put them on low so it cooks in the middle and if you put it on high and you just want to get it over and done with so it might not be cooked and you can get sick from it and you don't want that."

"If you are making something and you get it wrong or if it burns, if you have a panic attack you are not going to be able to fix anything. If you remain calm, then you would say 'alright, so what can I do to fix that?' You stay calm and you think it through. You don't just go 'oh my gosh, it's completely ruined, I am never doing this again.'"

Clean and safe (6 respondents)

"I don't think I'm a good cook because I don't know how to tell if a whole chicken is ready or if pork chops are ready. That's why I don't make them. A good cook would know the proper preparation and the proper way to cook it so it's not bad for you."

"They (good cooks) are clean. They take care in what they do. They make sure it's cooked. Pretty much the basics. That's really important to me because I've got food poisoning a couple of times. It was a horrible two weeks. I make sure now that the chicken is cooked, the hamburger is cooked. I make sure not to cross contaminate foods."

Again, this glimpse into what cooking means reveals overlapping qualities: patience is needed to ensure food safety; knowledge and confidence are needed to stimulate experimentation and creativity. All responses came out of personal experience, showing that learning sometimes happened from incidents such as food poisoning and kitchen fires. They also reflected the importance of self-confidence and being able to please others. These meanings helped inform our definition of food literacy.



THE PERCEIVED IMPORTANCE OF FOOD SKILLS

When interviewees had talked about their experience in the kitchen, no matter what the level of their skills, they were posed the question, "It sounds like you can make a number of (or a few) meals for yourself. If you think about your friends, for example, or young people in general, do you think

IMPORTANCE OF FOOD SKILLS

it's important for them to know how to prepare food?" If they answered yes or no, they were asked to give a reason. This question was posed to deflect the issue to others, instead of asking participants directly if they thought food skills were important (arguably a leading question). Notably, the word "skill" was rarely used by the young people in this study.

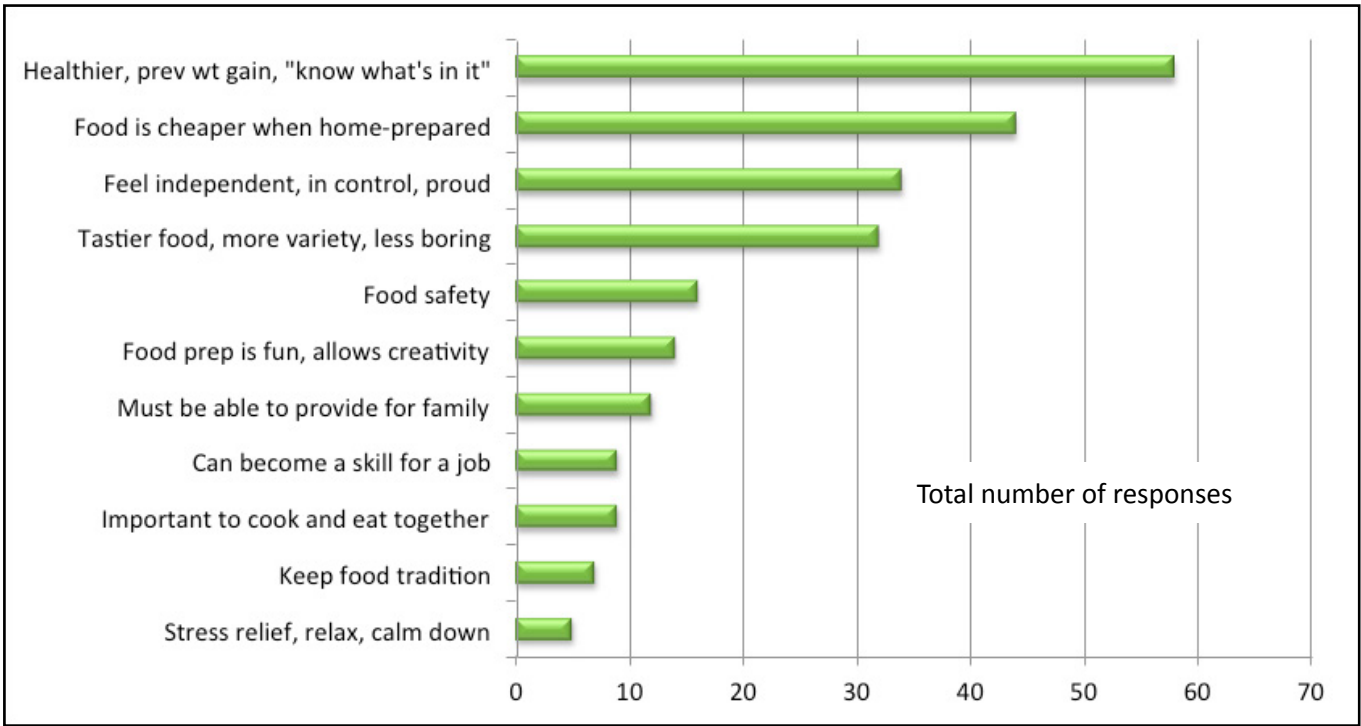
As summarized in Table 5 below, the breakdown of the responses by the two priority groups was very close, with the majority stating their answers quite emphatically. Those who said it was "not important" thought that depending on ready-made foods was fine, as long as you could afford it or if someone else was preparing it for you. Two respondents felt that learning food skills were more important if you were going to make a living with it, such as being a chef; but otherwise you could manage with pre-made or non-cooked foods. Figure 1 quantifies the reasons for the importance of knowing how to prepare food. These categories emerged from the data analysis, and were not suggested to the participants.

TABLE 5: PERCEIVED IMPORTANCE OF KNOWING HOW TO PREPARE FOOD

	Teens age 16 – 19 years (n=42)	Young parents and pregnant women (n=43)
Very important	63%	62%
Somewhat important	32%	33%
Not important	5%	5%

FIGURE 1: Types of reasons given for positive responses to the open-ended question, "Should young people know how to prepare food? (If yes) Why?"

N=85. Most participants gave more than one reason.



The following quotes were selected to illustrate common reasons given by respondents for why they thought young people should know how to prepare food.

Life & survival skill, money saver (44 respondents)

“Yes because, well, you never know what’s going to happen in the future and you should know how to do stuff, how to cook, because if you don’t know how to cook you have to go out and go to the restaurant and eat, like every day go out and eat.”

I think it’s important because your mother is not always going to be there to prepare food for you. You’ve got to be able to kind of make something, even if it’s little things, to know how to survive.

I: If someone doesn’t know how to cook, is that a problem or is that okay?

R: That is a problem because then you are relying on somebody else for your own well-being and you should be able to be independent, make your own food.

Some people should know it (how to make basic foods), especially if you are going to be a parent or if you live on your own, then you have to know how to cook, like you just have to know. That’s something that you have to do -- not just sit there and buy microwave stuff and live off that. That’s not healthy and it’s not cheap.

Health value; you know what’s in food if you cook it yourself (41 respondents)

“Some ways of cooking are healthier than others. Like just going out and buying something off the shelf that is already pre-made you don’t know what’s in it, you don’t know what they put in it, and there are so many food allergies nowadays that you have to be careful. You never know so that’s why I like doing everything on my own and knowing what I am putting in it.”

“Sometimes to really understand what you are eating you have to make it sometimes.”

“If you don’t know what’s going into your food, how are you going to know if it’s good for you or not? I can make bread (injera) and I’ll think: ‘That’s what’s in there, and that’s how long it takes to make it, and that’s the quality I put into it’. I guess you got to make it to really appreciate the food.”



R: When you bring chicken nuggets into the house, the kids think that’s what they are allowed to eat all the time, and I don’t want them thinking that it’s alright to eat chicken nuggets and French fries all the time.

I: Why is it not alright?

R: I just don’t think it’s proper to eat that because it’s not real meat. It’s fake meat inside of it. Like hamburger patties, they have to be made out of real hamburger or I won’t let them eat it because you don’t know what’s in it.

“If you have no basic cooking skills then you would be eating a lot of fast food which costs a lot of money, which I know because I was once that person. It would cost you a lot more money to have fast food. And you get obesity because you are eating too much fatty fast foods.”

R: I think everybody should cook because when you eat out of a box or things that are pre-made it’s so bad for you. All the preservatives and everything in there, gross.

I: What happens if you eat too much of it?

R: You can get sick – high cholesterol, diabetes.

"I find that when you cook like your own, you actually know what you are eating and how much you are eating. Like when you go out for fast food or you buy one of those TV dinner things you really don't know what's put in it because when you read the ingredients, I don't know what half of those things are."

**Value connected with positive feelings & variety
(21 respondents)**

I: What kinds of benefits do you think they would have if kids learn?

R: A skill, a job. Learning for themselves, right, make them feel good that they can do something. Like it's really hard to cook and it's really hard to know what to do, so if you learn it, then you feel proud.

"Me and my mom used to bake a lot, like all the time, but after my brother passed away so my mom stopped baking. Like we used to bake a lot of brownies and cookies and stuff like that, we made them really nice and rich and real good. So now I still bake things when I want to feel good."



R: I think it's important to know how to cook. If you don't know how to cook, how are you supposed to make things?

I: So people who don't know how to cook -- what happens?

R: They just make things that are really easy like Kraft Dinner and stuff like that.

I: Is that a problem?

R: Yeah, it gets old. It's nice to make stuff from scratch, like more variety.

I: Like you were saying you learned from your grandma?

R: Yes. It always tastes better when you make a good meal. You get more nutrients.

I: Does it save money or not?

R: It depends. If you make things yourself it can be cheaper. Like say for example you make your own lasagna than buying it pre-made. It's better making it yourself.

I: Did you ever help with the shopping?

R: Sometimes. I was a bad kid though because I would just see something that I liked and got it.

I: And that's bad?

R: Yes because I used to want everything, like all kinds of stuff. But I kinda learned more after I started shopping on my own.

Overall, the significant finding that emerged from the question of importance of food skills was the near unanimous sentiment among our priority groups that it was an important life skill. Their self-defined reasons revealed that "being in control" was important: especially knowing what is in their food; being able to create a variety of flavours to counteract the sameness of packaged mixes or dinners; feeling more confident that the food would not make them sick; and feeling independent and able to manage on their own. It could be summed up as a sense of self-efficacy that young people strove for and had achieved to varying degrees.

Naming and Categorizing food skills

Food preparation skills among the young people in this study varied greatly. Among all the interviews, 54 respondents verbally described, in total, 93 recipes they commonly made, often in streams of

consciousness about foods they put together and how it tasted and how people reacted. These ranged from the gleeful discovery by two young immigrant brothers that chocolate brownies could be easily made at home from a mix (“We added some eggs and some oil, and it turned out pretty good”), to the preparation of cabbage rolls from scratch by a 21-year old with three children:

“You have to try to core the cabbage. It’s hard to do, but get as much of the core out as you can and steam the whole cabbage, and as it steams, slowly pull the leaves off. And then like the center part of the leaf, just trim it down so it’s not so thick because if you try to roll it, it won’t roll.”

This variation in food skills underscores the need for a reliable tool to assess different levels of ability of food preparation and overall food literacy among young people that fits with the spectrum of practices that commonly occurs among them. Consequently, in this section we draw on information from two themes, namely how study participants tended to name foods and how they tended to perceive and use recipes and instructions, in order to arrive at a basic set of food skill levels or categories that are directly relevant to these two priority groups. We also raise the question about the relationship of food skills to diet quality by pointing to some inconsistencies in the application of food skills to meals over a day, given lifestyle realities.

Four main sub-themes for this section are:

- i. Naming foods**
- ii. Using recipes and instructions**
- iii. Categorizing food skills**
- iv. The question of food skills levels and diet quality**

NAMING FOODS

Grounded theory, the basis of analysis for this study, emphasizes that specific language used by interviewees can serve as windows into meaning (Charmaz, 2006). In this study, for example, it was apparent that young people commonly used language that distinguishes foods by their perceived

ease of preparation or required skill level. Similarly, it was revealing to listen to the language they used to describe the size, composition, status and health value of food or meals. Selected quotes from these and other categories are listed in Table 6 (page 32). Some phrases or terms are followed by explanations which were summarized from participants’ own words.

The strongest theme that emerged from these quotes and the many similar ones throughout the study was the juxtaposition between what were called “boxed foods”, “microwaveable food” or “mixes”; and, on the other hand, “real food”, “actual meals” or “home-cooked food”. The term “frozen foods” was commonly used to signify ready-to-eat processed foods or meals, rather than single frozen ingredients such as frozen vegetables, fruit or fish. All respondents consumed both pre-made and home-prepared meals/foods regularly, but many implied that they tried to balance the two. One teen characterized his effort to put together a meal for himself in his small apartment as “ceremonial”, in opposition to eating on the run:

“Lunch is like I’m grabbing something and walking and eating. My evening meal is preparing a big plate of different foods if I have it. I know that I can take 20 minutes and prepare something... and obviously there’s more ceremony to that.”

A young pregnant woman characterized the preparation of a meal by how she felt about herself, as well as by the act of sitting down.

“I like really really crappy fast food a lot, like I really do like it, but I also...I don’t know, I feel like I’m a better person when I’ve prepared my own meal, sit down. I like eating at my place before I go to work so I can sit down and it’s nice.”

TABLE 6: NAMING FOOD AND MEALS: SELECTED QUOTES
THAT HIGHLIGHT MEANINGFUL LANGUAGE

Ease of preparation or required skill
<ul style="list-style-type: none"> • “food that comes in a box with directions” vs “stuff that didn’t come in a box” • “My dad doesn’t eat boxed food so he makes it all.” • “Pizza, both the made-it and the box kind.” • “A lazy supper is like hot dogs, TV dinners, stuff like that.” • “On a fast day I would usually make burgers and fries, the worst meal to make.” • “Making cookies and cupcakes and stuff from mix, that’s not cooking skills.” • “Simple sandwiches like meat or cheese or like crackers and peanut butter isn’t really making anything.” • “Using a mix, that’s like nothing – anyone can do that” • A “recipe-recipe” is “instructions that don’t have ingredients with it”. • “Usually I use a mix but sometimes I’ll go all out and make them homemade.” • “...that’s elbow work, like when you have to mix with a spoon instead of an electric mixer” • “People that don’t know how to cook usually just open a can and put it in a pot and cook it.”
Size or composition of meal
<ul style="list-style-type: none"> • “full breakfast” = toast and eggs and bacon • “big full dinner” = meat and potatoes and veg • “meal-meal type foods” = “a big hot-ready meal”
Status of food or meal (judgment, appraisal or special meaning attached to it)
<ul style="list-style-type: none"> • “Fancy food” has spices in it. • “I have a junk food cupboard for Saturday nights.” • “Fridge foods are cheaper than going out to eat.” • “A gourmet meal” is “when we’re all at the table together.” • “A gourmet meal is like steak, you know, potatoes, turkey, like a Thanksgiving dinner.” • “Sit-down meal” is “special home-cooked food” • “Cafeteria food, that’s like soggy fries covered in cheese and gravy” vs “actual real food.” • “normal stuff” (frozen food) vs “good-good-good food” (“fruits and vegetables, like fresh”) • “Foreign foods are cool to watch on TV, that’s what I want to make.” • “High-horse food is like top-notch Grade A chicken or wholesome homegrown potatoes.” • “It’s just normal food. It’s grown where you can see it.”
Health value of food
<ul style="list-style-type: none"> • “a proper breakfast” = “something nutritious and that gives you energy for your day” • “bad things” = “fries or pizza” = “greasy, fat” • “Healthy things” is “when you sneak vegetables into things and they don’t even know.” • “Fresh ingredients are more nutritious than getting something out of a box.” • “Winging it, that’s if you are going to a restaurant you have no idea what’s in the meal you are eating, like cholesterol and stuff.”
Microwave connotations
<ul style="list-style-type: none"> • “Microwave food means you get really fat.” • “Some people can’t even cook so they just eat out of the microwave all the time.” • “I don’t use the microwave because someone told me that when you use the microwave it takes out a lot of the nutrients and stuff from the food so I prefer to steam them.” • “Having a microwave will not help me eat healthy.” • “Anything in the microwave I can’t eat because of the carbohydrates and sodium and that kind of stuff.”
Shopping terms
<ul style="list-style-type: none"> • “your regular money grab” = bread and milk • “I do a good grocery” = major shopping • “a budget shop, I know how to do that”

A few young people used the term “gourmet” to describe a meal with people eating together around a table with home cooked food, suggesting that this was not a common occurrence, and that commensality is associated with better quality food. Other expressions were used to indicate an inherent hierarchy as well. For example, a recipe could be the instructions on a box, but a recipe-recipe was something written in a cookbook. Whereas any food on the table could be a meal, a meal-meal meant a “full dinner” with home cooked foods. One young parent gave fresh fruit, the kind she bought for her child, the superlative name of “good-good-good food”.

Interestingly, the microwave oven became a flashpoint for many in terms of its association with convenience food. This bred the somewhat derogatory term “microwave food” and the phrase “eating out of the microwave”. Two people said they did not want a microwave oven because it would make it too easy to just “heat stuff up”. Overall, there was clear value put on food prepared at home and from relatively unprocessed ingredients (although the word “processed” was not used). This, and the distinctiveness of “box food” by study participants was so common that we made it the basis for categorizing levels of food preparation skills on page 35.

USING RECIPES AND INSTRUCTIONS

When young people start to learn food skills on their own, foods derive meaning from their various preparation requirements and the types of instructions (if any) that go with them. Although the way foods were named in this study suggested a hierarchy of effort, ability and status, most people used a combination of foods with and without instructions.

A “good cook”, several participants said, could improvise an edible meal from any ingredients available, without instructions.

People who had learned with others at home often knew the ingredients and steps to make specific dishes by memory. On the other end of the spectrum,



“box foods” were found to be convenient because they contained both instructions and ingredients. Where did recipes fit in?

The ability to follow a recipe is considered a basic component of food skills in North American and European countries, and it is commonly viewed as an easy and effective way to pass on information about food preparation. Recipes (or instructions without ingredients, as one study participant defined them), have become socially normalized, dropping former gender connections and making new connections to health. Highly available in magazines, brochures, cookbooks and the internet in a variety of formats, recipes are a vehicle for introducing new methods, flavours and ingredients.

Were recipes used by the young people in our study, many of whom were living on their own? Interviewees were asked that question directly, and responses were as follows:

7% of study participants said they always used recipes
48% said they sometimes used recipes
45% said they never used recipes

Further discussion in the interviews revealed that levels of food skills did not have to be based on the ability to follow recipes with increasing levels of difficulty, but perhaps more on the ability to improvise with various food ingredients on hand.

- Respondents who always used recipes for more complex dishes were typically skilled in cooking from scratch and also felt comfortable using the oven to bake casseroles, cakes and cookies from recipes. They tended to feel insecure about improvising, however, and took comfort in specified amounts of ingredients and stepwise instructions.

“I follow recipes still a lot. Because like I said it’s just a hassle to mess it up, to put too much of something or not enough. Like my nan says, you can always add but you can’t take away.”

- Respondents who never used recipes tended to perceive them as complicated, prescriptive and requiring ingredients that they did not have on hand. Lack of numeracy skills made fractions and measures seem complicated. A further problem was the inability to visualize what the end product should look like, or how it would taste, especially when not all ingredients were familiar. This issue is further discussed in the section on Challenges (page 59).

“I’ve done recipes a couple of times but it doesn’t work as well because you don’t know how it’s supposed to look, you don’t know if you are doing it right. It’s easier to learn from somebody.”

- Occasional and non-recipe users showed how avoiding recipes was not necessarily a barrier. Their approaches to food preparation included a range of options:
 - (a)** Processed foods (instructions on the package) that require reheating in an oven or microwave, rehydrating with water, or mixing with a few added ingredients.
 - (b)** Simple stove-top foods without instructions, such as eggs, flatbreads, fried meats, rice, pasta or steamed vegetables. These foods were often felt to be healthier than “box foods”.
 - (c)** Improvised combinations of ingredients (processed and unprocessed) for stir fries, soups, stews, roast meat or poultry, meat loaf, scalloped potatoes, etc.

Recipes, this study suggests, are not an essential requirement for the preparation of healthy food. The freedom from directives allowed freedom to experiment, which could range from adding new spices to combining familiar ingredients in a new way; this added to their enjoyment and confidence in cooking. It was a good skill to have when receiving an assortment of random foods from the food bank, for example, or to just prepare meals from foods on hand.

“He (partner) prefers to follow a plain old box recipe. He’ll do the boxed potatoes and open up a can of corn, throw it in the microwave and I’ll throw the chicken in the oven with some onions and carrots. So yes, we know how to do the basics to survive.”

To make scones (bannock) I don’t have a recipe, I just make it the old way. It’s eggs, water, flour and baking soda. You make a dough, like you add just enough flour to get it not sticky anymore. And then you get a pan about this deep and you fill it with about this much oil and then you just fry it.

“For soup, I usually boil the carcass and bones and stuff. My mom taught me pretty much, she used to do it. I’ll put celery, carrots, onion and the bits of chicken. I use one of those broth cubes in it. I cube up potatoes for them (children). Rice I put in if I don’t have any noodles. *I just put in it what I have.*”



CATEGORIZING FOOD SKILLS

CATEGORIZING FOOD SKILLS

As previously described, insights into the way participants mentally categorized foods came from the way they named them, corresponding to the form in which they were bought (e.g. “box food”, “frozen food”, “fresh food”), the way they were prepared (e.g. “microwave food”) or their perceived status (e.g. “fast food”, “real food”, “actual meal”). The words “processed” and “nutritious”, which pertain to the constituents of food, were rarely spoken.

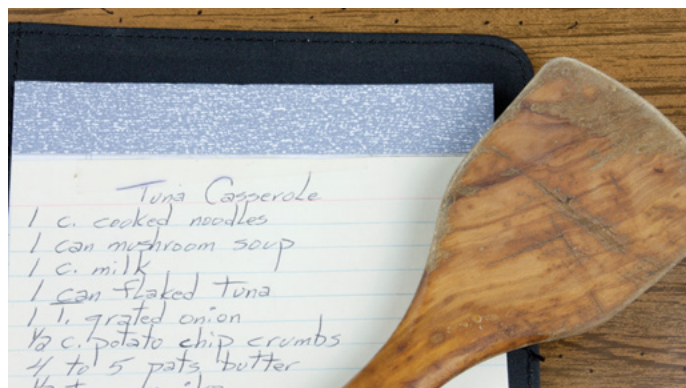
For this study, we have correspondingly created five levels of preparation skills, shown in Table 7 (page 36). The successive levels (minimal, moderate, advanced) represent the spectrum of possibilities for cooking food that was articulated by young people. Each level requires certain skills or knowledge, as well as appliances and cooking implements. Importantly, although the levels are inherently hierarchical, they do not imply that individuals adhere consistently to a certain level. In reality, as shown in the next section (Figures 3, 4 and 5, page 40), different levels were typically practiced at different meals of the day, depending on daily circumstances.

When young people learned to prepare food on their own, they would typically start at **levels 1, 2 or 3** where they could follow instructions on the package. Without a freezer but with a hot plate or kettle, levels 2 and 3 were possible. For many, preparing food at this level was an accomplishment. Instant oatmeal and pancake mix were very commonly used to make what was considered a hot and hearty breakfast on weekends, a step up from the daily cold cereal. Kraft Dinner and Sidekicks were staples for many.



Moving to **level 4** for some foods required learning from others rather than using recipes or instructions, with internet illustrations or videos as standbys for some – and a healthy dose of trial and error unless they had learned it a young age with caregivers. It was very common for young people to use a fry pan to cook eggs and bacon, especially on weekends. Confidence and satisfaction typically arose from learning to prepare food at this level, as was articulated repeatedly by participants who had discovered, on their own, how easy and inexpensive it was to cook with rice or pasta rather than their processed counterparts. Limited budgets drove this food preparation behaviour. Still, this basic level of food preparation is actually not simple, requiring experience with multiple small techniques such as breaking an egg or peeling a potato.

I don't really know what I would do if I didn't pick up those random little things that you do when you cook. Now it's like knowing how to walk and talk. It just seems like a habit.



The ability to prepare some foods or meals at the more advanced **level 5** was present in a larger than expected percentage of our study group, as shown in Figure 2 (page 37). Twenty percent of teens and 38 percent of pregnant women or young parents had demonstrated their ability (orally, by naming ingredients and methods of preparing certain dishes) at this level. Advanced skills among females were much more prevalent: 37 percent of them could prepare some foods at level 5 compared to nine percent of males.

TABLE 7: APPROXIMATE LEVELS OF ABILITY IN FOOD PREPARATION

Preparation level		Named as...	Examples	Preparation requirements: Instructions, recipes, appliances
1	MINIMAL	Ready to eat, “toaster food”, “microwave food”, “frozen food”	Toaster waffles, microwave dinners, frozen pizza, chicken fingers, frozen fries, canned pasta, frozen cookie dough, etc.	Re-heat only <ul style="list-style-type: none"> • Use freezer, toaster, oven, microwave • Follow timing and temperature instructions
2	MINIMAL	“box food”	Instant oatmeal, instant noodles, instant potatoes, minute rice	Reconstitute with water <ul style="list-style-type: none"> • Need kettle only • Follow measuring instructions
3	MINIMAL	“box food” - mixes	Pasta mix, pancake, cookie & cake mixes, condensed soup	Follow instructions on box <ul style="list-style-type: none"> • Involves some measurements, mixing, boiling, timing, temperature setting • Need some additional ingredients • Need stove/hotplate, oven, pots and pan Can experiment by adding spices, other ingredients
4	MODERATE	Single ingredient “real food”, “fresh food”, simple stovetop cooking More perishable ingredients	Eggs, sausage, fried meat, steamed fresh or frozen vegetables; potatoes, rice, pasta. Can add processed ingredients such as canned sauce or cheese Also includes home-made salads and blender drinks.	No or few instructions <ul style="list-style-type: none"> • Need fridge, stove or hot plate, pans, pots; can use grill, deep fryer • Boil, fry, steam • Often no recipes, but need to know quantities, timing and temperatures • Requires knowledge of food safety Provides a sense of “real cooking” to make simple meals. [Clear distinction in terms of greater “health” value and lower cost by about half of study group.]
5	ADVANCED	Complex from scratch “Real” or “actual” meal; [high status]	Any dish cooked or baked with two or more minimally- processed ingredients. Includes oven-roast chicken, meat or vegetables.	Recipes or no recipes <ul style="list-style-type: none"> • Can use a variety of appliances and kitchen implements. Slow cooker enhances improvisation.

FIGURE 2: MAXIMAL FOOD PREPARATION ABILITY OF STUDY PARTICIPANTS
(Levels were assessed by the researcher, and are derived from Table 7.)

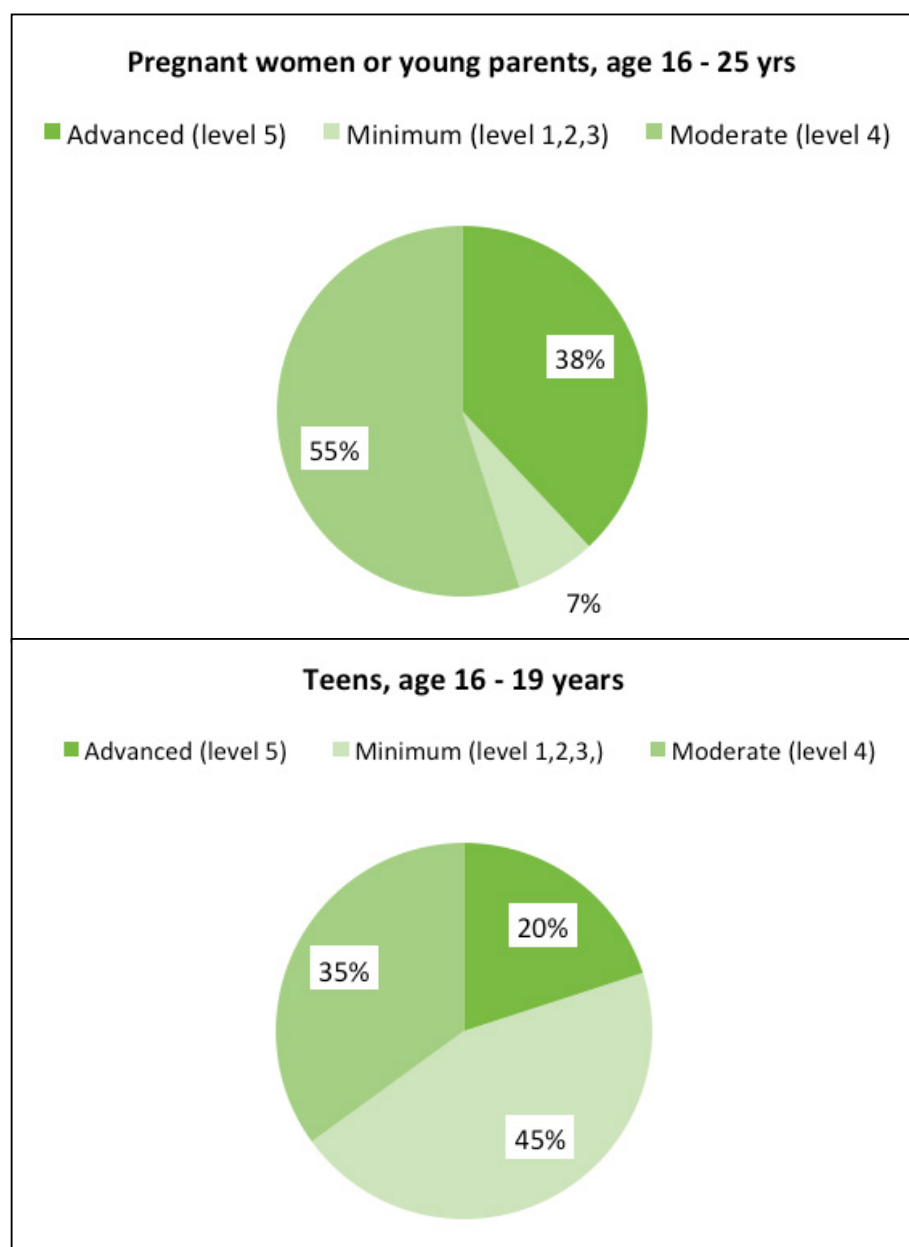


TABLE 8: WHO CAN STUDY PARTICIPANTS COOK FOR?

Self only	41%
For family	41%
For several people	18%

FOOD SKILL LEVEL & DIET QUALITY

THE QUESTION OF FOOD SKILL LEVEL AND DIET QUALITY

Could the categories of food preparation skills in Table 7 (page 36) be linked with the health value of daily meals, and consequently, over time, with dietary quality? We did not do dietary assessment by traditional methods in this study, nor did we ask about body weight. We wanted our subjects to talk to us freely about what they could and did prepare and why, letting their own meanings and understandings inform us. Nevertheless, we were able from our data to assess each participant's preparation ability level, using the criteria developed in this study. As well, this study includes an analysis of participant responses to the initial interview questions asking what they prepared for breakfast, lunch and dinner on a typical day, and how that might vary during a week (Figures 3, 4 and 5, page 40).

What we found was that their maximum food skill levels did not necessarily coincide with what young people consumed on a daily basis, for a number of reasons:

1. Some participants had learned to cook at a young age, and could function impressively in a well-stocked kitchen such as the one they learned in (parents' or relatives' home, group home, etc.). However, after transitioning to their own place without the same amenities, without sufficient income and/or without personal inspiration to prepare food for themselves, their food skills were less likely to be put to use.

"(In the place I was living before) I was living with a lot of other people so I cooked and baked for them in that big kitchen. I'm not trying to brag but I am a good cook and a good baker. Now I don't do it very much because now I am buying my own groceries and I'm not very good at shopping for myself. And I work a lot and I don't have time. Well...I do have time but I am lazy. It's harder to cook for yourself than for fourteen people. I do like cooking, just not for myself."

"No, I don't have stuff like that, like I don't have baking soda or baking powder or flour or anything like that. The thing is, if I was like "I want to go bake cookies today", I couldn't because I would

need some baking pans too. Like when I lived at home, I made cookies by myself quite a lot because the ingredients were at home. It was very easy to make."

2. On the other hand, young people who lacked food skills still could eat healthy meals at community programs on a regular basis if these were available and accessed.

3. It was common for teens, especially those in special school programs, to prepare food in different locations over the day, which influenced what they prepared. The following 17-year-old could prepare food at an advanced level, but only used these skills when she had time to make an "actual meal". Her diet was otherwise dominated by preparation at levels 1 to 3.

"At the school kitchen usually I just make simple things like box foods or a can of something. But if I was at home I would make something nicer. Like if I'm in a rush I'll just make like chicken nuggets or fries or some other microwave food, but if I actually have time I'll make like an actual supper, an actual meal like for my family because I like to cook. And sometimes I'll make like a big stir fry like where you cook rice and then you cut up all the meat and cut all the fat off it, and you prepare the vegetables, fry up all your vegetables, add the meat, put in your sauce and mix it together. That's one of my favourites is stir fry."

Notably, even the more advanced dishes described by participants often included processed ingredients. For example, as illustrated in the quotes below, the canned soup made the scalloped potato dish possible without preparing a complex white sauce; and using instant rice allowed the preparation of a stir fry meal with only a single-burner hot plate.

"For scalloped potatoes, we just make them. We just chop up potatoes and onions and we put spices and cheese and stuff and then we put like cream of mushroom soup on top and we just put it in the oven. It's pretty easy."



I love making things with rice, like stir fry. I make 5-minute rice and I just cook that up. I don't have many spices. I always use salt and pepper. With the rice I make normally chicken or meatballs. I make a stir fry on the hot plate. I fry the chicken pieces up golden brown first and then I cut them into strips and then fry them up more with my vegetables and stuff, like peppers, onions, garlic.

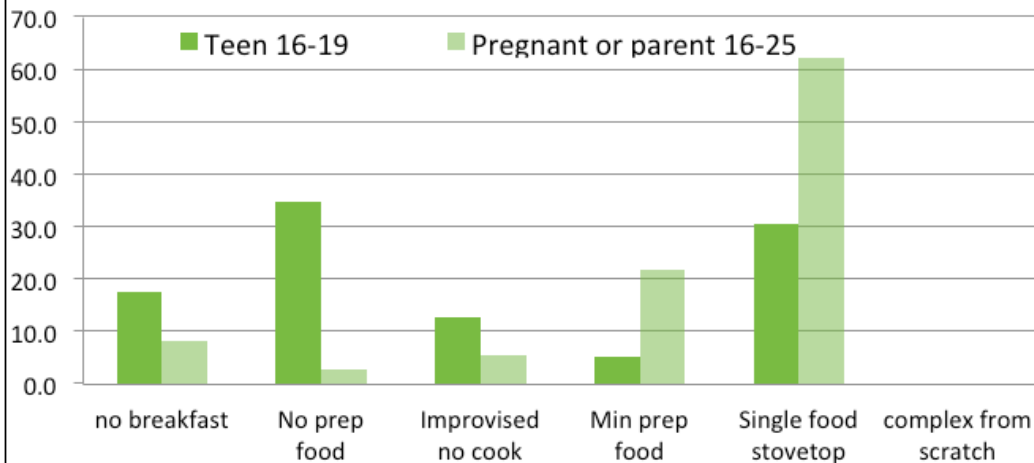
Figures 3, 4 and 5 (page 40) illustrate the profile of different types of food preparation for breakfast, lunch and dinner among our study participants, comparing the two priority groups.

- From the breakfast data it is clear that a large percentage of young people could, and frequently did, prepare stovetop foods for breakfast, although these might be accompanied by, or alternated with, foods like frozen hashbrowns or ready-to-eat cereal. These data indicated a shift in typical breakfast food preparation practices between teens and the pregnant-or-parent group, where the latter were more likely to make food that was somewhat more time-consuming to prepare and eat (e.g. instant oatmeal, stovetop foods).
- Lunch time showed a clear difference between these groups as well, since teens were more likely to purchase food at or near the school than prepare it themselves. Both groups often prepared sandwiches for lunch, but parents were also inclined to prepare simple stovetop foods like canned soup. Very little complex meal preparation happened at lunch.
- Dinner was where more complex food skills came into play for almost all study participants, including single stovetop foods and mixes (levels 3 and 4) but also more complex meals with more ingredients (level 5). Thirty percent of adolescents who lived at home said they frequently helped in the kitchen with preparing food.

In summary, these data indicate a rather complex interplay between different levels of food skills and actual food preparation practices throughout the day. Overall, there was a clear shift towards more advanced food preparation from adolescents without children to young people who were expecting or had children. This shift may increase the likelihood of healthier meals.

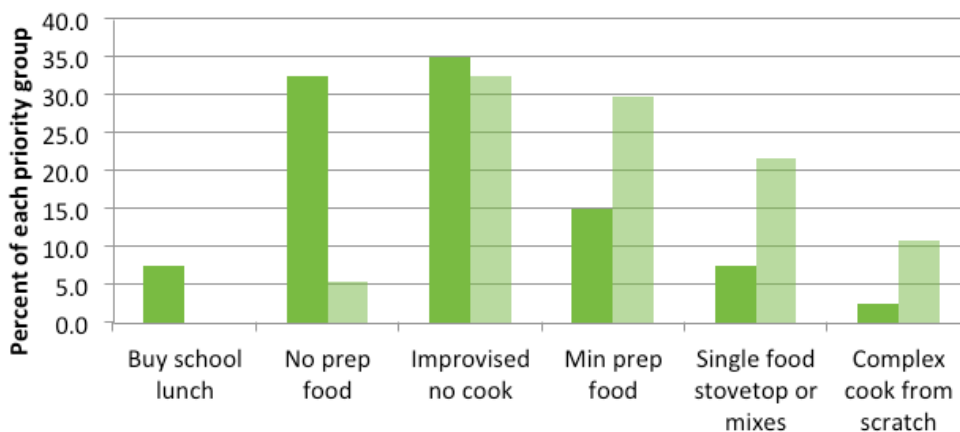
The data also inform us that it was the mid-day meal when respondents tended to consume the most processed convenience food. This trend illustrates, not surprisingly, the influence of place on the types of food prepared and consumed, since most schools and workplaces offer few kitchen facilities, if any. It suggests that overall dietary quality could be improved if fridges and microwave ovens were made available at schools or other settings, enabling people to store or re-heat healthy lunches from home. Healthy eating strategies could include preparing meals in larger quantities at home, leaving leftovers for lunch the following day; this was something that several of this study's participants said they did.

Figure 3: Degree of food preparation for typical breakfast



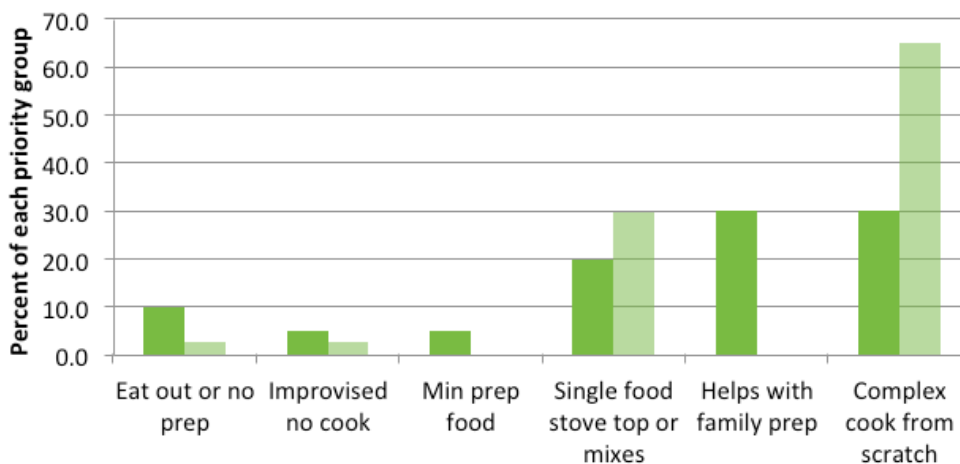
No prep food = cereal, yoghurt, toaster food
Min prep food = reconstitute (e.g. instant oatmeal)
Improvised no cook = smoothie, sandwich
Single food stop top or mixes = eggs, bacon, pancake mix

Figure 4: Degree of food preparation for typical lunch



No prep food = ready to eat, packaged food
Improvised no cook = sandwich, salad, grilled cheese
Min prep food = reconstitute (e.g. canned or instant soup); frozen fries, pogos, nuggets
Single food stop top or mixes = KD, veg, rice, hotdogs, burgers

Figure 5: Degree of food preparation for typical dinner



Eat out or no prep food = ready to eat
Improvised no cook = salad, sandwich, smoothie
Min prep food = reconstitute, reheat (*kettle, freezer, oven*)
Single food stove top or mixes = KD, meat, veg, potato, pasta, rice

Ways of Learning

The previous sections laid the groundwork for the way young people tended to talk about what food and food preparation meant to them, and what types of meals they tended to prepare (or not) over the day. This led to the questions, posed throughout the interviews, of what their sources of learning were, how they are continuing to learn and what they wanted to learn in the future. There were challenges to learning as well; these are presented in Section C2(e), page 59.

Four main sub-themes that emerged from the analysis of ways of learning were:

- i. **Past and present sources of learning**
- ii. **Self-directed learning: Improvisation, adaptation and exploration**
- iii. **Future learning**
- iv. **Confidence level and age at which food skill learning started**

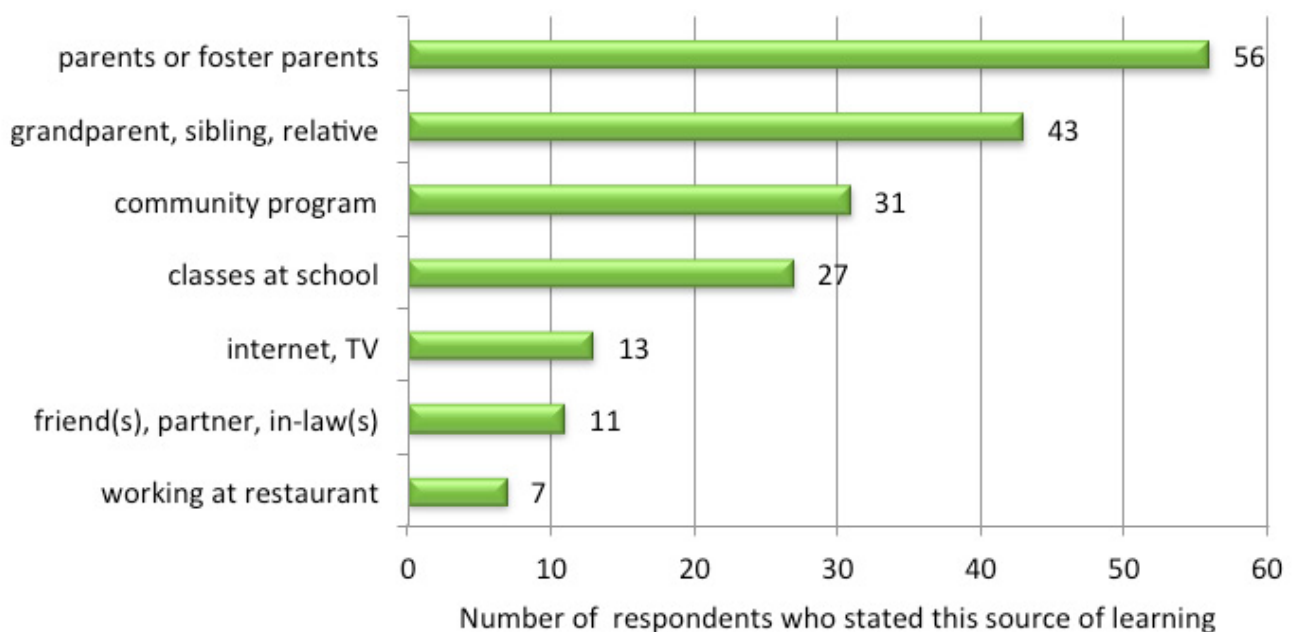
PAST AND PRESENT SOURCES OF LEARNING

Study participants were asked about learning in two ways: (a) near the beginning of the interview, how they had learned what they could currently do, and (b) towards the end of the interview, what they thought were the best ways for young people in general to learn about food skills. This section combines the responses to these two questions, offering a few select quotes from a large collection of extremely thoughtful expressions of experience and ideas.

Figure 6 profiles the total number of responses to the question of where young people had learned the food skills that they had. Quotes to illustrate these categories follow.

Figure 6: Sources for learning cooking skills

Number of sources per person ranged from 1 to 6



FAMILY & COMMUNITY PROGRAMS

1. Parents, caregivers, grandparents, siblings, relatives, partners, friends and in-laws were by a major source of information, pointing to the importance of learning directly from others. Grandmothers were most frequently mentioned as go-to people for cooking instructions, tips and cooking utensils.



I: If you were shopping by yourself for food do you think you would know what to get?

R: I don't think so. I have to learn when I go in there (grocery store) what I should I buy. To be honest I want to learn everything that they (family) are making because if one day I am by myself and I want to eat something and my mom is not with me so maybe in the future if I live by myself so if I don't know how to cook something and I am going to starve.

I: What is your plan?

R: I am trying to learn everything from my sister slowly and sometimes maybe from YouTube.

"I'd say that I just copied her stuff because she would always do this thing with ground meat. Like I would watch her do it, like garlic, onion, ground meat and she would cook it up and let that fry for a little while and then she'd add green, red, orange, yellow vegetables to it and cook that up. That was her spaghetti sauce. I watched her do it for years and now everyone is like "I love your spaghetti sauce, what do you put in it?" I don't know. I just copied my mom."

"(Mom re adopted teen daughter who is mentally challenged) At home she likes cutting up vegetables and stuff. We eat a lot of raw

vegetables too so she prepares them. She helps cut up potatoes because we cut potatoes up in little cubes and then put them in the frying pan with vegetable oil and we fry them up and then put barbeque chicken stuff on it for seasoning. She looks after that on the stove. She flips them around and stirs them up and stuff. She does that. She does a lot of stuff in the kitchen. Like this weekend we are going to be making apple pie and applesauce. And it's usually just her and I that go shopping so she does pick out stuff. I'll give her a couple of things at a time to go and get and she'll go around the aisles and find it while I'm picking up other stuff so she knows, she can do that."

Regarding the next two categories, school classes and community programs with cooking components were spontaneously mentioned by about half of respondents as sources of learning for them, as well as for others.

2. Community programs: There were 31 comments from participants who experienced community programs with a food component, and all were positive. It is clear that community cooking programs made a major difference for those who were motivated to learn more about food preparation at the time when they were facing the reality of moving away from home, becoming pregnant or having children. A few from the rural areas said that they lacked programs nearby and would have to drive far to attend, and two said the cooking programs available to them had a fee and were too expensive.

"Well, the biggest one that I like to use is the *Boys' and Girls' Club* because honestly there are specific programs for kids who want to learn how to make healthy meals, maybe kids who want to learn how to prepare a snack to take with them to go play some sports with their friends. It's just little things that they learn. Little things at a time because people have a hard time taking in a lot at one time but if you teach them one thing at a time, maybe if you make a new snack every Monday for a year you would learn fifty-two new things. It seems a lot at once but if you do it one thing at a time you can learn how to do every single thing."

FOOD CLASSES

"I took a foods class at school for two years and then when I was pregnant, *Building Healthy Babies* used to do cooking classes so I learned some stuff there. That was good because I realized I had to cook for myself so I might as well learn to cook certain things."

"It is because of those (community) supports, a person is going to learn that skill. It's just like you learned how to walk and you walk for the rest of your life. You learn how to cook and you are going to be cooking for the rest of your life. You need to eat every day. So if you are taught in simple ways that's easy to remember, patterns of how you do things like how you cut onions and tomatoes – like I showed my sister how to do it and now she has no problem to do it."

I: So what was the scene at first in your new place?

R: A can opener. A pot and ... presto. Canned soup.

I: You've obviously learned to diversify a fair bit. How did that happen?

R: My grandmother started coming over and helping me cook small things, and then when I had my first child *Building Healthy Babies* came in. My home visitor would come in and teach me how to make a meal.

"With *Healthy Babies* I go to a cooking class twice a week at the church. It's for families and every second Thursday so they buy all the food and everything. They provide childcare, it is from 9 to noon and we make something new every time and then we get to bring it home for supper. Last week we made chili. It's just nice to get out and interact with other young moms my age because we are still all learning. Like I said cooking for two it gets repetitive, so I am always trying to think of new things to make and I want to make sure she (daughter) is going to like it and it's affordable."

"So like the cooking classes here they help a lot. I know a lot of my friends never knew how to cook, and they took a cooking class here and then they are like 'okay, now I can cook a little'."

My way to learn would be like someone showing or telling you, someone who is right next to you when you do it the first time.

3. Learning at school: Out of the whole study group, 60 percent had taken Foods or cooking classes at school. Out of these, 88 percent said they found the classes helpful. The majority responded positively when asked if food skills classes at school should be mandatory. Some said that not all students are motivated to learn this while in school, but rather when they move out on their own. There were several comments about the need for more practical food skills rather than theory only.

"I took grade nine Home Ec and I think if that was a mandatory course for every kid in high school they would learn a lot. There are a lot of kids living out on their own and they don't know how to cook and I think that maybe if we had made that a compulsory course even in elementary school I think it would just educate them so much more."

I think foods classes should be mandatory in high school. I think so. I learned quite a lot of different recipes in foods class. I loved them all. They were great ways of having an affordable meal while feeling like it's an expensive meal.



"Some of the schools that I have been to the cooking teachers haven't really been the greatest because they don't really know – I feel like they don't really know how to teach kids how to do it."

"The class was called *Food and Nutrition* so every Wednesday we would cook and we would do labs and stuff. I still have my book, actually, with all the recipes. We would have units on nutrition, one on eating disorders, just everything around food and nutrition. Like safety in the kitchen, like not to cross contaminate, all that stuff like that."

"At school we make the rolls, we make the soup, we make the full entrée meal and then the teacher sells it down there, like students can come in and say 'oh, I want soup' or like yesterday 'I want a BLT'. So it's like \$2 for the BLT or \$5 for the whole meal including dessert."

"I took cooking classes in school but it was mostly book work. We didn't do much hands-on cooking ourselves. It wasn't very helpful."



4. Peer teaching and learning: Other ways to learn food skills that were mentioned were teaching others and creating friend or peer networks. Such informal interactions could be encouraged through clubs and community groups.

"I have friends that come over. On Fridays I meet up with a couple of different friends and we make a new recipe which has been quite successful and delicious. We've been doing that for about a month now. We try to do that once a week but sometimes it's once every other week whenever we can meet up."

"What I really miss out on is silly little tricks that people know. My friend was over the other day and I was trying to peel garlic and I was doing it I guess the slow way and she's like 'no, just put a knife on it and bash it'. I didn't know how to do that. It's a pretty simple trick but I just feel like I missed out a little bit because I never got those things from my mom, like that passed-down knowledge. That's why I am hooking up with other women and doing it."

5. Internet or TV as a source of food skills

information: The internet, especially YouTube, was an automatic go-to strategy for young people to look things up, but not all found it useful. Some relied on the internet for specific pieces of information, but they tended to be the ones who already had basic food skills. Several others pointed out that on-line or TV cooking demonstrations could be intimidating (e.g. showing gourmet dishes and expert chefs), confusing (when instructions are not clear, or too fast) and frustrating (when unfamiliar or inaccessible ingredients are called for). Nevertheless, electronic media could be useful tool if targeted specifically at new learners by illustrating basic food preparation methods in a detailed, step-wise manner.

"I am more of a visual, hands-on type learner. I have attention-deficit disorder so I have a hard time focusing and paying attention to things. So like rather than reading it off the computer and trying it myself, I'd rather have someone there to do it with me, type deal."

"I don't like getting recipes from the internet. Everyone says to look on-line but when I find something on-line it never turns out the way it looks in the picture. I'd rather learn hands-on."

"Like sometimes if I see stuff on TV it's like they have this one show called Chopped and it's like they give you just four random ingredients and these people are competing and a lot of the ingredients are like unheard of and they make good food out of it. So sometimes I'm like 'I wonder what that tastes like' but you don't get it from Sobey's or Walmart. You would have to go to the market or something like that to get it. But it's scary sometimes when you want to try new things."

Key points made about food preparation classes:

- A little over half of the study sample suggested, without prompting, that the best way for young people to learn food skills if they did not learn at home was cooking classes, both in school and in the community.
- Several respondents mentioned that community classes should be widespread, rural and urban, and not just short term (“a few weeks is not enough”).
- It was commonly felt that public cooking classes should be free or low cost.
- Personal instruction by a teacher is important for many people who want to learn hands-on skills.
- Most said school classes should be mandatory, but others said that people who are not interested while they are in school should have classes available in the community later when they do become interested.
- The main goal should be “to feel comfortable, confident in the kitchen so you’re ready when you go out on your own”.
- Starting young with cooking may lead to greater confidence later on.

The nature of food skills classes: suggestions from participants

- It’s good to start young with cooking.
- Go with recipes/meals/ingredients that the participants themselves identify.
- Focus on step-by-step hands-on learning (especially for those with a learning disability).
- Target food skills courses at people who leave home because that’s when they become interested.
- Balance information about healthy eating and food safety with actually preparing food.
- Provide culinary classes for credit at school that can prepare students for a career.
- Include food shopping skills.
- Cooking and eating the meals that you cook, or bringing it home, is really effective.
- Youth groups or clubs where cooking takes place have the potential to engage children and stimulate their interest through fun activities, where they might otherwise not be interested in food preparation.



SELF-DIRECTED LEARNING

SELF-DIRECTED LEARNING: IMPROVISATION, ADAPTATION AND EXPLORATION

A key finding from this study was the high value place by many young people on the ability to prepare simple meals with whatever ingredients are on hand, as well as the ability to counteract the sameness of processed food with personal creativity in the kitchen. Interviewees were asked if they ever liked to experiment with food ingredients, which unleashed a large number of stories and examples of imaginative efforts with food.

Several people talked about trying new recipes, food or spices (26) ; some gave examples of how they created dishes with what they had on hand (15); others had successfully achieved modifications of previously-used recipes (12) and several explained how specific appliances (blender, slow cooker or crock pot) helped them to improvise with little risk of spoiling a meal (9).

The tendency to explore, improvise and adapt in food preparation is, arguably, an indicator of resilience. It manifests attitude to cooking that involves active learning and enhanced confidence, enjoyment, and control.

“Sure I experiment quite a bit. I made sesame ginger chicken, and salmon I have yet to experiment with but salmon is something that’s up there. Actually I have made a couple different kinds of salmon. I made Caesar salmon – not that great. I made spinach and goat cheese salad with mandarin oranges and a bunch of other stuff in it – it was really good. And mashed cauliflower.”

“I make my own pancakes and put berries in them and stuff. It’s from a box recipe. It’s not like I’ve got the flour and salt and stuff like that.”

“Just like if I want to make chili and I don’t have ground beef or something then I make a vegetarian chili. I sauté the green pepper, red pepper, mushrooms, onions, garlic and then to the oil I add the cumin and the chili powder and

then tomato paste, diced tomatoes and I usually use canned kidney beans but you don’t feel like you are missing out. Like to me I don’t feel like I need meat every day.”

“My dad really didn’t do much cooking so I just picked it up and I liked it because I cooked for my little sisters. And my favourite was macaroni and cheese back then so then I started cooking more and I got a little risky and I added hamburger to my macaroni and cheese and that’s how it started, hamburger and macaroni and cheese, that’s my dish.”

The slow cooker is definitely my favourite thing in the kitchen because you just cut everything up, doesn’t matter what you have, you throw it in the pot and it sits there for six hours, but at the end it’s really good.

“I play basketball so I usually mix like strawberries and a banana in the blender and put in some milk and it’s pretty good, so I’ve got something high protein to keep me going.”

“I taught myself pretty much. My mom can cook a couple of things but I didn’t learn how to cook from her. My dad can cook, but he didn’t teach me or show me. I’ve been on my own probably since I was fifteen so since then I’ve been learning stuff on my own. I get ideas about ingredients from different places.”



YOUNG PEOPLE WANT TO LEARN

WHAT DO YOUNG PEOPLE WANT TO LEARN?

The study participants were asked if there was anything they would like to be able to prepare or learn. Their responses were varied and again revealing of the meanings they attach to food and the broader context of it.

More complex, broadened food skills (23 respondents)

Several respondents just wanted to create more varied dishes, but some had fantasies about being able to cook a whole holiday dinner for their family, make food for a party, create a special decorated cake, or make food with special meaning .

"I love to cook new things. I would love to do it. It would broaden (child's) taste buds rather than like when I was younger, like I never really – I don't know if I wasn't introduced to it or I just didn't like it, you know what I mean. I would love to be able to cook Mexican and Chinese and all that stuff rather than oh, I want Chinese, I have to go buy it at the restaurant which costs a lot of money too. Like take-out is definitely a lot more than making it yourself."

"I really want to learn how to make gnocchi because I have tried it before and it did not work out. It's made with potatoes. My dad has a vegetable garden and we had like huge potatoes that were like this big and you had to cook them and then we made gnocchi with potato skins because we didn't want to waste the good potato skins and then we froze them. It took forever and the amount of potatoes that you actually use is so little but it actually makes a lot of pasta. So I really want to learn how to make it. It looks fun."

Making basic foods (10 respondents)

R: Like I don't even know how to put ground beef in my sauce. I wouldn't know how to make a meat sauce. I just know how to take the tomato sauce out of a can, dump it in a pot and heat it up.

I: Would you like to know how to make that?

R: That would be pretty cool, have different kinds of pasta instead of the same thing over and over again.

Return to family meal or traditional dishes (9 respondents)

"The (Aboriginal) corn soup can have any kind of vegetables you have on hand but everything has to be put in a certain order. I don't have a recipe for this soup. I had asked someone for a recipe but they wouldn't give it to me because it is a family recipe and it can only be given to family members. I have some family still living on the Res so I have been trying to get in touch with them to see if they have a recipe for corn soup that I can have. I would like to learn how to make corn soup from my family who live on the Res. I want to make my own Indian tacos from scratch but I need a special kind of yeast that can only be bought on the Res. I will have to go the Res."



Prepare for food-related job (8 respondents)

"If there was like a culinary program where I could go to school and get the rest of my credits through cooking, kind of like an apprenticeship for high school. Something like that would help, then I would be able to get my high school diploma."

But I have to learn it anyways because (after high school) I am going to open my own daycare so I am going to take Culinary. That's why I'm doing it for, like learning to make little snacks and whatever and foods and drinks. So I am going to need to know that.

CONFIDENCE & AGE

CONFIDENCE LEVELS AND AGE AT WHICH FOOD SKILL LEARNING BEGAN

All participants were asked how old they were when they first started preparing food, as a way to lead into how, where and from whom they had learned.

TABLE 9: AGE AT WHICH PARTICIPANTS STARTED TO LEARN TO PREPARE FOOD (N=85)

7 – 12 yrs	39%
13 – 15 yrs	29%
16 – 19 yrs	29%
20 yrs or older	3%

Ten respondents described situations where as young children they took over the role of cooking for themselves and/or younger siblings when parents were absent or too busy, or where culture dictated that girls should learn food skills at a young age.

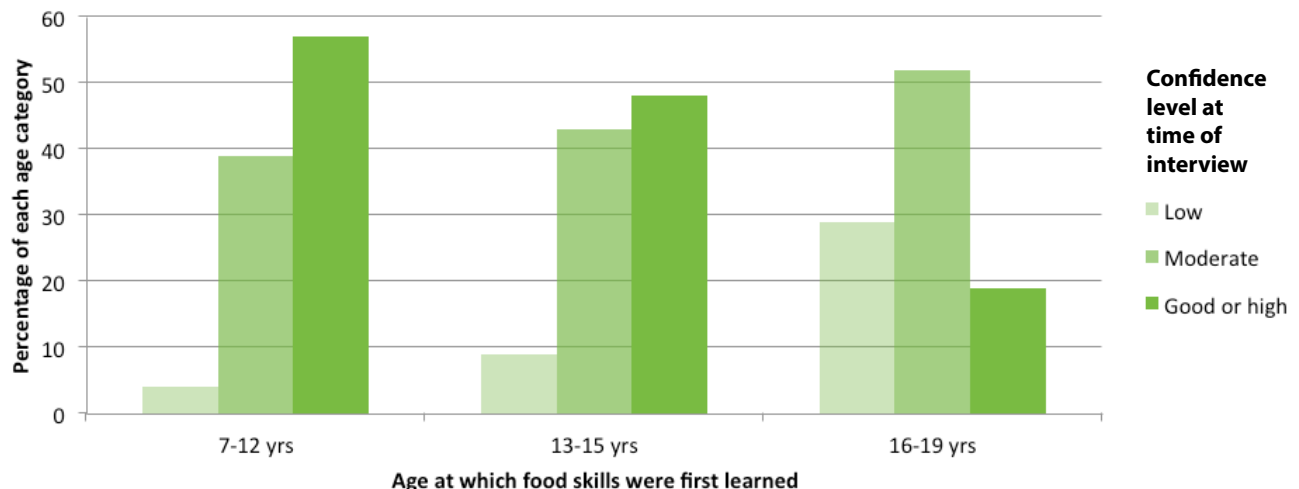
The slow cooker is definitely my favourite thing in the kitchen because you just cut everything up, doesn't matter what you have, you throw it in the pot and it sits there for six hours, but at the end it's really good.

"I think my mom had us in the kitchen at nine or ten. Once my baby sister came around, my brother and I we were ten so it was time to do our own laundry, be able to fend for ourselves, make our own lunches, sandwiches and stuff."

Confidence in cooking skills was estimated over three categories: low, moderate and good/high. This was estimated by the way that interviewees spoke about preparing food and responded to the questions in general, without a formal confidence scale (confidence assessment was not originally planned, but its importance emerged during the study).

Estimated confidence levels at the time of the interview by the age at which food preparation was started is depicted in Figure 7 below. The overall trend seems to indicate that learning food skills at an early age is associated with greater confidence around food skills in later years. The lower levels of confidence at an older age of initiating food skills may be explained by the fact that most study participants were in the 16 -19 age group themselves, so if they also first learned to prepare food during those years, they would not have had much time to gain experience or confidence in this area. The significance of this preliminary data might be to encourage learning of food skills in earlier years, so that people can enter their teen years with a greater degree of resilience.

Figure 7: Estimated level of confidence in food skills by age at which these skills were first learned



Summary points about learning food skills

- The majority of young people in this study:
 - * said that food preparation is an important life skill for everyone
 - * named school as an important place to learn these skills.
- Acquiring food skills requires experiential learning. Regular, one-on-one teaching by parents, relatives, partners and/or friends was described by respondents as the best way to learn.
- Learning food skills at an early age may lead to greater confidence in food preparation in later years.
- Youth named basic cooking skills with practice as essential for school programs, but often lacking (nutrition and food safety seen as important but not enough).
- Community cooking programs were praised by those who have access to them.
- The internet was not found to be a useful substitute for inter-personal teaching.
- Recipes are not a learning method of choice.
- Improvisation in the kitchen was commonly cited as a valuable skill, as it enables flexibility, adaptability and creativity.



ENHANCE RESILIENCE

Strategies that enhance resilience: dealing with food insecurity, life change and parenting

The concept of **resilience** has increasingly been explored, tested and defined in various contexts, although not widely yet in the area of food, food security or diet. Duffy et al. (2009) have looked at the “enhanced psychological well-being” aspect of resilience and shown that it may promote healthy dietary habits. Canadian researchers Vesnaver et al. (2012) have studied *dietary* resilience with seniors, defining it as “the development and use of adaptive strategies that enable an individual to maintain an adequate diet despite facing dietary challenges”. Key themes of dietary resilience were found by them to be prioritizing eating well, doing whatever it takes to keep eating well, being able to do it yourself, and getting help when you need it. Smith B.W. et al. (2010) define resilience as “the ability to bounce back from stress”, and have developed and tested a number of health-related measures, calling resilience “an important personal resource to examine in future studies and target in interventions”. In yet another angle, Wexler et al. (2009) explored how “group affiliation” can be an effective strategy towards greater resilience in youth who feel marginalized. This could be further tested in terms of the potential of regularly cooking and eating together as a group to enhance resilience (countering the effects of isolation and enhancing skills). The Learning Partnership⁵, for their professional development module on *Understanding Resilience in Schools*, states that “resilience is the capacity of children and youth to navigate towards resources they need and to negotiate the use of these resources.” They cite seven core elements of resilience for youth as positive relationships, sense of identity, self-efficacy, social justice / to be treated fairly, access to basic services, cohesion/spirituality and culture.

In this study, not surprisingly, we heard from young people about situations of change and insecurity that affected the foods they acquired, prepared and consumed. We also heard how they developed strategies to mitigate these situations, or deal with them as best as possible. Such strategies, often

small and simple, collectively contribute to resilience through a sense of control, or of taking deliberate positive actions that increase the likelihood of successfully weathering change. So, in addition to statistics about the percentage of participants who say they run out of money for food, it is important to understand the range of ways in which they confront this circumstance, as well as with what specific challenges they still need help. Similarly, it is of interest how young people deal with the food-related issues inherent in new (often limited) housing arrangements, pregnancy and child rearing.



These findings have informed our food literacy definition and models (pages 68-70), as well as the strategies that we have recommended for action (page 71). We hope that these data will inspire further studies on how food skills and food literacy can build not only better diets, but a degree of resilience that can help tide young people over during the inevitable times of change and insecurity.

In this section, we highlight three main themes that encapsulate what young people told us about their food-related strategies. The first two in particular have the potential to enhance their level of resilience. The section on parenting also illustrates strategies used by young parents that could arguably strengthen their children’s resilience as well. Challenges are discussed on page 59.

- i. Preventing food insecurity and eating healthier**
- ii. Responding to life changes**
- iii. Parenting**

⁵ <http://www.thelearningpartnership.ca/page.aspx?pid=820>

PREVENTING FOOD INSECURITY

PREVENTING FOOD INSECURITY AND EATING HEALTHIER

All participants in the study group were asked, near the end of the interview, *Do you sometimes run out of money for food? If yes, how often? What do you do then?*

Figure 8 shows how the responses compared by group. Most teens who said they never ran out of money were still living at home. Frequent lack of money for food was more common among teens living on their own. Among pregnant young women or young parents, the distribution was more even, with only 10 percent saying they frequently ran out of money for food. The latter group demonstrated a greater range of strategies for preventing food shortages, such as the ones described in the following pages.



Figure 8: How often respondents said they run out of money for food

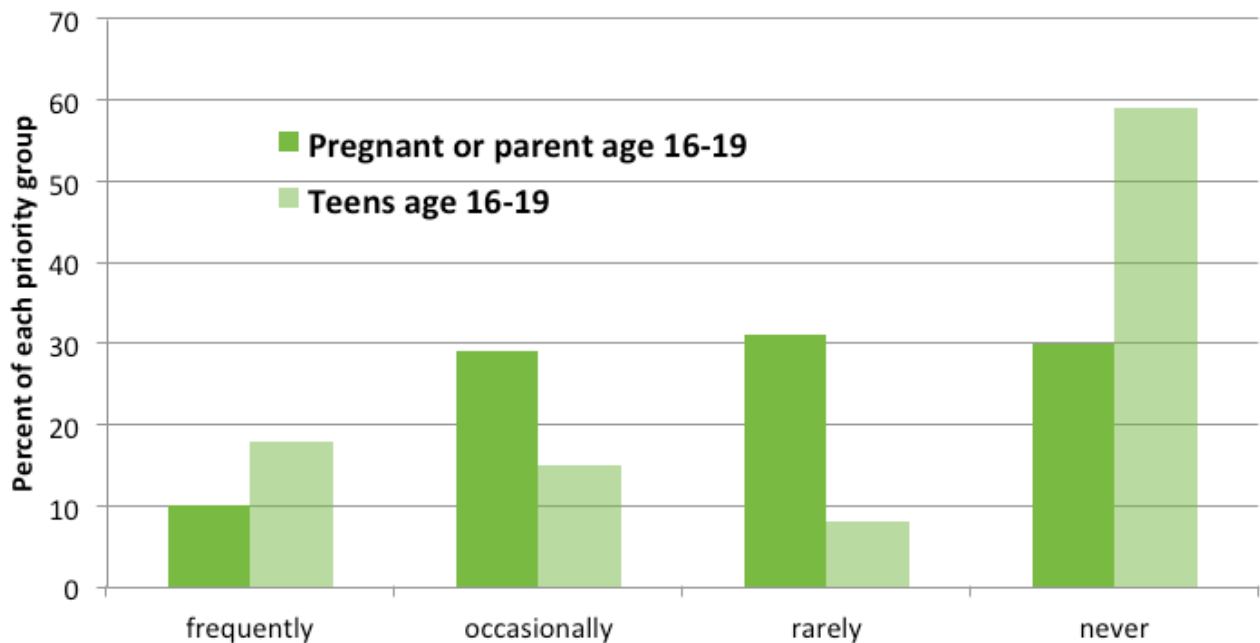


TABLE 10: STRATEGIES FOR MANAGING ON A LIMITED BUDGET

Subtheme	Number of respondents who used strategies for this theme	Key strategies mentioned by study respondents
1. Food preparation strategies, resources	51	<ul style="list-style-type: none"> • Preparing large amounts of food (“a big pot”) and dividing it up for other meals • Improvising with what you have • Using a mix of fresh ingredients (e.g. meat) and processed mixes or coatings • Having key appliances that enable time saving and minimize guess work (e.g. slow cooker, blender) • Avoiding a microwave – minimizing temptation to buy convenience foods • Starting with simple or boxed foods and getting more creative or experimenting from there
2. Food shopping strategies	39	<ul style="list-style-type: none"> • Buying food in bulk and freezing it or stocking up (need freezer) • Buying lower priced food, choosing unprocessed ingredients instead of pre-packaged (e.g. salad ingredients); buying beans instead of meat • Planning food shopping in advance according to meals or specific healthy foods, rather than buying spontaneously and then eating spontaneously “out of the fridge” • Investing in bags of flour or rice which cost more up front but last long • Calculating the total cost during shopping to match with the amount you have
3. Managing limited food resources	19	<ul style="list-style-type: none"> • Using food banks or getting meals from community programs • Getting food or money from family • Budgeting in advance and not wasting money or food (e.g. eating leftovers) • Eating out minimally; bringing lunch from home • Learning by doing -“getting it down pat”

What young people in this study said about their strategies for managing on a limited budget revealed considerable inventiveness about food shopping and preparation. Several respondents talked about a personal evolution from uncontrolled buying and spontaneous eating (*“eating out of the fridge”*) towards the discovery that planning ahead led to better use of a limited food budget (*“getting it down pat”*, as one young mother said). For the most part, these responses illustrate basic skills for

building resilience and eating a healthier diet at the same time.

Strategies ranged from the immediate solution of getting food from food banks, programs, friends or relatives to the longer-term (and skillful) solutions of using money resourcefully and preparing their own food from low-cost ingredients. A number of respondents used the phrase *“fending for yourself”*, implying situations where previous supports

disappeared and they had no choice but to look for new ways to manage. The following quotes illustrate the range of strategies in Table 10 (page 52):

1. Food preparation strategies, resources

"I did eat out a lot prior, when it was just myself, because it was easier, right? That does add up (in terms of cost) and you are not getting really anything that you need nutrient wise. In terms of like if you are going to buy (ingredients for) well-balanced meals, I feel that's affordable. And if it's some-thing that you can get leftovers out of, so much the better. Like I freeze a lot of my leftovers and stuff just because sometimes I don't have time. I mean I can get more than one meal out of (one prep time)."



2. Food shopping strategies

"I think it's good to have an idea of what you are going to eat before you go (food shopping). Like if you were to go to Costco and buy let's say chicken breasts in bulk, well dividing them up already and saying 'this is going to go for this, this is going to go for this' and you already have a plan, you are not kind of eating out of what's in the fridge, you just eat what you need."

R: There are a lot of the same things that I buy all the time. 'Cause one week I'll do all my meat and freeze it, and the next week my canned stuff if it's on sale. I always still have like Kraft Dinner and things like that just to have in the cupboard. And other times when I go I know I need just vegetables and fruit. Now I am getting it down pat.

I: Getting it down pat?

R: I am, yes. I am into a routine now, like at the grocery store I have my way that I go around and what I get. There's a lot of the same things but it's all good. I know what I'm getting 'cause I plan it.

"I calculate like every time I put something in the cart I see how much money I'm losing so I'll be like I only have \$59 left now and then \$54. I just keep going down and when I get to the last \$5 I stop just in case because of tax and stuff."

3. Managing limited food resources

R: I spend \$150 on food and about \$50 on myself. It lasts for about two weeks, one week, it depends on what I get.

I: What happens after that?

R: I just go to the mission and stuff. It's usually the last week that I'll have to fend for myself.

I: What do you do to fend for yourself?

R: Just call up auntie and be like 'auntie, come over'. She'll bring food over and drop it off.

"My mom gave me a bag of flour the one day so I have flour. She didn't need it all so she was like 'here, you can have it'. 'Thanks, mom'. She lives right across the street so if I need anything or if I run out of anything I just run over there."

"When they (parents) were gone you kind of have to fend for yourself. You don't always want to live off of Kraft Dinner, you know what I mean. You have to learn to do other things so you don't get sick of something. That's kind of how I looked at it. Like if I am going to have to cook then I might as well learn to do it right rather than not do it at all."

R: I lived with my dad before I lived at the shelter, and he wasn't there much at all so I had to do things for myself a lot.

I: So you just figured stuff out for yourself?

R: Yes, I learned through experience by cooking like once a day or something like that. I would just cook something like spaghetti and then I would cook it again and the next time it would be better.

RESPONDING TO LIFE CHANGES

A key characteristic of youth is personal and lifestyle change, which not limited to high risk youth but exacerbated by disadvantage. Dietary change

RESPONDING TO LIFE CHALLENGES

is intricately tied up with these changes. An English study with a similar methodological approach and target group concluded that “food and eating practices are not ordinary, mundane events in young people’s lives, but an important part of dealing with the transition to new social contexts” (Wills, 2005).

Methodologically, the ethnographic approach seeks to identify meanings and key behaviours by focusing on difference and change. Questions are posed along the line of *“Have you always done this, or was it different before? If so, what made change happen? What did you do then and why?”* This line of questioning encourages reflection without requiring judgments on the part of interviewees about their apparent successes and failures (what worked and what didn’t). It tends to reveal key turning points as well as strategies and challenges.

Most respondents in this study, especially those who had moved out of their childhood home(s) and had gained some independence, gave examples of how their food experience changed. Pregnancy and having children was a watershed time regarding food preparation for most – related to the health of their children, the cost of eating, anxiety about weight gain, food safety and disease prevention. Correspondingly, this subsection highlights the following three themes, focusing on strategies related to food skills:

- **Changing living environments (e.g. immigrating, moving out, going to college)**
- **Pregnancy: changes in diet and/or food preparation**
- **Having children: changes in diet and/or food preparation**

The following selected quotes illustrate how young people responded to changes in their lives, along the above three themes. Collectively, what emerges is a sense of both vulnerability and gradual resilience-building as strategies are developed.

Changing living environments (39 respondents)

“When I got kicked out so I had to change then. I couldn’t buy fast food every day. That’s expensive.

That’s like \$10 a meal when I could go buy \$10 worth of groceries that would last me a couple of days. Like if I made a big meal I made it spread out.”

R: I learned on my own kind of. I moved out really young so I just kind of learned as I needed to.

I: So you didn’t know much about food prep when you moved out?

R: No. I was like fourteen when I moved out. Like I only started eating vegetables when I moved out, ‘cause my mom cooked a lot of boxed food.

I: So something must have made you make that decision?

R: Meeting P., like my boyfriend’s mother. She cooks with a lot of fresh food and stuff like that.

I: And that made you change your mind? What was it about that food that made you change?

R: It tasted better. And it was healthier for me. I know the boxed stuff has a lot of sodium and gross fatty stuff too.

“When I got married I also became Muslim and I kind of got the culture from my husband, and (after moving to Canada from the US) I met some Arabic ladies here and they kind of showed me. I was ‘oh, I like this dish - how do I make it?’ so you get recipes from everywhere.”

R: When I was in college it was quick easy food. It happens when people go to college. I went when I was seventeen, fresh out of high school and we only had a kitchenette in our dorm. We had a community stove but my roommate and I kind of – actually we were cooking everything in the microwave. We did a lot of Mr. Sub because we had a Mr. Sub in our caf. Most of my good balanced meals were when I was going home.

I: Did things change for you after that?

R: (Going back to college a second time) I noticed that my habits were different just because I did have my own full kitchen. I was living in an apartment with my boyfriend, so I was cooking -- or if I wasn’t he was, and it was definitely a lot better this time around.

R: I was born in Afghanistan but I grew up in Russia and in 2007 I came to Canada. I am 17 now, I am grade eleven of high school. To be honest I love going to McDonald's but it's junk so my mom is not letting me to go there. I go like between three times in one month maybe. But I don't want to go every day because I don't want to get fat and it's not healthy because it is junk food and it makes people fat and they put too much oil and stuff in it.
I: Is it healthier to make your own?

R: Yes because you don't have to make all the time meat and stuff. You can make a salad or just eat some fruits and you can get full with that. Like last night my sister made a salad and we just ate salad. That was good. And I was telling my sister let's make every night just salad nothing else because it's healthy.

Having children: changes in diet and/or food preparation (26 respondents)

I have lived on my own since I was sixteen. I had a baby a year ago so, and pretty much once I had her I changed a lot of my eating habits. On my own it was ordering pizza or it was grab-and-go, whatever, but after I had her, now I would rather spend \$50 on groceries that will last me four or five days than eating out because eating out is crazy expensive. You can't afford to eat out all the time and like I said it is all about my daughter now. It has changed a lot of what I do. A lot more salads. We don't really eat much fries.

"No, we don't eat fish but it's good for her so we make it for her. We are not going to be like 'ya, we don't like this so you can't eat it'. So we are trying to get her to eat it because it's good for her. When I moved out I was going to have a baby in February so I moved out on my own and it was a big step, very big. Once the baby came it got a little bit harder but I dealt with it. I knew how to boil water but I didn't know how to cook so I used to call around a lot, especially my mom. I have also done cooking classes."

R: With my kids I started preparing things at home more and not buying out so much and trying to make healthier things for them as well.

I: What was the main drive behind cooking more yourself?

R: Just making sure they were healthy and at a healthy weight and gaining weight properly and things like that. My son when he was a baby was gaining too much weight so I had to follow him getting enough veggies and fruits and things.

Pregnancy: changes in diet and/or food preparation (13 respondents)

"I grew up, my mom was sick. By the time of age thirteen or fourteen I was pretty much taking over my mom's kitchen. I didn't really start thinking more about that until I was pregnant with my first son about what I was eating. Before I was like 'yes, you can eat at McDonald's' because when you get older like sixteen or seventeen you're like 'okay, I've got my own money I can buy whatever I want' instead of eating homemade food. But then being pregnant it was like 'okay, I need to eat this for my baby, even if I don't like it I got to eat it for my baby.'"

"I found I was eating out more before I was pregnant because I have always had such a busy schedule, and running into McDonald's in ten minutes is a lot easier than cooking. But last night I actually took the time to make myself a quesadilla. I grated the cheese myself. I cooked the chicken. I chopped up some vegetables and like I took the time to do that, where I could have just thrown in the microwave a bag of popcorn for dinner, and that's something that I would have done before."

"My ex taught me how to cook. Before I was pregnant, I knew how to cook everything that came in a box that had directions, and he knew how to make stuff that didn't come in a box. So now I used more fruits and vegetables and different stuff in my food. And I made sure that I ate three meals a day because I was pregnant and had no choice. My doctor told me that I needed to be eating more."



Summary points about responses to life changes

- Eating fast food and convenience food, with minimal home food preparation, seemed to be the norm for the majority of adolescents, reinforced by media, the food environment, and often their own families. Motivation to change in the direction of more at-home food preparation was driven mostly by cost when they had to pay their own food expenses; and by health reasons when faced with weight gain, lethargy, pregnancy and the pressure (through pre- and postnatal education) to give healthy food to their infants and children. Chronic disease such as diabetes among family members also was a driver for healthier diets among some young people.
- Knowledge about nutrition seemed to be limited to a general understanding that boxed foods and fast foods are “not healthy” and that cooking with simpler ingredients is better. The words “processed” or “nutritious” were rarely

used. Most knew that vegetables and fruit are healthy, and prepared them for their children, but they often did not eat it themselves. Whole grains were not mentioned among any of the interviewees, but high cholesterol, fat, salt or sugar content was commonly given as a reason not to eat fast foods or boxed foods in excess. Most participants said, in various ways, that they tried to prepare healthier foods some or most of the time, but that convenience foods were included an acceptable part of their diet.

- Prenatal and postnatal programs were pointed to as being very effective in encouraging and enabling change away from general reliance on fast food. Many respondents told of dietary change and appreciate learning directly from program leaders or health professionals.
- Respondents commonly expressed tensions between giving their children healthy food and serving them processed snacks and meals (sometimes expressed as “treats”). Fast food and “junk” were often linked to weight gain, allergies, diabetes or ADHD (Attention Deficit Hyperactivity Disorder).
- Life changes such as immigration or moving into an entirely new living environment (often with considerably poorer cooking facilities than they were previously used to) meant shifts in food preparation possibilities. Participants with or without food skills found themselves in situations where they had to adapt to new resources and circumstances. It was at such times that programs that incorporate food skills targeted to life transitions were described as particularly useful.



PARENTING AND FOOD PREP

PARENTING AND FOOD PREPARATION

This subsection is seen as part of life changes in terms of the new roles that young parents told us they played in order to instill good dietary habits in their children or to bond with them through food preparation. Many spoke of how they were planning to act differently with their children than what had been their own experience in childhood. The significance of this information lies in the relevance of self-efficacy, personal identity and social norms to the practice of food skills. When these attributes change during parenthood, young people's experience with and practice of food preparation changes as well.

Three themes stood out in the analysis of this area, and are illustrated by the quotes below.

- Teaching or planning to teach children
- Bonding by cooking and eating together
- Acting as a role model



Teaching children (17 respondents)

"Now we (little daughter and I) make things like chicken noodle soup. She loves to help, especially around food. There are a lot of things that we try to do but like I said I don't know that many things. Cookies, she rolls out the dough. If I am shredding cheese for garlic bread she is out there picking at it. She is right there watching with a chair."

"I would really like my kids to know how to cook and teach them how to cook because my mother never did that with me. She only taught me how to bake. It's definitely important because you don't

want them staying at home because they don't know how to do that stuff (i.e. when a child is old enough to move out they should be able to do so with cooking skills, and not remain at home because they need someone to cook for them)."

"I think with little kids you could always get them – like I have little brothers and sisters, they are four, five and seven. So if I'm cooking with them it's very difficult because they make a mess and it's stressful but I get them to measure stuff, pour stuff, stir stuff. I got my sister to use the stove when I was there, like she's tall and I taught her how to turn it on, make sure she knew all the safety stuff. Make it fun...because they get interested with the cookies and baking stuff. And then they get interested 'oh I like salad now. Let's make some salad' or 'let's make some casserole'."

Bonding by cooking together (11 respondents)

The kids love to help and cook in the kitchen. We make it like a family. Sometimes I don't have so much time to sit down with them and do something, so I try to include them in what I am doing. When you sit at the table with your kids they tell you how their day is, you know what's going on in their life. If they have a problem they'll be more eager to let you know what's going on if there is an issue because they have that closeness with you.

I: As a new dad, are you planning to cook with your little girl when she gets older?

R: Yes, I can't wait. I love baking so I am hoping she'll love it the same. I think she'll love it for the fact that she gets to eat the sweet stuff, too.

"I think if you properly know how to cook and you involve little kids, like involve them in little things. Have them learn like maybe grate some cheese or whatever. Just involve them in helping prepare food and that way it's not so much of a time consumer. Because everybody always says 'oh preparing dinner is time consuming so it's just better to go for fast food because I have little kids'. Well if you involve the kids in making dinner and make it fun then it will make it a family thing."

"I like when (little son) helps me. It's fun together and when he spills a whole bunch of stuff you laugh about it. He likes to do it, so that's good too."



Acting as a role model (8 respondents)

And for her (8-month baby) I want to make sure she has meat and potatoes and all that other stuff while she is growing up and not have to struggle with eating properly. You know when you get used to eating fast food, then as you get older it is harder to eat healthy. I am trying to get out of bad habits and trying to get good ones so that I can set an example for her.

"I would say that probably the main motivator aside from keeping myself healthy and stuff like that is that I want my daughter to learn from me so I need to – it's not just going to 'learn itself', like I've got to start learning in order so that I can pass on that skill to my daughter so she doesn't struggle like I did."

"Honestly the best way a child is going to learn, a child is going to learn like cooking and stuff and like even behavioural stuff or like the comfortableness of being in the kitchen is by modeling what you are doing. That's the main link because kids are around their parents more often than anybody else. They are going to model what you do."

Summary points about parenting and food

- Several young parents expressed extreme delight at the prospect of preparing food with their children when they grew older, and several already did so, often adding that "this was going to be different from the way they grew up themselves."
- Those who enjoyed experiential learning in terms of preparing food together with their children visualized it not just as a skill the children needed for life but as a fun activity (as opposed to a mess or a burden), a means of bonding and communication ("a family thing"), and a process of mutual learning.
- It was recognized by some young parents that it would be hard to get children to eat healthy food if they did not model it themselves. Being in the role of teacher meant taking on new behaviours themselves as parents, or at least trying to.
- Community-based programs with a food preparation component that targeted young pregnant women and new parents were highly valued and made use of.



ACQUIRING FOOD SKILLS

Challenges

This report has so far highlighted strengths, capacity and resilience of young people with respect to their food skills and strategies, as was reflected in their interviews, while acknowledging the supports they needed to bring their skills into action. It was also clear, however, that participants faced a number of challenges on a day to day basis, and these are singled out in this section. Their challenges ranged from personal learning abilities to home cooking environments to struggles with sufficient food at hand to cook with.

Three main themes emerged in this area, each with subthemes:

i. Challenges with acquiring food skills

- Math ability (numeracy), language, difficulty using recipes
- Disinterest in food prep; ease of convenience options (media encourages it)
- Lack of self-esteem or confidence, discouragement, bad experience
- Lack of learning opportunity-inadequacy of family, teachers, classes, internet

ii. Challenges with preparing food in the home

- Functional challenges (kitchen space, storage, facilities, appliances, implements)
- Psychological challenges
- Food quantity and quality challenges
- Time

iii. Challenges with accessing food for home preparation

- Cost of food or ingredients
- Travel time & expense, carrying food from store
- Unfamiliarity, difficulty with food retail environment

CHALLENGES: ACQUIRING FOOD SKILLS

As we learned from interviewees, barriers to learning food skills resided not only in lack of learning opportunities (although that was a common issue) but also in personal characteristics that included ability, attitude and self-esteem. The following candid quotes revealed barriers that could be overcome with school and community

programs that are inclusive, targeted to specific needs, sensitive to personal issues, and focused on building confidence.



**Lack of self-esteem or confidence, discouragement, bad experience
(17 respondents)**

“I had all the ingredients to make peanut butter cookies and I was too scared that I was going to burn them and stuff so I sent them over to my next door neighbour and she baked them for me.”

“For example my mom can make rice but I can’t. One time I tried to make it but it come out like a soup. I can’t make it.”

R: If you are cooking and then you lose your patience you are going to get like probably bored of it and then just walk away and forget about it and you could like burn it or set the house on fire or something.

I: Did that ever happen to you?

R: When I was younger my mom was at work and I almost set the house on fire just by making Kraft Dinner in the microwave. Like a really big accident. I didn’t add the water and I forgot about it and then my kitchen was completely full of smoke so I like freaked out. I broke my bowl in half and everything. If I had been more patient I would have actually read the box.

"I'm not still sure on the temperature that you are supposed to cook meat at so I don't cook meat a whole lot. I can't tell when it's ready, usually. I can make sausages but I don't make roasts."



**Math ability, language, difficulty using recipes
(13 respondents)**

"I find it's a little more difficult to learn from recipe books. I went to (special school) so a lot of my learning was a little bit slower than a lot of people's so it would probably be a lot easier if I had somebody there to help."

R: I think recipes are only useful for people who know how to read them and that's probably a big problem because I know people my age who do not know how to read like one and a half cups so they just can't read them. They don't know what it means. Same things as with a tablespoon or a teaspoon they don't know the difference.

I: So it's like a cooking language, is that it?

R: Yes. Basically, because some of my friends will read a recipe and have no idea what they are talking about. And it's like okay, well, go piece by piece kind of a thing. I think it's like the measurements and stuff that turn people away because a lot of people aren't very good at math.

"So when I got introduced to measuring cups and tablespoons it was difficult for me because I never knew how to use those things (in my country of origin). It's more like a pinch of salt or a handful of this – stuff like that I'm used to, so I had to learn this whole new level of cooking so this is why I wanted to take cooking class to know all that."

"I think I could (do the math) in the cooking area because I know how. It's the buying area (that I might have trouble with) because I think I would buy – I am not good with money, budgeting, and I am not good with math."

**Disinterest in food preparation; ease of convenience options (media encourages it)
(12 respondents)**

"Because parents complain, 'oh, I have to cook dinner tonight' or you hear so much negativity about it so everyone is like 'I have to do it', you know. I have friends who are seventeen and they don't know how to cook. Like they can't even cook Kraft Dinner. it's ridiculous, they don't want to cook so they just don't do it."

"Media doesn't help with educating kids in healthy food. Sure you see the diabetes or like some Cheerio commercials but look at all the fast food commercials that are on TV like McDonald's and Wendy's. I was watching a show and I think I saw the same Wendy's commercial 15 times."

"I would say probably because fast food is becoming too easy. I love not being able to get my hands dirty. It's easy if you go to the hot dog cart and you buy a hot dog for three dollars and you buy a pop for another dollar, that's four dollars. But over a few days you could have bought a whole pack of sausages and buns."



PREPARING FOOD IN THE HOME

CHALLENGES WITH PREPARING FOOD IN THE HOME

Several of our participants who had considerable food skills told of barriers that prevented them from preparing food the way they could or would like to. One line of questioning that brought out such challenges was *“What do you have in your kitchen or cooking space that you use all the time? Is there anything you wish you had, that could make things easier for you?”* This revealed that 13 participants owned slow cookers or crock pots and loved them, and that seven people wished they had one. Several wanted more counter space. Blenders and mixers were commonly on the wish list (“otherwise I have to mix things by hand!”), and the absence of freezers larger than a cubic foot was considered a severe challenge.

Some respondents with advanced food skills related how their own state of mind often prevented them from preparing a meal. New immigrants sometimes found ingredients here strange, or could not find their familiar ones. In a few cases, sufficient food at home was lacking altogether; but the absence of bulk ingredients such as flour was a very common challenge for food preparation. Interestingly, lack of time was mentioned by only six respondents as a consistent challenge to practicing food skills; this challenges the commonly-held assumption (and finding) that time is a major determining factor in how much food is prepared at home (Jabs & Devine, 2006; Chenhall, 2012).

Functional challenges (kitchen space, facilities, appliances, implements) (28 respondents)

Optimum food preparation requires a place where perishable and bulk food ingredients can be safely stored, where foods can be prepared and cooked, where hands and kitchenware can be cleaned, and where meals can be eaten. The availability of cupboards, working appliances (e.g. freezer, stove, oven), food preparation surfaces, kitchenware, a sink with running water, and resources for stocking up on basic food ingredients was a major consideration for the applicability of their cooking skills.

“(What I need is) probably a bigger place. I know it sounds funny but I only have this little counter

about this big and it’s hard to do stuff with such a small counter. More cooking space is what I need because I chop onions and everything.”

“A blender would be nice so I can make smoothies and stuff like that. Pretty much I’d like just a blender. Eventually I’ll need baking supplies like muffin tins and stuff too.”

R: Been on my own since I was sixteen.

I: Do you have a place where you can cook things?

R: I usually just go to a friend’s house, whoever is available. I don’t really have nowhere to live at the moment. So that makes it hard to make anything for yourself.



Lack of learning opportunity or inadequacy of family, teachers, classes (23 respondents)

• Lack of learning in family environment

“It could be complicated. Like I always had a bunch of stuff in my house because my parents cook, but if your parents weren’t like big cookers and they didn’t really make things and they didn’t have all the stuff in your house I can see how it would be really difficult to learn how to cook if you don’t have anything to experiment with.”

“Yes, especially hunting, like you got to know how to cook and clean the meat, and some people never learn how.”

“Up until I was twelve I didn’t have the baking, I didn’t have the cooking, like full meals, never. I ate Mr. Noodles for twelve years of my life – so from the age

of twelve on it's like 'I am going to cook, I am going to make more than just Mr. Noodles'. I have no Mr. Noodles in my house. I hate Mr. Noodles with a passion."

"My sister knew how to cook, but then she moved out. My mom cooked for us for supper but other than that, as a kid I would make my own little meals when I was hungry. I was always hungry."

"My parents were separated at a young age, and I lived with my dad on weekends and my mom and my stepdad throughout the week. And my stepdad worked so he didn't cook. My mom never really cooked either, like she didn't cook anything without instructions. Like everything always had instructions. It was boxed food like chicken fingers, there was never anything that she just made of her own. That's just how I was raised and so I make a lot of that stuff. I don't cook a lot of fancy meals or anything like that because I don't know how."



"This (food preparation) is new. I wasn't taught how to cook by my parents. The time that I lived with my mother she was the one that pretty much did all the cooking. I couldn't do anything right so she wouldn't bother getting me involved. And my dad is a 'take-out, pre-prepared food' kind of guy so he doesn't really cook meals by himself. I think the best he does is meatloaf. So this is pretty much self-taught, using cookbooks."

"Growing up I didn't learn anything from my parents. I learned stuff but not cooking. My parents always bought like macaroni, canned soups, that stuff. And they made dinner, we weren't allowed to. I don't think I really learned anything from them other than maybe what not to do."

• Inadequacy of teaching in programs

The thing is, so in courses people need to know more about actually preparing basic recipes, like knowing what the ingredients are and using them. Just having the recipes is not enough.

"I don't like it when she (the teacher) watches me. Because I don't like people staring over me and 'oh, what are you doing?' So I work better alone because I feel more comfortable. I know if I mess up I'm like 'okay, we'll just fix it or start over' but if somebody is watching me I'm like 'oh, yup, I messed up'."

• Programs are not accessible

"If things were more accessible, like there's a lot of things going on in Chatham, a lot of programs, but then it's travel to get there (from other town) and not everybody has a vehicle like me and not always can I afford the gas. I have a truck but I can't drive it all the time. That thing costs me 20 bucks just to get to Chatham. There was this one (cooking course) in Chatham, but you had to pay a set amount of money each week to go. I can't afford that."

"Yes, once they (new parents) feel comfortable they can try to experiment by themselves. That's why it's good to take a cooking class. One thing is with young parents like me was, I didn't have the money to afford a cooking class. It wasn't convenient to me because I just had a new baby and I had to learn how to cook. So it was not happening because I had all the other expenses for the baby."

ACCESSING FOOD FOR HOME PREP

Psychological challenges (17 respondents)

"I don't really cook for just me. It's hard to because I'm not going to make a big meal when it's just me, and she (small child) don't eat half the stuff."

"There are times when I feel too depressed and I don't want to get off my couch so I don't go cook. I just go and grab a sandwich and I eat that."

R: Before, I was living with a lot of other people so I cooked and baked for them... That's probably where I learned a lot to cook too, because I could cook and they had like everything there for me.

I: How many people would you have cooked for?

R: It depended on the day but sometimes like fourteen, sometimes it was ten, sometimes it was twenty. I used to bake all the time there, too. I'm not trying to brag but I am a really good cook and I am really good baker. Now I don't do it very much because now I am buying my own groceries... and I work a lot and I don't have time. Well, I do have time but I am lazy. It's harder (psychologically) to cook for yourself than for fourteen people.

It is notable that the oven was often perceived as a "black box" quite separate in its use from stovetop cooking. With respect to baking from scratch (e.g. cookies, cake, roast meat, casseroles, but not re-heatable frozen items), 33 percent of study participants who had a working oven said they never baked, 27 percent had made baked goods with a mix, and 40 percent could bake with a recipe. Moreover, some people associated baking with having large quantities of tempting sweets in the house, and therefore avoided it. Some felt an uncomfortable lack of control with food in a hot oven; and actual accidents had been a deterrent as well.

"I use the stove. I feel like if I put something in the oven I just can't control things. I like being there and watching it cook and being part of the process as opposed to waiting around. I made chicken fingers in the oven last night after work, and I was just sitting on the couch and I'm like 'this is taking so long'. Whereas if it's on the stove and I am cooking it, the time goes by faster

because I have to watch and I have to make sure it's not burning or anything. But if it's in the oven, it is in the oven, and I can't do anything. I can't get my hands on it."

"The other time I was cooking chicken and by mistake turned the oven on too high and the chicken burned and there was smoke and I had nothing for dinner. So I don't use the oven anymore."

Food quantity and quality challenges (17 respondents)

R: I started cooking for myself at thirteen, twelve-ish.

I: And who was showing you?

R: My mom. But she got tired of cooking for us because there was six of us. So I left the Reserve because there was lack of food. After I left I started eating more.

I: You ended up in this place (youth program) where you could get better food?

R: Yes, almost every day.

I used to bake. Before I found out how much all the supplies cost. Like I'm on my own, on a fixed budget, single mom with three, so there's no baking supplies in my cupboard.

"I (new Canadian) tried making rice from a box and it was yucky. It wasn't good rice, like there's some stuff you put in the rice that's from a box. It's kind of brown, some powder. I put a lot on it. I thought it would taste better but it tasted too much bad, it smelled so much different. I'm like okay, 'I don't know what's going on'."

Time (6 respondents)

"I am just so busy now. I don't have a lot of time. I have to do 32 hours a week at my placement and then I work 20 hours a week and then I have school and homework and I have to try to fit sleep in there at some point so I don't have a lot of time. I don't find myself cooking as often as I used to. My mom and I actually decided yesterday that we're going to sit down and make a meal plan for the week."

"There is so much that I would love to actually cook like recipes and stuff. I have like a million recipes saved on my computer just of things that I'd like to actually do. It just takes a lot of time because it's not just the cooking, it's going to the grocery store and getting every single ingredient."

"A lot of people don't like vegetables. They don't know how to cook them and they don't know what kind of things to put on it or they think it's too much work. It's easier to go to the cupboard, open a bag of chips and sit on the couch rather than clean off some carrots, put dip in a bowl and eat it like that, or they think like it takes too much time to stand at the stove and steam them."



CHALLENGES WITH ACCESSING FOOD FOR HOME PREPARATION

For young people who bought their own food, the cost of food or proximity of stores with lower prices were obviously the biggest challenges to food access; but other challenges included the time and difficulty to carry food home from the store or the expense of a taxi. The absence of a freezer meant that buying perishable food in bulk for less money was not an option. About ten percent of the study group felt that grocery stores were unfamiliar territory, especially those new to Canada. And finally, accessing food from the food bank posed various challenges, including feeling ill at ease, being limited to one visit a month, travelling long

distances to get there, and receiving unfamiliar or unacceptable food. Such challenges have to be addressed in order to make the regular application of food skills possible.

Cost of food or ingredients (13 respondents)

"I've gotten low on food and then I've gone to the food bank, and then I just know I have to buy like more produce because they don't give you produce at a food bank. I've gotten low on food before where I've had to go to the grocery store with \$30 and it's like 'I don't know what to do.'"

"No, I used to bake but the money is kind of tight so you don't have as much as you want to do. You have to budget your money and stuff, so you wouldn't have all those baking ingredients on hand."

"And because I only get \$60 off OW a month additional on top of my rent, to get groceries I only have enough to buy a certain amount of everything. Or if I wanted to buy in bulk, I would only be able to buy a few things."

"My mom she goes to the grocery store up the mountain where there's Costco, like a bulk place and she buys the pack and it's three loaves of bread and that's only like 4 bucks. But if I would do it for myself, I would have nowhere to put it. So probably like for me to get the three loaves closer by, it's six bucks."

Travel time & expense, carrying food from store (8 respondents)

"Well yes because she (small daughter) can't carry anything and half the time I have to carry her too, especially living in an apartment building on the fifth floor. I've got arms full of groceries and I've got her and I've got a dog and it's hectic. So we sometimes go to the grocery store twice a week just so there's not so much to bring in at once."

Unfamiliarity, difficulty with food retail environment (8 respondents)

R: I would like to make lasagna. I know how to make it if I am in Portugal but here the stuff is different, the names and everything else so I can't really do it the way I know how to do it.

I: If you were in Portugal, how would you make it?

R: We have something there – béchamel. I tried to find it the other day (in the store) and I even went and asked one of the workers and they are like 'what's that?' and I was like 'just forget it'. And then the guy – I was trying to explain to him what it was and he gave me some cheese thing. I was like 'okay, that's not it'. Oh well. So I tried to make it and it was kind of disgusting. I didn't really like it.

"One time my mom was sick and she said go buy vegetables, meat and stuff. When I went there so I don't know like how many I have to buy fruits. I was confused. Each time I called my mom and I say 'I don't know how much I have to buy' like for example, apples: 'how many I have to buy for a week?' And she said 'I see you don't know how to shop by yourself'. It's not easy. I like it when my mom gives me money to buy something it's like paper money. I can't count the other money, like the loonie, the coins. It's really hard for me."



Summary points about challenges to food skills

Acquiring food skills

- Math ability (numeracy) and reading skills are prerequisites for using recipes; this should be taken into account in cooking classes at school or in the community. Teaching food preparation experientially is most effective, but learning to use recipes is also a useful skill that is part of food literacy and requires practice with measurements, techniques and cooking terms. Simply distributing recipes will not ensure they are used.
- Cooking classes or any teaching situation about food should aim to enhance self-esteem and confidence
- There is a widespread need for more food preparation learning opportunities, at home, in schools and in communities, in both rural and urban areas.

Food preparation at home

- Healthy food preparation requires a place where perishable and bulk food ingredients can be safely stored, where foods can be prepared and cooked, where hands and kitchenware can be cleaned, and where meals can be eaten. The need for cupboards, working appliances, food preparation surfaces, kitchenware, and a sink with running water in the kitchen is a major consideration for the applicability of food skills.
- Depression, stress and lack of self-esteem can be barriers to food preparation, in spite of skills.

Accessing food for home preparation

- Healthy food preparation requires sufficient income to buy healthy, basic ingredients for cooking as well as knowledge about shopping for food within a limited budget.
- Some areas require long distance travel to find healthy affordable food; there is a need to address walkable food access at the level of municipal by-laws that influence food retail (Desjardins et al., 2011).

SUMMARY

SUMMARY OF KEY FINDINGS, MODELS AND DEFINITIONS

KEY FINDINGS FROM THIS STUDY

[Note: More detailed observations were summarized by themes in previous sections.]

- There is a broad range of food skills among teens and young parents, both male and female. A hierarchy of food preparation levels was developed, based on the meanings of food skills expressed and practiced by study participants.
- Youth grow up in a food environment that normalizes and promotes highly processed food, and they learn to judge and navigate this environment as they become more independent, especially when they move to places where they pay for and prepare their own food and when they become parents themselves.
- Those who acquired food skills at a young age have an advantage in terms of food skills and confidence in preparing food; but those who learn later display a high degree of self-directed learning – mostly from people they know or live with.
- Youth are motivated to learn food literacy skills because of:
 - cost** – when they realize they cannot afford to eat out and buy pre-prepared meals on a limited income;
 - taste** – when they become bored with the lack of variety among their regular processed food choices;
 - personal health** – when they link a steady diet of processed foods (especially those high in fat and sugar) with weight gain, risk during pregnancy, lethargy, onset of diabetes or other conditions;
 - child health** – when new parents realize a sense of responsibility for their child's welfare and fear that undernourishment may be perceived as negligence;
 - feeling independent** and in control, often in opposition to their own upbringing;
 - the pleasure of creativity** and cooking for and with others, when the opportunity arises.
- The majority of young people in this study: were able to prepare meals at a moderate or advanced level; said that home food preparation saves money; said that food preparation is an important life skill for everyone; named school classes and community programs as an important places to learn these skills.
- What young people know how to prepare and what they actually do prepare on a daily basis depends upon psychological, social, environmental and financial circumstances. These are determinants which can influence the actual practice of food skills once they are acquired. For example:
 - * Stress, poor body image, depression or loneliness may deter home food preparation.
 - * Youth who have acquired cooking skills at home (or in a group home or structured setting where others bought the food) often still face the challenge of learning to budget, plan and shop for food when they live independently.
 - * Without money for food or access to an adequately-equipped kitchen, food skills cannot be applied.
- Most young people in this study named basic food skills, with both theory and practice, as essential for school programs, and thought it should be regarded as a mandatory life skill. However, existing school food classes were often found lacking or inadequate. Some said they had learned about Canada's Food Guide and food safety in school, but little that would help them make healthy choices in the grocery store and in the kitchen. Culinary programs leading to job opportunities were welcomed by those who had access to them.
- Community cooking programs were praised by all who had access to them, and were seen as positive learning opportunities for people who were less motivated to learn food skills during high school but wanted to learn later.
- Direct experiential learning was the preferred way of learning food skills. Learning food skills at

an early age, which tends to be experiential, may lead to greater confidence in food preparation in later years.

- The internet was not found to be a useful substitute for the inter-personal teaching and modeling of food preparation skills. Recipes were not a learning method of choice for novices in the kitchen; they were most useful for those who already had experience with food preparation. Use of recipes requires math and reading skills, familiarity with and availability of ingredients, cooking or baking utensils, knowledge of techniques, and ability to visualize the outcome.
- Improvisation in the kitchen was commonly cited as a highly valuable skill, involving flexibility, adaptability and creativity in working with existing resources. These attributes also enhance resilience. Kitchen appliances like slow cookers and blenders were seen to facilitate improvisation.
- Young people in this study articulated a broad array of personal strategies for managing on a limited income, including skills for food shopping, storage and preparation as well as building social networks. Many would be capable of leading peer cooking programs; some were already doing it, and several others agreed, when asked, that leading a cooking program would be something they would like to try.
- Knowledge about nutrition seemed to be limited in this study group, and reading food labels was not common practice. Still, there was a general understanding that “boxed foods” and fast foods are “not healthy” and that cooking with basic ingredients is better. Most knew that vegetables and fruit are healthy, and young parents usually prepared it for their children although they often avoided it themselves. Whole grains were not mentioned by anyone, but high cholesterol, fat, salt and sugar content was commonly given as a reason not to eat fast food or boxed food in excess. Most participants said that they tried to prepare healthier foods some or most of the

time, but that convenience foods were usually an acceptable part of their diet as well.



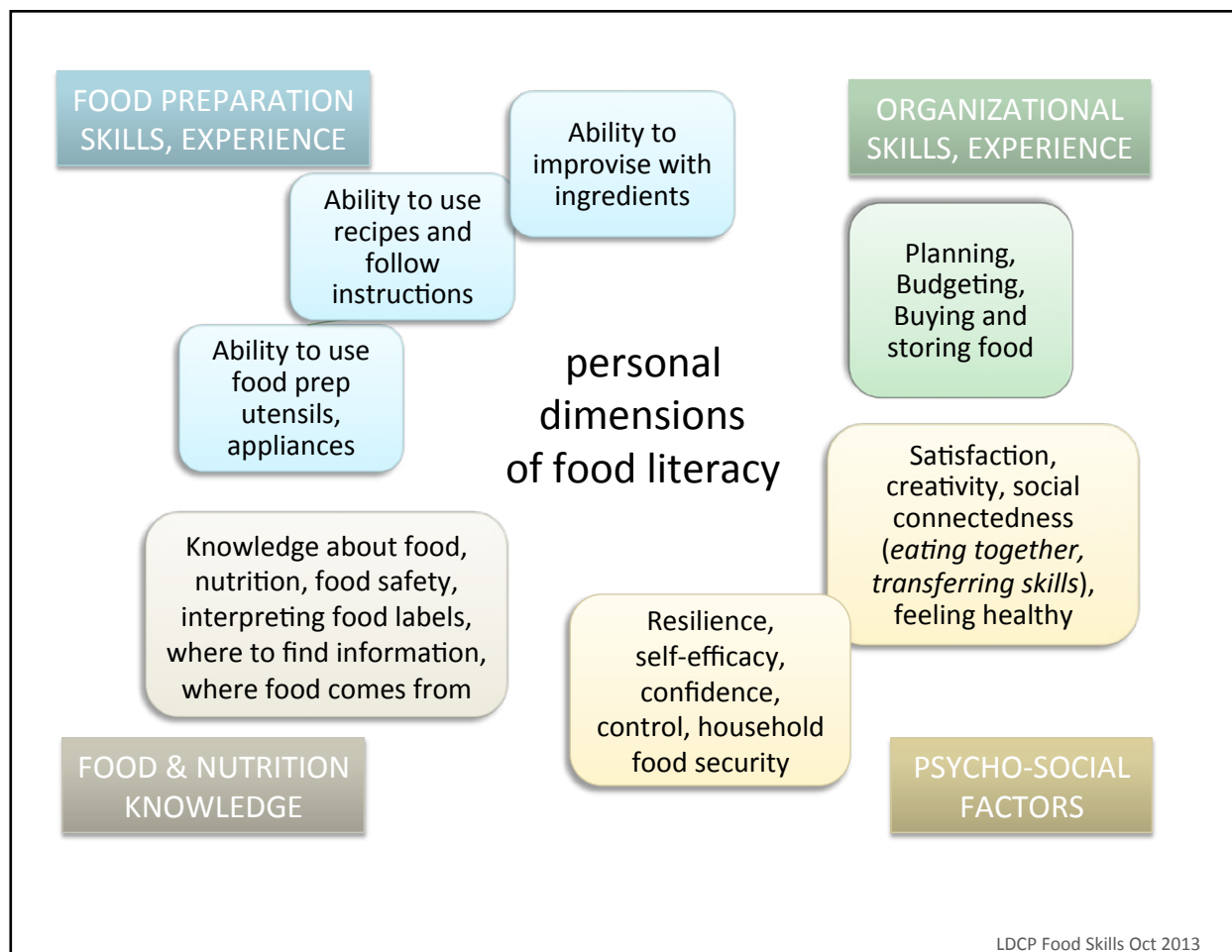
CONCEPTUAL MODELS

CONCEPTUAL MODELS OF FOOD LITERACY

By listening to young people talk about food and food skills and what these meant to them, a complex picture emerged. It revealed them for the most part as resilient, strategic and skillful in various ways, as they obtained and prepared food for themselves and others in the face of challenging life situations. It also clearly showed that technical food skills are important but can only function optimally if other personal attributes are present, such as self-efficacy and planning ability. Ultimately, after considerable discussion and debate, the data of this study enabled us to visualize a set of dimensions that collectively contribute to “personal food literacy”, represented in Model A below. The four areas in the model (four outer boxes) could serve as interactive components of food programs for young people and as areas of program assessment.

Being “food literate”, then, would mean that one is capable and feels motivated to access adequate healthy food and prepare regularly it in a safe, personally satisfactory way for one’s self and one’s family, with the facilities available. It means being knowledgeable and confident that one can regularly prepare meals that taste good and make one feel good, as well as having the organizational skills to find and use resources (human, financial, informational, material, time) to optimally to make this happen.

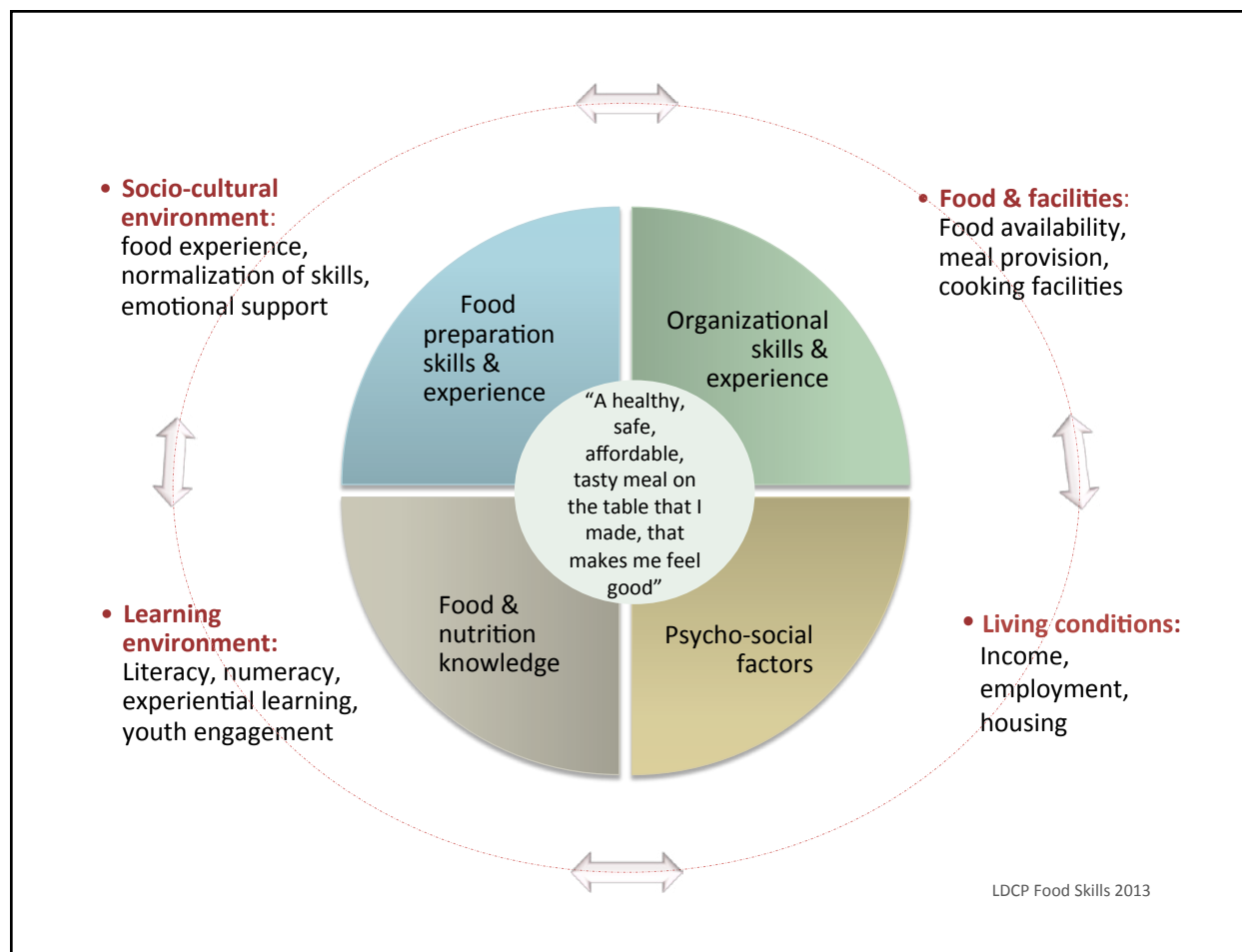
FIGURE 9: MODEL A: PERSONAL DIMENSIONS OF FOOD LITERACY



A person cannot become food literate in a vacuum. The second conceptual model below represents an ecological framework that emphasizes the societal determinants—socio-cultural and learning environments, living supports, and food and cooking facilities—that facilitate and enable food literacy for individuals. A key part of food literacy, from the perspective of young people at risk, is awareness of these external resources and feeling able to access them as needed.

Models A and B complement each other. As we learned from this study, the components of food literacy take time to develop, in a mutually-reinforcing way and with trial and error. Experience with food skills can be gained at home, at school, in the community and with friends and family. It builds from repetitive mundane actions as well as from venturing into new recipes, appliances, ingredients and social networks. It involves disappointment at mishaps and pride at achievements. Food literacy further accumulates from cooking for others, teaching others and eating together. Broader experience leads to enhanced ability to improvise and problem-solve, which in turn contributes to enhanced self-efficacy and resilience. All these are transferable life skills. Given that all components, personal and external, are essential for food literacy, models A and B have informed the recommendations in this report.

FIGURE 10: MODEL B: EXTERNAL DETERMINANTS OF FOOD LITERACY



DEFINITIONS

DEFINITIONS OF FOOD SKILLS AND FOOD LITERACY

We accept the food skills definition that is stated in the Ontario Ministry of Health Promotion's *Healthy Eating, Physical Activity & Healthy Weights Guidance Document* (2010), which is based on definitions from Short, F. (2003a) and Vanderkooy (2009). The definition of food literacy below was developed from the findings of this research study.

Food skills that are necessary to provide regular, healthy meals for one's household and/or one's self comprise a combination of *techniques* (ability to use cooking implements and appliances, handle food ingredients); *knowledge* (nutrition for good health, interpreting food labels, following/understanding instructions, ingredients and recipes; food safety; awareness of food origins and characteristics, and growing foods if possible); and *planning ability* (organizing meals; food budgeting, shopping and storage).

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. Food literacy 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. Food literacy is made possible through external support with healthy food access and living conditions, broad learning opportunities, and positive socio-cultural environments.

The potential outcomes of food literacy, as expressed by young people who live in at-risk situations, include a greater likelihood of consuming a healthier diet; feeling better both physically and mentally; connecting more with others (transferring skills, eating together); improved response to changes and challenges; a feeling of satisfaction in preparing food for themselves and others; attraction to food-related career opportunities (for some); and improved household food security.

TABLE 11: FOOD LITERACY: MEASURABLE COMPONENTS

Personal skills and attributes related to food preparation	External determinants	Potential outcomes (as expressed by young people themselves)
<ul style="list-style-type: none"> • Food skills (techniques, knowledge, planning) • Self-efficacy and confidence • Ability to improvise and problem-solve • Ability to find and use social & other supports 	<ul style="list-style-type: none"> • Socio-cultural environment • Learning environment • Food access, cooking facilities • Living conditions (income, employment, housing) 	<ul style="list-style-type: none"> • Preparation of healthier meals and greater likelihood of consuming a healthier diet • Feeling better, physically & mentally • Greater connectedness to others with respect to food and eating • Improved response to change • Feelings of satisfaction in preparing food for themselves and others • Attraction to culinary training and job opportunities (for some) • Improved household food security

*Affordable food: see Glossary, Appendix A

RECOMMENDATIONS

RECOMMENDATIONS FOR ACTION

This study has yielded, in Model A, a depiction of skills and attributes that contribute to food literacy of individuals. Conversely, the model suggests barriers to food literacy when those contributing factors are absent. Overcoming personal challenges to food literacy depends in large part on the influence of external, environmental determinants; and our data provided a rich repository of real life examples of those individual-contextual links, depicted in Model B. Consequently, we have drawn up a set of recommendations for action based on the four external determinant areas of this model, which, if implemented, could help reduce barriers to personal food literacy of young people. Notably, there is considerable overlap of these barriers with several of the strategic principles in the 2013 report by the Ontario Healthy Kids Panel, *No Time to Wait: The Healthy Kids Strategy*.⁶

Although this study provided some data about food skill learning opportunities (or lack of them) in rural areas, we felt it would be useful to add insights from public health unit staff to more fully inform our recommendations. With respect to Ontario's geographical diversity, they noted the many differences - both challenges and opportunities - in different communities depending on programs and services offered. For example, the availability of the *Community Food Advisor* program or other peer nutrition programs makes a major difference in the reach of food literacy programming. The existence of other programs, such as the Canadian Prenatal Nutrition Program, registered dietitian involvement or training for other staff in *Healthy Babies Healthy Children Programs*, school and community programs influence availability and success of opportunities within and throughout the regions. Access to public transportation in many rural areas is a barrier for food literacy programming targeted to families and individuals living on a low income. Although our recommendations are universal, it is clear that programs need to be designed to complement each community's assets, to take into account barriers and to address inequities.

TABLE 12: INTERVENTIONS AND SUPPORTS TO OVERCOME CHALLENGES TO FOOD LITERACY

Determinant area 1	Barriers to food literacy	Interventions/supports to overcome challenges to food literacy
Social and psychological environment	<p>Social isolation</p> <p>Lack of role models for healthy food preparation</p> <p>Weight concerns, depression, stress, lack of self-esteem</p>	<ul style="list-style-type: none"> Promote strong social networks to share food skills <i>Use the Youth Engagement Principles (see Glossary)</i> to promote peer-led food skill programs 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	Interventions/supports to overcome challenges to food literacy
Learning environment	<p>Low literacy, numeracy</p> <p>Food classes are absent, are poorly taught, or are not geared to needs or interests</p>	<ul style="list-style-type: none"> Advocate for programs and classes at elementary, alternative and high schools, as well as after-school and community programs, that <ul style="list-style-type: none"> enhance food literacy are practical, experiential, confidence-building, skill-related, learning-level-related. align with curriculum topics are adequately funded to include equipment, facilities, leaders' wages and food 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 RD-led grocery store tours with priority groups Implement the <i>Community Food Advisor</i> program or similar programs across Ontario, targeted specifically to youth. Ensure that community programs are offered in rural areas.

⁶ http://www.health.gov.on.ca/en/common/ministry/publications/reports/healthy_kids/healthy_kids.pdf

Determinant area 3	Barriers to food skills	Interventions/supports to overcome challenges to food literacy
Food, food preparation facilities and food environment	<p>Poor housing with limited cooking and food storage facilities</p> <p>Lack of implements & ingredients for home cooking</p> <p>Poor access to healthy food</p>	<p>Engage with community partners to:</p> <ul style="list-style-type: none"> • Advocate for funding for safe kitchens for community use – e.g. in schools, universities, community venues, shelters, and community food hubs or community food centres.⁷ • Provide resources that aid food skill development such as slow cookers, Basic Shelf Cookbooks, spice kits, grocery hampers with 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, community gardens.
Determinant area 4	Barriers to food skills	Interventions/supports to overcome challenges to food literacy
Living conditions	<p>Low income, unemployment, household food insecurity</p>	<p>Work with community partners to:</p> <ul style="list-style-type: none"> • Create programs that build job skills, e.g. incubator kitchens, culinary training, food service, catering, food handler courses. • Establish free or low cost community kitchen programs . • Establish meal programs at hostels & shelters for youth who are homeless, in transition, or upgrading or finishing high school. • Advocate for living wages for people and adequate food allowance for social assistance. • Provide vouchers to buy food at farmers markets.

⁷ Community Food Centres Canada – Progress Report - <http://cfccanada.ca/documents/CFCC%20Progress%20Report%202012-13.pdf>

The recommendations from two other documents which were also released in the fall of 2013 support the recommendations of this study. The report by The Conference Board of Canada (October 2013), *What's to Eat: Improving Food Literacy in Canada*, targeted Canadians as a whole. Their “future directions” included the following:

- Tailor food literacy programs to high-risk populations and community needs;
- Incorporate food literacy into school curricula;
- Foster parental involvement in hands-on experiential opportunities to develop food literacy; and
- Track, study, and evaluate food literacy initiatives.

Secondly, the Ontario Edible Education Network of Sustain Ontario, in their *Background on Food Literacy, Food Security, and Local Food Procurement in Ontario's Schools* (October 2013) offered eight recommendations that included the following:

- Create a provincial food literacy and student nutrition policy framework;
- Provide teacher training and support other infrastructure that enable food literacy to be taught using the Ontario curriculum and for it to be integrated into other aspects of the school environment; and
- Support public health and community-based programs outside of the classroom that educate children and youth about healthy eating and teach food literacy.

The parallel release of these reports and others, in addition to this study, is indicative of the strong current interest in food literacy. It underscores the need for interested groups to work collaboratively towards fulfilling their objectives and recommendations for policy change.

CONCLUSIONS

With this report, the Locally-Driven Collaborative Project on Food Skills has addressed its second and third objectives, namely to explore the meanings of food skills, develop a definition of food skills and identify the barriers and facilitators to food skills acquisition and practice from the perspective of the two priority populations, adolescents age 16 to 19 years, and pregnant women and new parents age 16 to 25 years with at least one social determinant of health risk.

To explore the meanings of food skills through ethnographic interviews with young people (85 participants from seven health districts), we delved into a variety of topics with them. These included the types of food skills practiced on a daily basis; the realities of the cooking space; meanings and feelings related to food preparation and cooking for others; past and present experience with learning about preparing food; thoughts about food cost and strategies for managing on a limited income; ways of dealing with the challenges of becoming independent and raising children; and responses to the proximal food environment.

The result of this investigation revealed a paradox: food skills and organizing daily meals can seem on the surface to be a rather mundane and marginal part of life, less important than skills aimed at higher status jobs, and less interesting than other pressing concerns; yet, when young people talked openly about how they dealt with food, it exposed a vital, urgent, fluid slice of life experience that had everything to do with self-efficacy and resilience—both essential to physical and mental health.

It was this complexity, the intertwining of cognitive, skill-building and psycho-social domains inherent in preparing food at home, which led us, in our analysis, to adopt the term food literacy. Here, we built on what other researchers had found, which clearly overlapped with our findings. The construct of food literacy is in its infancy, but it does serve as a

prism to highlight the dimensions of food skills in an ecological context. In this sense, the definition and conceptual models of food literacy that emerged from this study, as well as the food skill levels defined in section C2(b) (pages 35-36), can serve as an initial step towards the need, articulated by public health evaluators and epidemiologists, for measurable indicators in the area of food skills and health. Further research is needed to bring this to fruition.

The following definitions align with the findings from this study:

Food skills that are necessary to provide regular, healthy meals for one's household and/or one's self comprise a combination of techniques (ability to use cooking implements and appliances, handle food ingredients); knowledge (nutrition for good health, interpreting food labels, following/understanding instructions, ingredients and recipes; food safety; awareness of food origins and characteristics, and growing foods if possible); and planning ability (organizing meals; food budgeting, shopping and storage).

-Ontario Ministry of Health Promotion (2010)⁸

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. Food literacy 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. Food literacy is made possible through external support with healthy food access and living conditions, broad learning opportunities, and positive socio-cultural environments.

-LDCP food skills study (2013)

The *facilitators* to food skills acquisition and practice, or food literacy, from the perspective of the two priority populations are delineated in models A and B. They include early learning of food preparation skills; numeracy and literacy; experience with meal planning and food budgeting and shopping; adequate kitchen facilities and

⁸ http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/guidance/HealthyEating-PhysicalActivity-HealthyWeights.pdf

storage; understanding the health value and cost value of foods; a sense of confidence and creativity with cooking; adequate income and access to healthy food; connections with friends, relatives and other sources of advice and information.

Barriers to food skills acquisition and practice, or food literacy, are shown in section E (page 71) on recommendations for action. They emerged as challenges articulated by our study participants, and span the social, psychological, cognitive, environmental (material) and financial areas. Barriers are also implied as absence of the facilitators or contributors to food literacy (models A and B). They include lack of role models for healthy food preparation; weight concerns, depression, stress and lack of self-esteem; low literacy and/or numeracy; lack of access to, or inadequacy of, food skills classes at home, school or in the community; poor housing with limited cooking and food storage facilities; insufficient implements and/or ingredients for home cooking; poor access to healthy food; poverty, unemployment and household food insecurity. Many of these challenges are inherent to adolescence and new parenthood, but were exacerbated for young people living in at-risk situations.

Procedurally, this LDCP food skills study worked well in terms of its recruitment of a diverse and at-risk study population, and opportunities for one-on-one interviews. Although participants were spread across Ontario, including rural and urban populations, there were no clear distinctions in the findings related to these geographical differences. The only noteworthy difference was that some rural participants said they had poor access to community programs.

Limitations of this study

While care was taken to select study participants in an unbiased manner, they were recruited as a convenience sample, most often through community programs and institutions, and are therefore not representative of all adolescents at risk and young pregnant women and parents in the province. The creation of a random sample was beyond the resources of this exploratory study, and it was not our original intent to do so, as was articulated in the consultation document.

Further research needs include:

- A repeat of this study with emphasis on males, new immigrants and Aboriginal youth.
- Validation of the food skill level categories as a tool for assessment.
- Research that can link the food skill levels identified in this study with dietary practices, especially a longitudinal research model that repeats dietary data collection with the same participants at regular time intervals. For example, data are needed to compare the dietary intakes, over a month, of independently-living youth with minimal and well-developed food skills, based on rigorous dietary assessment methods.
- Studies to further elucidate the impact of other components of food literacy, such as psychosocial factors and other social determinants, on the practice of food skills and on dietary intake.
- The comparison of food skill levels in young people of different incomes.

Overall, this study has provided new perspectives on food preparation experience and perceptions of young people at risk for poor health in Ontario.

Our data showed both vulnerabilities and a large reservoir of strengths and capacities, and provided the foundation for two complementary models of food literacy.

We echo the view of our study participants that food skills should be included in the curriculum of schools (elementary, secondary and alternative) and into widespread community programs in both rural and urban areas. This would clearly represent an investment in physical and mental health, based on the meanings of food skills expressed by our participants. We also emphasize that we have, among these two demographic groups, a major opportunity to involve many of them as peer leaders to teach others and to serve as role models for preparing healthy meals.

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APPENDIX A

APPENDIX A: GLOSSARY OF TERMS

Affordable Food: By “food that is affordable” we mean in the range of what people can buy given their available income for food. We do not imply that retail food prices should be kept low. As well, we accept that food banks and free meal programs are a necessary, temporary solution for many people, and that they should promote dignity and be a source of healthy food and meals; but not that they are a solution for societal food insecurity. Food literacy includes having the skills and resources to access and prepare healthy food in ways that avoid cheap convenience food with little nutritional value and long term dependence upon food charity. (*LDCP Food Skills Ontario, 2013*)

Community food security exists when all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance and social justice. (*Hamm & Bellows, 2003*)

Cooking from scratch means preparing food using minimally-processed or unprocessed ingredients only. The term may have originated from foot races where the starting line was scratched onto the ground. Eventually “from scratch” took on the meaning of “from nothing”, or being created from basic, raw materials. (*Wikipedia*)

Dietary resilience is defined as “the development and use of adaptive strategies that enable an individual to maintain an adequate diet despite facing dietary challenges”. Key themes of dietary resilience include prioritizing eating well, doing whatever it takes to keep eating well, being able to do it yourself, and getting help when you need it. (*Vesnaver et al., 2012*)

Food environments are “institutional spheres where food is displayed for sale and/or consumed”. (*Koc et al., 2012*). Food environments refer to retail outlets where people can purchase foods, such as grocery stores, markets and restaurants, as well as environments where people acquire food in traditional ways, such as hunting and fishing (*Health Canada, 2013*). Food environments also refer to the food that is available and prepared in homes, schools, workplaces and institutions.

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. Food literacy 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. Food literacy is made possible through external support with healthy food access and living conditions, broad learning opportunities, and positive socio-cultural environments. (*LDCP Food Skills Ontario, 2013*)

Food skills that are necessary to provide regular, healthy meals for one’s household and/or one’s self comprise a combination of *techniques* (ability to use cooking implements and appliances, handle food ingredients); *knowledge* (nutrition for good health, interpreting food labels, following/understanding instructions, ingredients and recipes; food safety; awareness of food origins and characteristics, and growing foods if possible); and *planning ability* (organizing meals; food budgeting, shopping and storage). (*Ontario Ministry of Health Promotion: Healthy Eating, Physical Activity & Healthy Weights Guidance Document, 2010*)

The food system is “an interdependent web of activities that include the production, processing, distribution, retailing, consumption and disposal of food.” (*Koc et al., 2012*)

Food deskilling means the population-wide reduction of cooking and food preparation skills, over time, within the home or domestic environment. The reasons for deskilling among the population are multiple, including both the increased availability of highly-processed convenience foods and new cooking methods (e.g. microwaving) over time; as well as the reduced value placed on cooking skills in society as evidenced, for example, by the removal of home economics in most schools. As a result of food deskilling and the widespread availability of highly processed food, many consumers lack sufficient knowledge to make informed decisions about buying and preparing healthy, sustainably-produced food. (*Jaffe & Gertler, 2006; Chenhall 2012*)

Household food insecurity is the lived experience of individuals or households whenever food security is limited or uncertain, qualified by periodicity and duration (Campbell, 1991). Household food insecurity is strongly associated with income; however, contributing factors include stability of employment, affordable housing, the adequacy of social security programs, social support and debt or large unavoidable expenses.

Resilience is both the capacity of individuals to navigate their way to the psychological, social, cultural, and physical resources that sustain their well-being, and their capacity individually and collectively to negotiate for these resources to be provided in culturally meaningful ways.” *Ungar, M., Resilience Research Centre* <http://www.resilienceproject.org/>

Resiliency is the ability of people to successfully adapt and develop positive wellbeing in the face of chronic stress and adversity. This ability is highly influenced by protective and supportive elements in the wider social environment. (*Resiliency Initiatives, 2013: p.69*)

Research links the development of resilience with internal characteristics and the presence of important relationships, resources and activities. (*Resiliency Initiatives, 2013: p.84*).

See Resiliency model and Frameworks, <http://www.resil.ca/tools>

Self efficacy can be defined as “personal judgments of one’s capabilities to organize and execute courses of action to attain desired goals” (*Zimmerman, 2000: 83*). As such, self-efficacy is achieved when an individual has the aptitude or ability necessary to overcome barriers that preclude the desired change in behaviour (*Baranowski et al., 2002*). (*Thomas, H.M., 2011*)

Self-efficacy is the belief in one’s capabilities to organize and execute the courses of action required to manage prospective situations. In other words, self-efficacy is a person’s belief in his or her ability to succeed in a particular situation. (*Bandura, A., 1994*)

Those who demonstrate a high degree of self-efficacy will often undertake more difficult tasks, stick with them longer, and be motivated by challenges. Such an individual might say, “I know I have the ability so, if I study hard, I will pass this math test”.

Ministry of Children and Youth Services. *Stepping Stones: A Resource on Youth Development*.

http://www.children.gov.on.ca/htdocs/English/topics/youthopportunities/steppingstones/youth_policy_development.aspx#t05

Social determinants of health (or determinants of health): “The health of individuals and communities is significantly influenced by complex interactions between social and economic factors, the physical environment, and individual behaviours and conditions. These factors are referred to as the determinants of health, and together they play a key role in determining the health status of the population as a whole. Determinants of health include the following: income and social status; social support networks; education

and literacy; employment/working conditions; social and physical environments; personal health practices and coping skills; healthy child development; biology and genetic endowment; health services; gender; culture; and language.

Addressing *determinants of health* and reducing health inequities are fundamental to the work of public health in Ontario. Effective public health programs and services consider the impact of the determinants of health on the achievement of intended health outcomes. A key component of the requirements outlined in the Ontario Public Health Standards is to identify and work with local priority populations. Priority populations are identified by surveillance, epidemiological, or other research studies and are those populations that are at risk and for whom public health interventions may be reasonably considered to have a substantial impact at the population level.” (OPHS (2008) retrieved from http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/ophs_2008.pdf)

Youth at risk are those considered vulnerable due to characteristics such as having a racial background; negative influences from family, environment or peers; social factors that restrict healthy mental and social growth; limited financial resources; difficulty achieving optimal education; and behavioural issues. Youth at risk may be marginalized for a plethora of reasons including but not limited to homelessness, unemployment, First Nations heritage, addictions, adolescent parenthood, unstable home life, and economic instability. For health promotion programs targeting youth at risk to be useful, they must meet the unique needs of this population while also enhancing the youth’s social, economic, education, or family environment – some of their social determinants of health. (Thomas, H.M.,2011)

Youth engagement principles are inclusiveness; positive youth development; accountability; operational practices that sustain youth engagement and enable youth development workers; a strengths-based approach; flexibility and innovation; space where youth feel safe; transparency; sustainability of resources; cross-sector alignment; and collaboration to share knowledge and facilitate action while fostering development of strong and lasting relationships. Ontario Ministry of Health and Long-Term Care (2010), retrieved from <http://www.mhp.gov.on.ca/en/youth/engagement.asp>

APPENDIX B: AREAS IDENTIFIED AS IN NEED OF MORE RESEARCH TO INFORM FOOD SKILLS PROGRAMS FOR YOUTH AND YOUNG PARENTS

Chenhall (2012): “How do Canadian families with children define or describe cooking and food preparation skills? Do Canadian families with children value basic or ‘from scratch’ cooking and food preparation skills? How do Canadian families with children consider or assess the nutritional value of convenience and pre-prepared foods as compared to foods and meals ‘from scratch’”.

Daniels et al. (2012): “It might be useful to direct more attention to people’s reasons to cook at home. How are the motivations behind home cooking related to the use of pre-pared food or the consumption of food in general.”

Larson et al. (2006): “Research is needed to determine what kinds of programs, policies, or environmental changes might increase the participation of young adults in preparing healthy foods.”

Rose (2007): “More research is needed on the at-home meal production process, especially the trade-offs between preparation time and food costs. If implicit assumptions about the time spent preparing meals are outdated, what level of food costs are needed to produce healthful, culturally appropriate meals given the current time constraints of the working poor and modern day societal norms about the time spent cooking?”

Scholderer & Grunert (2005): (economic psychology) “We found that the relationship between objective household resources and perceived household resources is very complex, and that the effects on behaviour are further mediated by attitudinal variables. The analysis of how resource constraints affect human behavior is usually the domain of economics. Our model is an example demonstrating the added value of economic psychology, since we can show that we can fully understand the effect of resource constraints only when considering two classes of intervening psychological processes. , a more detailed analysis of how objective and perceived constraints are related and how they affect attitude and eventually behaviour becomes a prime issue.”

Short 2003a: “Look at the meaning of cooking as contextual/ ‘person-centered’. The understanding of ‘prepared’ or ‘raw’ food was based on the importance placed on the different cooking occasion, i.e. breakfast, lunch, supper, snack. Have a clear idea of what cooking means to participants when possible; Tacit skills (knowledge, timing) influences a cook’s confidence and how motivated they would be in cooking more frequently and use ‘raw’ foods. Interventions should focus on food cultures, ‘domestic food ways’, ‘socio-cultural ‘understanding of cooking rather than focusing on isolating the different aspects of cooking such as ‘practical cooking.’”

Short 2003b: “More extensive research that recognizes the contextual nature, cultural differentiation and the ‘task-centred’ and ‘person-centred’ duality of ‘cooking skills’ is required before a definitive typology can be established and debates about deskilling and reskilling, the decline of the intergenerational transference of cooking ability, the influence of socio-economic factors on skills application and acquisition and so on can be answered.”

Ternier (2010): “More research needs to be conducted on social environmental factors and their impact on cooking competence, as there is so little information on this subject. Further research also needs to investigate the effects of having a positive environment which would encourage the development of cooking knowledge and skills rather than a negative environment. This could include family or friends

who enjoy cooking and getting together for potlucks versus family or friends who would prefer take-outs or purchase pre-prepared meals. Deeper examination of the influence from parents, peer pressure, household structure, living situation, ethnicity, and women's satisfaction from cooking for others needs to be taken in order to understand how one's environment can affect a person's acquisition and expansion of cooking knowledge and skills."

Laska et al. (2012): "Overall, rigorous behavioural intervention research is needed to understand how to successfully promote young adult health. It is important that future intervention research explores the ways in which we can more effectively connect young adults, particularly young men, with their food and engage them in healthy meal preparation at home in enjoyable ways, as well as exploring the potential dietary impacts of such behavioural changes.

Overall, the findings from the present study and others suggest that the transition to young adulthood may be an important age for acquiring and reinforcing these skills, and for promoting positive advances to long-term diet-related health outcomes. Additional research is needed to confirm these findings."

Simmons and Chapman (2011): "Further research is needed to better understand why broader segments of the population do, or do not, cook, and what may be the social and health implications of current trends in home cooking."

APPENDIX C: INFORMATION LETTER FOR AGREEMENT FOR STUDY PARTICIPANTS

What do “Food Skills” mean to you?

Letter of Information

Background:

This study is to help us learn about the meanings and experiences that young people have with preparing and cooking food, because there are so many possible options in today's world. We will be asking people from across the province to talk about their usual experience in obtaining and making food for themselves at home, to find out what they normally do, what they have to work with, and what their needs, wishes, barriers, and supports are in terms of preparing food. The information will be used to plan and deliver food skills programs in health units across Ontario.

What will happen in this study:

If you agree, you will be invited to an informal interview with the researcher at a place that is convenient and comfortable for you. We will be collecting some basic information about you, such as your age, and where you were born. We will then ask you some questions about how you prepare the food you eat (food skills). Your ideas and opinions will be used to develop food skills programs and services that will be offered in the future programs in community settings across Ontario. There are no known risks to you associated with your participation in this study.

The interview will last about 45 minutes to 1 hour. We will audio-record the discussion so we don't miss anything. The audio-recording will be written down (transcribed), but your name, address or any identifying information will not be shown on the written transcripts.

Your right to withdraw from the study:

Your participation in this study is voluntary. That means you may refuse to participate, refuse to answer any questions, and ask to stop the recording at any time during the interview, or withdraw from the study at any time. Your decision will not influence your current or future access to community programs or services.

Confidentiality:

We will keep your identity and comments, as well as all audio-tapes and written records, confidential and secure. Your name will not appear on any written or other information generated during the course of this study. Representatives from the University of Western Ontario Health Sciences Research Ethics Board may contact you or require access to the records related to this study, to monitor the conduct of the research. That means that they may check if we are running the study in a way that respects and protects people's privacy, dignity and rights. We will keep all data in a safe and secure place for five years after the study results have been published. All computer data will be erased and all written/paper data will be shredded after five years after the study results have been published.

Costs and compensation:

There is no cost to you for participating in the study. You will receive a \$20 gift card at the interview as a token of our appreciation. If you need help getting to and from the discussion group or in-depth interview, we can pay your transportation costs.

Publication of the results:

When the results of the study are published, your name will not be used. If you would like to receive a copy of the overall results of the study, please give your contact information to the researcher present at the interview. We may present the results at conferences, on webinars and/or in professional journals. Your name will never appear in any of these reports or presentations.

Contact persons (should you have any further questions about the study):**Elsie Azevedo, Public Health Nutritionist, RD, MSc**

Haliburton, Kawartha, Pine Ridge District Health Unit
1-866-888-477 or (905) 885-9100 ext. 218
eazevedo@hkpr.on.ca

Ellen Desjardins, RD, PhD

Waterloo, Ontario
Tel.-----
Email ---@---

* If you have any questions about your rights as a research participant or the conduct of the study you may contact the Office of Research Ethics at (519) 661-3036 or by email at ethics@uwo.ca.

This letter is for you to keep.

By agreeing to participate in the in-depth interview or the discussion group you are giving your consent to participate in the study.

I have read the Letter of Information, (have had the nature of the study explained to me) and I agree to participate. All questions have been answered to my satisfaction.

_____ Date	_____ Participant's name (please print)	_____ Participant's signature
_____ Date	_____ Name of person responsible for obtaining informed consent (please print)	_____ Signature

APPENDIX D - GUIDELINE FOR QUESTIONS ASKED IN THE ETHNOGRAPHIC INTERVIEWS

The following list served as a guideline for types of questions to be asked during the interview; it was not used as a semi-structured interview process in this order. Question #1 was used to start the interview, but after that the discussion flowed where respondent felt inclined to talk about.

1. Food skills abilities and regular practices

We are interested in what your experience is with getting food to your table at home. Let's start by together going through one of your days.

- a. On a typical day, what do you do for breakfast? (If breakfast is usually prepared/eaten at home, probe for type of food preparation).
 - b. On a typical day, what do you do for lunch? (probe for eating out, eating at home, or preparing brown bag lunch for school or work for self or others)
 - c. On a typical day, what would you do for dinner? (If dinner is usually prepared/ eaten at home, probe for type of food preparation).
- For each meal, probe: How does it vary from day to day, or on days off, like weekends? Have you always eaten this way, or was it different at other times of your life?

2. Food preparation resources and techniques

- What appliances and other things do you have in your kitchen (or cooking space) that you use regularly?
- Is there anything you would like that would make food preparation easier for you?
- Do you feel you have adequate place to store food at home?
- Do you ever bake?

3. Meanings of the food preparation experience; involvement of others

- Do you enjoy preparing food for yourself? For others?
- What is your favourite type of food or meal that you prepare?
- Do you use recipes or not? Do you ever experiment with different ideas in the kitchen?
- Do you cook for others? How does that make you feel?
- Do you prepare food differently when you are alone or with other people?
- Do you prepare any food or meal for special occasions?
- What is your definition of a "good cook"?

4. Learning food skills

- How did you learn about the food preparation that you do? At approximately what age did you first start preparing food?
- Did you take food or nutrition classes at school? Food programs in the community? How was that experience?
- Would you like to learn to prepare other types of food or meals? (Probe for examples)
- What kinds of food skills are important for people to know?
- Why are those skills important to have?
- What is the best way for young people to learn these skills?

5. Perceived cost of food

- There is a debate out there: some people think that buying ready-made food or fast food is cheaper, and others think that food you make at home from simple ingredients is cheaper. What do you think, and why?

6. Food shopping and planning

- Where do you usually go to buy food to prepare at home? (name the main places, and frequency per week).
- At these stores, can you get what you need to prepare what you want?
- Do you plan ahead for shopping trips? If so, how do you typically do that? What makes you decide what to buy when you are at the store (or market)?

7. Household food insecurity

- Do you sometimes run out of money for food? How often? What do you do then?

8. Life changes

(If interviewee is not pregnant and has no children)

- Looking back, was there a time when you started to prepare food differently, even an “aha” moment? Can you tell about that?

(If interviewee is pregnant or has children)

- Did any changes happen to the way you view and prepare food when you became pregnant? What about when you had children?

9. Demographic information: age, number of children and their age(s), educational level, living arrangement, country of birth, length of time in Canada



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