UPSKILL Health – Technical Report on the qualitative sub-study

Heather Smith Fowler | Dominique Leonard | Kelsey Brennan | Geneviève Mák

Submitted to:

Social Determinants and Science Integration Directorate
Public Health Agency of Canada

SRDC SRSA

The Social Research and Demonstration Corporation (SRDC) is a non-profit research organization, created specifically to develop, field test, and rigorously evaluate new programs. SRDC's two-part mission is to help policy-makers and practitioners identify policies and programs that improve the well-being of all Canadians, with a special concern for the effects on the disadvantaged, and to raise the standards of evidence that are used in assessing these policies.

Since its establishment in December 1991, SRDC has completed over 250 projects and studies for various federal and provincial departments, municipalities, as well as other public and non-profit organizations. SRDC has offices located in Ottawa, Toronto, and Vancouver, and satellite offices in Calgary and Winnipeg.

For information on SRDC publications, contact

Social Research and Demonstration Corporation
55 Murray Street, Suite 400
Ottawa, Ontario K1N 5M3
613-237-4311 | 1-866-896-7732
info@srdc.org | www.srdc.org

Vancouver Office
789 West Pender Street, Suite 440
Vancouver, British Columbia V6C 1H2
604-601-4070 | 604-601-4080

Toronto Office
481 University Avenue, Suite 705
Toronto, Ontario M5G 2E9
416-593-0445 | 647-725-6293

Published in 2016 by the Social Research and Demonstration Corporation

Executive summary

Background

This document is the fourth deliverable for the UPSKILL Health and Mental Health Outcomes Study (UPSKILL Health), whose purpose is to explore the relationship of literacy and essential skills (LES) with physical and mental health, using data from the original UPSKILL trial. UPSKILL was a large demonstration project that tested the effectiveness of workplace-based literacy and essential skills training for employees in the tourism accommodations sector. The Social Research and Demonstration Corporation (SRDC) is the Canadian non-profit research organization that developed and managed UPSKILL, which ran from 2010 until 2014.

The Public Health Agency of Canada (PHAC) contracted with SRDC in January 2014 to undertake a two-phased sub-study that analyzes the health implications of the UPSKILL trial. Since the UPSKILL trial results were somewhat ambiguous with respect to health impacts, the first phase involved a more in-depth and comprehensive analysis of health-related data already collected through UPSKILL. The second phase – presented here – was a qualitative inquiry that aimed to explicitly seek UPSKILL participants' own perspectives on the relationship between LES, training, and physical and mental health. The final report for UPSKILL Health will synthesize the results of the quantitative and qualitative analyses and explore implications for policy and practice, and will be delivered in September 2015.

Methodology

Phase Two of the UPSKILL Health project attempted to further our understanding of how participants in workplace training experienced the relationship between LES and physical and mental health by explicitly seeking participants' own perspectives. The qualitative research also aimed to contextualize and nuance the quantitative sub-group analysis as it related to gender, immigration, and occupation.

Data collection for Phase Two of UPSKILL Health involved two main steps:

1. Semi-structured telephone interviews with LES trainers and curriculum developers to help us understand the ways in which health and other variables (e.g., health literacy) may have affected the take-up and observed outcomes of LES training for participants, and the influence of specific contexts (e.g., size of hotel, presence of a union, perceived workplace climate, surrounding community characteristics, etc.);
2. Focus groups with UPSKILL participants to seek participants' own perspectives on essential skills and the training they received, as well as potential connections with health literacy, self-esteem, self-efficacy, and physical and mental health.

In total, SRDC held four focus groups with 32 UPSKILL participants from five hotels in Ontario and British Columbia. SRDC conducted a thematic analysis on the data collected, using both pre-determined codes that aligned with specific lines of inquiry, as well as emergent codes to capture new concepts and ideas. The coded data was verified in terms of prevalence and confirming or

contradictory evidence, and UPSKILL survey data was used to support sub-group analyses (e.g., to confirm participants' immigration status or skill gains). Themes were developed from the coded data and illustrative quotes identified.

As with any study, we encountered our share of challenges and limitations. The timing of the project meant we had to hold the focus groups long after the training was over, which meant some participants had difficulty recalling details of their experiences. We suspect the delay also affected recruitment – particularly of housekeepers, whose more limited LES and language skills likely meant they were less able to understand our emails or voicemails, or the purpose of the study without a local 'champion' who could vouch for us.

Similarly, it seems likely some bias was introduced as a result of workers self-selecting to participate in the focus groups, which would have been more of interest to those who were comfortable expressing themselves verbally in English. Time constraints and language barriers also prevented us from exploring the complex, nuanced interplay among job tasks, coping strategies, workplace factors and individual circumstances that no doubt affected their experiences and feelings about work. As such, our discussions did not lend themselves to a more detailed examination of *which* literacy or essential skills they thought were most linked to their subjective experience of coping at work.

Finally, we used purposive rather than random sampling to recruit participants, in keeping with most qualitative research. This means the experiences of participants in this study do not represent the full range of experiences of others who received UPSKILL's LES training. However, it may be possible to generalize or transfer our results to other contexts or settings in specific, limited ways, insofar as they have similar characteristics of the hotel industry in terms of tasks and workforce composition.

Findings

Study participants' experience of low LES at work was clearly tied to their occupational role:

- Housekeepers reported a particular lack of confidence in their LES skills, especially with regard to oral communication with guests;
- Front desk agents mentioned the high cognitive and social demands of their jobs;
- Kitchen staff reported feeling pressure to perform LES tasks under strict time constraints and feeling disconnected from the larger organization; and
- Food and beverage servers experienced challenges working with others and using cognitive (e.g., memorization) and organizational skills.

Not surprisingly, the vast majority of participants reported effects on their mental health in terms of stress, suggesting that the psychological effects of low LES at work are more salient or conspicuous to participants than those related to physical health. The intersection between gender, immigration status, and occupational role (with high physical demands and relatively low wages and status) may help explain why the housekeeper group, in particular, was more likely to report stress compared to other groups.

The majority of participants reported health-related changes as a result of UPSKILL, nearly all of which were related to improvements in stress. The reduction in stress was explained largely as a function of an overall increase in *adaptive coping strategies.* Comparing the pattern of coping strategies between the housekeeping group – largely comprised of immigrant women working in small, non-unionized hotels – with the pattern of other occupational groups revealed that housekeepers were the least likely to report reductions in stress. They were the least likely to reach out to supervisors when they needed help, more likely to try to cope with workplace stress by means of *avoidance,* least likely to be exposed to new contacts from other occupational groups at the hotel during training, and had the least amount of control over scheduling and workload during the UPSKILL training itself. In other words, housekeepers had the most to gain from UPSKILL in terms of potential reductions in work stress. Yet, as a result of structural features of training, deficits in English-speaking abilities, and the relatively weak ties outside of the immediate housekeeping group, housekeepers were among those least likely to report stress reduction.

Many participants also commented that the training led to greater self-confidence at work and brought about significant changes in their social capital, especially their feelings of trust and reciprocity with colleagues, their sense of belonging, and having new and/or more in-depth contact with colleagues within and outside of their occupational group at the company.

We also saw evidence of health literacy effects among participants in the qualitative study. A small percentage of housekeepers described a link between being better able to read and understand chemical and MSD labels (i.e., regarding hazardous materials) and better physical health at work. They also identified improved safe working practices and increased knowledge about their rights to a safe working environment; this was mentioned by workers in other occupations as well. Front desk agents also described feeling more knowledgeable of the emergency protocols that would be needed in the event of an emergency, although none could recall needing to implement these protocols, no doubt due to the rare occurrence of such emergencies.

Roughly one third of all focus group participants identified some type of health-related change *outside of work* after receiving training through UPSKILL. Roughly half of these said aspects of their mental health had been affected, and one third identified change in some part of their physical health; the rest were not specific. The changes in mental health were driven largely by servers and front desk staff who said that the communication and conflict resolution skills learned in UPSKILL had been used in their personal lives/at home, although this did not translate into any perceived reductions in stress or physical health at home.

Changes in physical health outside of work were driven largely by housekeepers, who noted that UPSKILL led them to incorporate safety tips – particularly for cleaning – into their home lives. Other changes in health literacy awareness or practices were minimal, with only a few participants saying that they had experienced changes in how they handled information about their health or communication with health professionals.

Concluding summary

That stress should surface as the most prevalent and recognizable effect of low LES in the workplace was consistent with the literature. Existing research has found that trying to cope with

the literacy demands of the workplace and society in general can cause stress, and that stress is one of the most prevalent sources of work and occupational health risk.

Additionally, although evidence on the role of gender in mediating or moderating occupational stress is inconsistent, the intersection between gender, immigration status, and an occupational role with high physical demands and relatively low wages may help explain why the housekeeper group, in particular, were more likely to report stress compared to other groups.

There is a wide body of evidence linking coping strategies with effectiveness in reducing stress. Problem-focused strategies have generally been found to be more effective at managing and reducing stress than emotion-focused strategies. This is consistent with the increase in problem-focused strategies following UPSKILL trial training, and the corresponding reduction in stress, that was seen in the qualitative data.

Many participants noted that they felt more confident after UPSKILL LES training. Increased self-confidence is one of the most commonly attributed private, non-market outcomes of learning noted in the adult education and training literature, and across a variety of education program types. Changes in self-confidence were more frequently reported among housekeepers and front desk agents. With respect to the housekeeping group, the frequency and scale of noted changes in confidence after UPSKILL may point to the potential of training to confer even greater psychosocial benefits to vulnerable groups, perhaps also leading to relatively larger health-related effects.

After changes in self-confidence/self-efficacy beliefs, the second most frequent psychosocial change identified by participants related to elements of social capital, most notably in feelings of trust and reciprocity, sense of belonging, and growth in bonding and bridging networks. Adult learning has been linked in the literature to positive changes in social capital which, in turn, have been linked to improved health**.** Adult learning is thought to affect social capital by encouraging closer and stronger ties within networks, and by encouraging connections with those unlike ourselves. In turn, these network changes are thought to play an intervening role in the realization of socioeconomic outcomes.

There was some evidence that the gains social capital may not have extended as much to the housekeeping group. Again, we see this particular group of UPSKILL participants as having "distinguishing" features that in some instances may have magnified the effects of UPSKILL training, and in other instances, may have lessened the effect.

Very little information about the links between workplace training, health literacy, changes in psychosocial factors, and workplace performance was obtained. A small proportion of housekeepers described a link between being better able to read and understand chemical and MSD labels, and several housekeepers and front desk agents reported feeling more confident in their knowledge and abilities around emergency procedures and safe handling practices for their equipment.

Table of contents

1. Introduction

There is a large and growing academic literature that identifies education and literacy as important social determinants of health, and points to the potential for non-health interventions such as training and adult learning to have substantial impacts on individual and population health.

There are a number of examples of research linking adult learning and health. For example, Feinstein (2002) found that increasing one's vocational and academic qualifications through adult education had positive mental health benefits; specifically, it significantly reduced the risk of depression. Studies of learners in community-based education with a history of mental health difficulties also reported that participation in learning had positive effects on mental health (McGivney, 1997).

However, while several theories exist as to the mechanisms by which education and health are related (e.g., income, health literacy, access to health resources, learned health behaviours, etc.), these theories are rarely examined empirically in a comprehensive manner.[1]

Building on the original UPSKILL Literacy and Essential Skills in the Workplace demonstration project (UPSKILL trial), the UPSKILL Health and Mental Health Outcomes Study (UPSKILL Health) presents a rare opportunity to identify how various personal and workplace factors – including workplace literacy training – influence workers' physical health and mental health (for a full list of measures, see Smith Fowler, Mák, Brennan, Hui, & Gyarmati, 2015). Since the health impacts of the UPSKILL trial were ambiguous, this study allows us to investigate them more thoroughly, and to explore more deeply the mechanisms by which literacy and essential skills (LES) might influence physical and mental health while taking into account other sources of influence such as psychosocial variables.

The UPSKILL Health sub-study has two phases. The first phase provides a secondary analysis of UPSKILL data to develop a conceptual and empirical model of the relationships among literacy and essential skills, physical and mental health, and other mediating and moderating factors, linking these to job performance and worker- and business-level outcomes. Phase Two explores the experiences of a sub-group of UPSKILL participants to identify how they coped with low levels of LES, how low levels of LES may have affected their health, and how their experiences may have changed with improvements in LES skills.

This document presents the findings for Phase Two of UPSKILL Health. The next section of this report provides background information on both the original UPSKILL trial and the UPSKILL Health sub-study. The third section describes the methodology and data sources used, as well as study limitations, while sections four and five present the findings and conclusions of the study.

[1] For a current review, see the February 2015 special issue of *Social Science and Medicine*, on educational attainment and health (vol. 127).

2. Background

Summary:

- The purpose of the UPSKILL trial was to rigorously evaluate the effectiveness of workplace Literacy and Essential Skills (LES) training for workers and firms.
- Results of UPSKILL have shown that even modest investments in workplace LES training can translate into substantial gains in skills and job performance of workers with accompanying increases in employment and earnings.
- Training also produced a wide range of improvements in business outcomes including increased job retention, productivity gains, and costs savings from reduced errors and waste, though the benefits and costs of training varied considerably across firms.
- UPSKILL Health explores UPSKILL's comprehensive dataset to identify how different personal and workplace factors – including LES training – influence workers' physical and mental health, their job performance, and business outcomes.

2.1 The UPSKILL trial

This section presents information about the UPSKILL trial that is particularly relevant to the design, results, and implications of the UPSKILL Health and qualitative sub-study. More details about the UPSKILL trial and its results can be accessed at http://www.srdc.org/news/new-study-shows-net-benefits-of-essential-skills-training-in-the-workplace.aspx.

Objectives

The original UPSKILL trial was designed and implemented by SRDC with support from the Office of Literacy and Essential Skills (OLES) at Employment and Social Development Canada (ESDC). UPSKILL began in February 2010 and ran until February 2014, and operated in eight provinces. UPSKILL was designed to help address the problem that 49 percent of Canadians function below the level of literacy and essential skills (LES) required to function adequately in many jobs.[2]

The specific purpose of the UPSKILL trial was to evaluate workplace literacy and essential skills (LES) training using the most rigorous evaluation methods. Its research strategy included three main components: 1) an experimental evaluation of impacts; 2) implementation research to explore delivery lessons and best practices; and 3) a cost-benefit analysis to estimate the returns from investments in LES training by firms and government.

[2] Based on the Essential Skills Profiles http://www.hrsdc.gc.ca/eng/jobs/les/profiles/guide.shtml.

The objectives of the UPSKILL trial were to:

- measure the impacts of LES training on workers and workplaces;
- understand the pattern of impacts on different types of workers and firms;
- establish a clear business case for LES training by measuring the returns to workers and firms; and
- describe the conditions in which LES training can be most successfully and strategically implemented.

The UPSKILL trial focused on the tourism accommodations sector, since this was found to have the required conditions for successful implementation of the study (e.g., partnership with a strong national sector council, existing standards and certification) and for generalizing results to other service and retail sectors. Within this sector, the project focused on a range of occupations, from those such as housekeeping that require lower levels of LES, to those requiring higher LES levels, such as front-desk agents. The LES training intervention was based on industry certification and occupational standards for these positions, and was customized to the skills and business needs of participating employers using organizational needs assessments.

Partnerships and recruitment

To design and implement the project, SRDC worked closely with a number of partner organizations, including the Canadian Tourism Human Resource Council (CTHRC), and several provincial tourism human resource organizations. Several provincial government training departments were also closely involved, along with non-profit organizations (e.g., the Training Group at Douglas College) and a private training developer (SkillPlan).

In total, 110 firms (hotels) with 1,438 workers were recruited from the eight provinces in which UPSKILL operated. Nearly one third of the recruited firms were from BC, 18 per cent were from Ontario, approximately 25 per cent were from the prairies, and another quarter from the Atlantic region. Of the 110 recruited hotels, 22 dropped out during the initial baseline research and needs assessment phase, resulting in 88 hotels that were eligible for random assignment.

Once the employer-level baseline research was completed at a given hotel, employees were invited to attend an on-site information session to learn more about the UPSKILL trial. In some hotels these sessions were a hotel-wide initiative with management ensuring all staff knew about the project and had the opportunity to sign up, though in all cases sign-up was voluntary. In other hotels, UPSKILL was more of a "niche" project with only a small percentage of staff invited to attend an information session, based on specific needs identified by management. All employees were assured that their participation was voluntary and not tied to their employment.

Intervention and research design

Once participants' consent was received, half the participating firms were randomly assigned to the program group, and the other to a control group that received no intervention during the study period. The control group had 651 workers while the program group had 787 workers;

randomization ensured both groups were balanced in terms of key variables such as job characteristics (e.g., occupation, tenure), age, health, language used at home, etc.). The workplace LES training was delivered to program group firms within a few months of the random assignment, and lasted an average of three months. Workers at hotels in the program group received an average of 20 hours of training. Employees' uptake of the intervention was high: n=562 workers in total received the training. UPSKILL's large sample size provided sufficient statistical power to detect even fairly modest impacts of five to seven percentage points, equal to about a 10-point change on the International Adult Literacy Scale (IALS)[3] or a 5 per cent increase on a job performance measure.

Random assignment of participating firms means UPSKILL's research design provided the most reliable measures of impacts of workplace LES training at two levels: for *individual workers* – on skills, confidence, career advancement, wage growth, health, etc.; and for *firms* – on job performance and business outcomes such as productivity, cost control, worker retention, customer satisfaction, etc.

Data collection

SRDC developed a variety of employee- and employer-level data collection instruments for the UPSKILL trial. There were three main components to the employee-related data collection:

- a survey to obtain information about demographic characteristics, psychosocial capital, literacy practices (e.g., time spent reading, writing, and using numbers or documents), and perceived health;
- a literacy and essential skills assessment (i.e., the Test of Workplace Essential Skills, or TOWES);
- a job performance assessment.

These instruments were administered at least twice during the UPSKILL trial to obtain pre- and post-intervention assessments. Together, these measurement activities generated repeated measurements of literacy, skills, performance, health, workplace factors and various psychosocial characteristics of UPSKILL participants for the impact evaluation. Likewise, the employer data collection had three primary components:

- a baseline survey of key workplace characteristics;
- baseline organizational needs assessment; and
- an employer follow-up survey to measure changes in employee performance and key business outcomes during the study period.

[3] IALS scores range on a scale from 0 to 500 points for each domain of literacy, numeracy and document use. Each of the scales are split into five different levels from level 1 for the lowest literacy proficiency to level 5 for the strongest level of literacy proficiency. After level 1 (2-225 points), each level has a 50-point range, so the ability to detect a 10-point change represents a fairly high degree of precision.

Measures of essential skills, health and well-being, job performance, and business outcomes

This section lists the measures used in UPSKILL to assess essential skills, health and well-being, psychosocial variables, job performance, and business outcomes.

- LES gains were measured using a TOWES-based Essential Skills assessment of respondents' **document use and numeracy skills**, and reported scores for those categories on a scale of 0 to 500. Scores are further categorized into five levels, with higher scores and levels indicating greater skills proficiency.
- Information on self-reported **physical and mental health** status was obtained using the Short Form Health Survey (SF-12), which provides a "glimpse into the mental and physical functioning and overall health-related quality of life" (Wen, Shi, Li, Yuan, & Wang, 2012, p. 2).
- **Work stress** was measured in two different ways in the UPSKILL Health study: a two-item subscale of the Quality of Work Life (QWL) that asked to what extent participants feel under pressure at work and feel excessive levels of stress at work; and a single-item included at follow-up asking participants to what extent they had noticed a reduction in the amount of stress they experienced at work since participating in UPSKILL.
- **Health literacy** was measured using a subset of the IALS literacy questionnaire to assess health literacy, as well as a number of screening questions (Chew, Bradley, & Boyko, 2004), and questions developed in conjunction with Canadian literacy and health literacy expert Scott Murray to unpack the perceived impacts of limited and marginal health literacy, and the coping strategies participants use.
- **Life satisfaction** was determined by a single question that measured the extent to which participants reported satisfaction with life (Van Laar, Edwards, & Easton, 2007).
- Various **psychosocial variables** were measured, including self-efficacy, motivation and engagement, self-esteem, attitudes to learning, and future orientation.
- **Job performance** was measured through *emerit* assessments conducted by third-party assessors certified by the Canadian Tourism Human Resources Council (CTHRC). Based on interviews and observations of UPSKILL participants at work, these assessments included ratings of teamwork, organizational skills, productivity, communication, emergency procedures, working safely, health and safety knowledge, and absenteeism.
- **Business outcomes** were determined through a survey with hotel management conducted following the intervention period, and included topics such as guest satisfaction, revenue, productivity, human resources, health and safety, staff outcomes (e.g., staff morale, receptivity to new challenges, and desire for further training and certification), and sales.

A full description of the measures used to assess health and psychosocial variables is available in the Technical Report on the quantitative results of the UPSKILL Health Study (Smith Fowler et al., 2015).

Results

The UPSKILL trial results show that even modest investments in workplace LES training can translate into substantial gains in skills and job performance of workers with accompanying increases in employment and earnings. Training also produced a wide range of improvements in business outcomes, including increased job retention, productivity gains, and costs savings from reduced errors and waste. Participating firms ultimately realized an average return on their training investments of 23 per cent within the first year alone. More information about UPSKILL trial results is available in the Final Report of the UPSKILL trial (Gyarmati, Leckie, Dowie, Palameta, Hui, Dunn, & Hébert, 2014). Key results of particular interest to the qualitative component of UPSKILL Health are summarized here.

Impacts on essential skills, job performance, and job retention

UPSKILL impacts were calculated by comparing differences in assessments on a number of variables pre/post-training for program and control groups.

UPSKILL participants' document use scores on a standardized TOWES literacy test increased by 11 points immediately after training and by up to 18 points six months later, compared to changes experienced by workers in the control group. Among those assessed more than a year after enrolment, a 23-point impact was observed, which is equivalent to about half a level on the internationally recognized literacy scale (IALS).

Along with the average improvement in skill scores, the proportion of participants achieving the literacy skills level required in their job increased substantially. For the average employer with 15 employees, three additional workers met the literacy requirements of their job following UPSKILL training.

Significant gains in job performance were also observed among UPSKILL participants, including a greater breadth of service quality, improved relations with customers, increased task efficiency, and an increase in the number of employees achieving industry certification standards of job performance.

Notably, skills and performance gains were accompanied by significantly higher rates of job retention among participants. Program group participants were also less likely than control group participants to be unemployed a year after enrolment in UPSKILL's LES training.

Impacts on health and well-being

In addition to improving labour market outcomes, the academic literature has linked literacy with a number of nonfinancial outcomes such as attitudes, confidence, social capital, health and well-being. In terms of mental health, UPSKILL participants were nearly 25 percentage points more likely than the control group to have reported a reduction in workplace-related stress since enrolling in the training program. There were no apparent differences in general perceived health between program and control group members. However, there were negative impacts on the physical health composite score of the SF-12, driven by a negative impact on its bodily pain

subscale. This negative impact might be explained by the higher employment rates or longer hours of work reported by the program group.

UPSKILL training also had positive impacts on participants' levels of confidence utilizing health information. This was accompanied by an increased willingness among program group members to ask for help reading medical materials, along with higher levels of confidence completing medical forms, and higher comfort in utilizing social supports to understand and use health information when needed.

While there was a significant increase in absenteeism among program group members compared to control group members, this was offset by a reduction in the incidence of working while unwell.

Impacts on psychosocial outcomes

In addition to the central impacts on essential skills and job performance, UPSKILL led to a number of improvements in the attitudes of participants that are indicative of gains in their psychological capital. The improvements included increases in receptivity to continuous learning, future orientation, trust, and self-efficacy.

UPSKILL also led to substantial gains in several behavioural indicators of workplace motivation and engagement, as well as literacy practices and broader social inclusion. These indicators include engagement in learning; reading and writing letters, notes, or emails; workplace practices such as time management and engagement at work; and volunteering for groups and organizations.

Impacts on business outcomes

UPSKILL training produced a wide array of improvements in business outcomes in most areas of interest to employers, as identified at the outset of the project. For instance, UPSKILL led to significant improvements in customer satisfaction with service quality, with over 70 per cent of program group firms reporting significant increases in satisfaction of hotel guests compared to less than 40 per cent of the control group.

UPSKILL also led to significant reductions in customer complaints. Only about one in four control group firms reported changes in guest complaints, while in contrast, over three quarters of firms in the program group reported reductions in the incidence of customer complaints after LES training. Program group firms were also more than 20 percentage points more likely to report an increase in the likelihood that guests would return to their hotel.

LES training also produced positive impacts on worker efficiency and the extent of waste and errors, as well as staff morale, receptivity, and a desire for further training and certification among staff.

More detail on selected results of the UPSKILL trial is provided in the section on UPSKILL's potential to improve health, below.

2.2 The UPSKILL Health and Mental Health Outcomes Study (UPSKILL Health)

Physical and mental health were included in the conceptual model for the UPSKILL trial – particularly in terms of occupational health and safety – but they were of interest as one of many potential business outcomes arising from the LES training intervention. Exploring physical and mental health outcomes at the worker level, the relationship of these variables with LES levels, and the mechanisms by which improvements in one area might affect the others, were not the primary focus of the original study.

However, there is a large and growing academic literature that identifies education and literacy as social determinants of health and the potential for non-health interventions such as training and adult learning to have substantial impacts on individual and population health. Data collection for the UPSKILL trial included a robust set of health measures, including employees' perceived physical and mental health status, well-being, and worker health behaviours, as well as workplace-level measures such as occupational health and safety. As noted above, SRDC also developed questions about health literacy and coping behaviours that supplemented questions on perceived stress and other aspects of quality of work life. For the UPSKILL Health study, these comprehensive data enabled SRDC to build a model of worker health, and to assess the potential of LES (and possibly other interventions) to improve worker and workplace health.

The objectives of UPSKILL Health were:

- to enhance conceptual understanding of how literacy skills and other factors can influence workers' physical and mental health;
- to measure the effect of workplace literacy and essential skills (LES) training, personal traits of workers, and characteristics of the workplace on worker health;
- to measure the influence of worker health on job and organizational performance;
- to examine differences/inequities in health and performance outcomes experienced by selected subgroups of workers such as those with low literacy, low income earners, immigrants, etc. (data permitting).

The empirical work for UPSKILL Health was divided into two phases: (1) a secondary analysis of UPSKILL trial's quantitative data, focusing specifically on health; and (2) gathering new qualitative data from selected individuals to explore their experiences and perceptions of LES and health in workplace and other settings. In Phase One, SRDC examined the relationships among worker and workplace factors, health literacy, and physical and mental health, in terms of both individual and business outcomes. This included:

- developing a conceptual and empirical model that described the relationships among health, mental health, and other mediating and moderating factors;
- applying the model to the workplace to assess worker-level outcomes; and

- analyzing workers' health and mental health in relation to job performance and business outcomes.

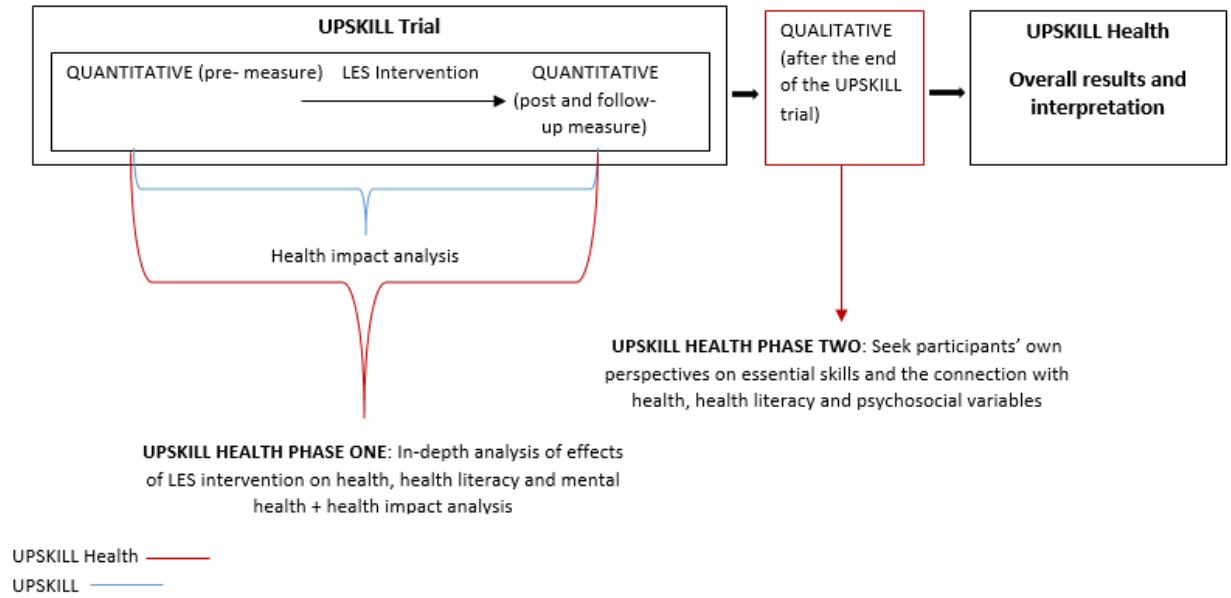
Phase Two explored the experiences of a sub-group of UPSKILL trial participants to identify how they coped with low levels of LES, how this may have affected their health, and whether/how their experiences may have changed with improvements in LES skills. Since these were not areas explored in the UPSKILL trial, this second phase involved thematic analysis of new data derived from interviews with experts in literacy and health, as well as focus groups with workers from the UPSKILL program group.

UPSKILL Health extended the analysis undertaken in the UPSKILL trial by examining the mechanisms by which literacy and essential skills affect workers' health, looking at a variety of personal and workplace factors and their relationship to physical and mental health, and measuring the contribution of worker health to performance. More specifically, UPSKILL Health:

- unpacked the role LES training plays in worker health, via changes in healthy behaviours, health literacy, and psychosocial capital (in the UPSKILL trial, the impact of LES training on health was measured but not the intermediate mechanisms by which this occurred);
- identified the contribution of, and the paths by which, various personal and workplace characteristics influence health for workers and workplaces, as measured by perceived health status, health and safety, job-related stress and satisfaction, and other measures (in the UPSKILL trial, many of these variables were controlled for in the training impact estimates, but their contribution to health at baseline and to the impact of the training was not identified); and
- measured the contribution of worker health and workplace health to job and organizational performance (in the UPSKILL trial, this was not considered at all).

Figure 1 below illustrates the ways in which UPSKILL Health extended and built upon the original UPSKILL trial.

Figure 1 Links between the UPSKILL Trial and UPSKILL Health



Overall, UPSKILL Health considerably expands existing work in the area of health and learning by exploring the potential design of, and business case for, interventions that can contribute to worker and workplace health. While LES training is one possible intervention explored in the original UPSKILL trial, UPSKILL Health considers a number of other factors that could be modified at the workplace level as a means to improving worker health. The results of this study will thus prove useful for policy makers, literacy and health practitioners, and employers interested in improving worker health through LES training and other interventions, and knowing what workplace factors and practices can be modified to contribute to greater worker health and improved job and business performance.

2.3 Summary of relevant literature

Beginning with the publication of the Lalonde report in 1974 (Lalonde, 1974), Canada has been a leader in the population health movement, which recognizes that health outcomes can be affected by factors "not normally associated with health, but whose activities may have an impact on health or the factors known to influence it" (Public Health Agency of Canada, 2002). The PHAC website, for example, lists twelve social determinants of health, among them education and literacy, employment and working conditions, income and social status, social support networks, personal health practices and coping skills. Education is commonly acknowledged to be a powerful social determinant of health (e.g., Raphael, 2012; Marmot, Bell, & Goldblatt, 2013; Braverman, Egerter, & Williams, 2011; the World Health Organization, 2003; the Public Health Agency of Canada, 2009).

As described in detail in the full literature review for UPSKILL Health (SRDC, 2015), several organizations and groups have produced overview studies on the factors contributing to worker

health, including the National Institute for Occupational Safety and Health (1999), the Canadian Centre for Occupational Safety and Health (2012), Jackson (2009), Smith and Polanyi (2009), Burton (2010), Marchand and Durand (2011), and Marmot, Siegrist, and Theorell (2006). While there has been a fair amount of research into the effects of workplace literacy training on individual health, evidence concerning the *mechanisms* by which this occurs is more limited. This section provides a high-level summary of the research literature that does exist in this area and a rationale about the need to further explore these mechanisms in this sub-study.

Health behaviours

In many cases, the impacts of adult learning on health are theorized to have occurred, implicitly or explicitly, via changes in health behaviours. In their investigation of the relationship between participation in adult learning and health and wellbeing, Feinstein and Hammond (2004) examined 12 indicators of health and social cohesion: smoking, drinking, exercise, life satisfaction, entering depression, leaving depression; racial tolerance, political cynicism, support for authority, political interest, number of group memberships, and voting. The authors found that participating in adult learning was associated with improved outcomes for nine of the twelve indicators.

Participation in adult learning was also found by Feinstein, Hammond, Woods, Preston, and Bynner (2003) to contribute towards giving up smoking and exercising more. Sabates and Feinstein (2004) associated adult learning with an uptake of cervical screening. De Coulon, Meschi, and Yates (2010) showed that basic skills and education affect the probability of being a heavy/binge drinker, a smoker and obese.

Health literacy

Another way in which learning has been thought to affect health is via improved health literacy. Zarcadoolas, Pleasant, and Greer (2006) define health literacy as the ability to understand, evaluate, and act on health information in spoken, written, and visual formats. Baker (2006) and Campbell (2010) contend that high levels of health literacy lead to healthy behaviours and good physical health via two main channels: (1) reading/document use – strengthened ability to interpret and apply workplace health and safety regulations; and (2) greater awareness of and advocacy for workplace safety rights and/or communication with health and safety officials. Literacy training can also enable individuals to better read and comprehend instructions for taking medicine, the inclusions and exclusions of a health plan, and to decide on a course of action when public health warnings and emergency bulletins are issued (Zarcadoolas et al., 2006).

There is considerable evidence of associations between health literacy and better health outcomes. For example, an Agency for Healthcare Research and Quality (AHRQ) systematic literature review of studies of literacy and health (2004) found an association between higher literacy levels and knowledge of matters relating to health services use and physical health issues. In a review of three Canadian randomized control trials involving literacy training focused on health, Rootman and Ronson (2005) found that the training positively affected health indicators. Lefebvre, Belding, Brehaut, Dermer, Kaskens, Lord, McKay, and Sookermany (2006) interviewed adult literacy learners who reported health literacy outcomes such as a better understanding of health issues and

more effective interactions with the health system, as well as healthier lifestyle choices and reduced stress.

More recently, an updated AHRQ systematic review (2011) of health literacy interventions and outcomes found that lower health literacy levels were consistently associated with negative health behaviours such as lower use of mammography, lower receipt of influenza vaccine, and poorer ability to demonstrate taking medications appropriately. Lower heath literacy was also associated with sub-optimal health outcomes such as increased hospitalizations, greater emergency care use, and poorer overall health status, including mortality among seniors.

Psycho-social factors

Literacy has also been found to affect health through a variety of psychosocial factors, both in the workplace (demand/control, reward/recognitions, social supports), and individually (resilience, motivation, trust, strong social networks). Perrin (1998) noted that workers with low levels of LES typically have limited self-confidence and feel vulnerable to changes in their circumstances, such as job requirements or employment. This is consistent with earlier research by the Ontario Public Health Association, which found that trying to cope with the literacy demands of the workplace and society causes stress for low literacy workers, which is a major factor in mental health problems such as depression and anxiety (Perrin, 1990).

A key workplace factor found to affect worker health is job fit, defined as alignment between a) employees' interpersonal/emotional competencies and job skills and b) the expectations and responsibilities of their position (CCOSH, 2012). According to Marchand and Durand (2011), industrial relations/climate, risk tolerance, organizational learning and changes are also important possible stressors at the workplace-level. These stressors are closely related to elements of workplace social capital that are also important to worker health, such as organizational culture, social inclusiveness, positive interactions, and social support available from colleagues and managers (CCOSH, 2012).

Job and business performance

Less research has been done on the contribution of worker health to job and organizational performance, which could help make a business case for employer interventions to improve worker health. NIOSH's (1999) review found that stressful working conditions were linked to increased absenteeism, tardiness, and intention to quit, all of which had a negative effect on a company's bottom line in terms reduced productivity and higher costs. Lowe (2006), in a study of Canadian workers, found that about half of respondents said stress had caused health problems, and at least half of workers reported that stress had led to lower quality of work, lower quantity of work, and a greater tendency to leave a workplace.

Park's (2007) research using Canadian data sources showed that high job strain (demand-control imbalance) and active jobs (high demand and control) were associated with reduced work activities and taking disability days. Gilmour and Patten (2007) also used Canadian data to demonstrate an association among depression, work impairment and absences, and lost productivity.

Burton (2010), in her review of research on worker health for the World Health Organization, found that poor worker mental health cost firms due to lost productivity, lost interest in work, withdrawal from colleagues, difficulty concentrating/making decisions/managing daily tasks and difficulty coming to work, all of which contribute to poor job performance. CCOSH (2012) similarly identified the outcomes of a mentally unhealthy workplace as increased conflict and strain, headaches, burnout and anxiety, and a higher incidence of accidents, errors, incidents, injuries and absenteeism/presenteeism,[4] all of which led to increased withdrawal behaviours and turnover, reduced productivity, and increased costs**.**

Burton (2010) cited evidence to indicate that mental health problems cost Canadian businesses $33 billion Canadian dollars per year in 2002 (The Scientific Advisory Committee to The Global Business and Economic Roundtable on Addiction and Mental Health, 2002). More recently, the Mental Health Commission of Canada (2013) estimated that the annual impact of mental illness on productivity was $6.4 billion in 2011. This impact is due to absenteeism, presenteeism and departures from the work force altogether.

These results summarize a growing body of evidence linking LES to health outcomes, and health outcomes to job and organizational performance. As seen in the Findings and Discussion sections, UPSKILL Health is now in a position to add to this research literature.

[4] Defined as situations where an individual is physically present in the workplace, but performing below what would reasonably be expected because of an inability to work productively (Haggarty, Bailey, & Kelly, 2013).

3. Methodology

Summary:

- Data collection for Phase Two of UPSKILL Health involved two main steps:
  1. Semi-structured telephone interviews with LES trainers and curriculum developers to help us understand the ways in which health and other variables (e.g., health literacy), and the influence of specific contexts (e.g., size of hotel, presence of a union, perceived workplace climate, surrounding community characteristics, etc.) may have affected the take-up and observed outcomes of LES training for participants;
  2. Focus groups with UPSKILL participants to seek participants' own perspectives on essential skills and the training they received, as well as potential connections with health literacy, self-esteem, self-efficacy, and health.
- SRDC held four focus groups with 32 UPSKILL participants from five hotels in Ontario and British Columbia. Proportionally, there were more women and immigrant participants in the qualitative sub-study than in the larger UPSKILL trial. On average, focus group participants experienced slightly higher skills gains in document use and numeracy than workers who received UPSKILL training but did not participate in the focus groups.
- SRDC conducted a thematic analysis on the qualitative data, using both pre-determined codes that aligned with specific lines of inquiry as well as emergent codes to capture new concepts and ideas. The coded data was verified in terms of prevalence and confirming or contradictory evidence, and UPSKILL survey data was used to support sub-group analyses (e.g., to confirm participants' immigration status or skill gains). Themes were developed from the coded data and illustrative quotes identified.

3.1 Overall scope and approach

UPSKILL Health is exploratory research into the relationship between literacy and essential skills (LES) and health. By adding a qualitative component to the experimental design of the UPSKILL trial, we were able to deepen and focus the original inquiry (Creswell & Plano-Clark, 2007), and ensure the voices of those who received LES training were an explicit part of the research. In fact, the research objectives for UPSKILL Health were directly informed by some of the early findings of UPSKILL (see below), and by specific gaps in knowledge highlighted by the original study.

The Phase One quantitative analysis provided some information relevant to the objectives for the Phase Two qualitative analysis by establishing the association between specific variables of interest and physical and mental health, and the strength of those relationships. The qualitative inquiry was

then designed to explore these relationships more fully and in a more nuanced manner, examining the influence of characteristics such as gender, immigration status, and occupation on the experience of workers. Phase Two also allowed for exploration of issues not part of the original UPSKILL trial, particularly coping strategies workers use for dealing with low levels of LES, their subjective experiences of training, and any "spillover" effects into other life domains outside of work. Overall, our qualitative analysis served four purposes:

1. to explicitly seek participants' own perspectives on the relationship of LES to physical and mental health, and the health impacts of LES training;
2. to help interpret the quantitative data related to impacts of LES on physical and mental health, including health literacy;
3. to help contextualize and nuance the sub-group analysis (re: gender, immigration, job occupation; and
4. to help understand unexpected results from the previous UPSKILL impact analysis.

The qualitative work also helped SRDC explore the potential for workplace LES training and other interventions to improve health, and potentially reduce health inequities. For example, we looked at different ways in which the LES training program may have improved health literacy or helped individuals face stressful life or work events, and whether or not this led to better health outcomes.

3.2 Research questions

In keeping with the objectives described above, the research questions for the UPSKILL Health qualitative study were as follows:

1. How did UPSKILL participants deal with low levels of LES at work?
2. Did LES training affect UPSKILL participants' work experiences?
3. What influences the relationship among LES, health, and job performance?
4. Did UPSKILL participants experience any benefits from LES training outside of work?

3.3 Data collection

The qualitative inquiry involved key informant interviews with LES practitioners and focus groups with a sample of UPSKILL participants. We used a purposive sampling approach to recruit participants for both the key informant interviews and the focus groups. This allowed us to focus recruitment on sources that were most likely to provide relevant data, as explained in more detail in each section below.

In terms of sequence, the qualitative data collection for UPSKILL Health took place quite a while after the UPSKILL training intervention, in some cases, almost two and a half years later. The hotels that hosted UPSKILL Health focus groups administered their training between June 2012 and February 2013. SRDC began contacting hotels for UPSKILL Health focus groups in November 2014. This gap was unavoidable, due to the lengthy contract development period for UPSKILL Health,

requirement for REB approvals, and the need for the quantitative analysis to inform the qualitative component. Nevertheless, this delay had numerous implications for the delivery and results of the qualitative sub-study, as explained in more detail under Methodological limitations, below.

Key informant interviews preceded and informed the development of protocols for the focus groups and their implementation. The time period between key informant interviews and the focus group discussions allowed the SRDC research team to synthesize results from the interviews and incorporate any new developments or insights into the focus group protocol.

Key Informant Interviews with LES trainers and practitioners

The key informant interviews were conducted with LES practitioners on the role of essential skills in daily activities both at work and home, on health literacy and health outcomes. The interviews were also designed to gather more detailed information on the links between literacy, health, health literacy and UPSKILL participants' coping strategies. These interviews helped us understand the ways in which health and other variables may have affected the take-up and observed outcomes of LES training for UPSKILL trial participants, and the influence of context.

Interviewees were identified through the network of organizational partners SRDC developed during the initial UPSKILL trial. LES training practitioners were chosen according to their general knowledge and experience. Our key informants were experienced professionals in the field of LES training, and able to speak to the larger 'landscape' of LES training programs in Canada more generally, and where UPSKILL is situated within the LES environment.

Key informants were also selected based on their role in delivering UPSKILL training. Recruitment was targeted to those with exposure to multiple (and larger) hotels in the target focus group locations, and those with more experience. Both practitioners with knowledge of curriculum development as well as those involved in "hands on" delivery were invited to participate. None of the selected key informants were involved in the evaluation or analysis stages of the UPSKILL trial, so we did not anticipate selection bias.

A total of four telephone interviews were conducted, with three women and one man. Interviewees had provided UPSKILL training in British Columbia, Ontario, and Nova Scotia, each delivering multiple sessions at several hotels in their respective regions. They were also involved in other aspects of the UPSKILL trial, including curriculum design; preparing trainers for course delivery; participant recruitment; coordinating with hotels and performing needs assessments; and LES assessment.

Through their involvement in various aspects of the UPSKILL trial, key informants had contact with a range of stakeholders, including hotel management, other trainers, and both program and control group participants. Overall, key informants have deep knowledge of the UPSKILL trial, its delivery, take-up by participants, and potential effects.

When conducting these interviews, SRDC used a semi-structured, in-depth interview protocol that encouraged key informants to reflect on the role of essential skills in relation to health, health literacy and coping strategies but also to provide new information for exploration (see Appendix A for the full interview protocol). Interview questions were developed based on the conceptual model

of LES and health (Appendix B), extensive literature review, and quantitative analysis (results of which are summarized in Smith Fowler et al., 2015).

Each key informant was provided with the topic areas in advance of the interview, as well as a description of the study goals. Arrangements were made to conduct the interviews by telephone, at which time further information about the study was provided and verbal informed consent sought (see Appendix C). Each interview lasted approximately 30-45 minutes. Interviews were recorded and extensive notes taken, on which the analysis was based.

Key informant interviews preceded and informed the development of protocols for the focus groups and their implementation. The time period between key informant interviews and the focus group discussions allowed the SRDC research team to synthesize results from the interviews and incorporate any new developments or insights into the focus group protocol.

Focus groups

The focus group discussions for UPSKILL Health were designed to seek participants' own perspectives on essential skills and the connection with health literacy, self-esteem, self-efficacy, and health. Focus groups are better suited to exploring the *nature* and *meaning* of a specific experience for the individuals involved. They are useful ways of exploring commonalities and differences of perspective and experience, and how these may vary according to different circumstances. The focus group protocol included questions that encouraged participants to share their experiences on the effects of the training on their work and their health, both generally and in terms of work stress and job satisfaction, working safely, self-efficacy and self-esteem.

Engagement with UPSKILL hotels and local delivery partners

A number of practical considerations were used to determine the UPSKILL Health focus group locations, the first of which was the presence of a strong local delivery partner. Local partners – usually provincial tourism human resource councils, but also training organizations such as Douglas College in BC – managed all aspects of delivery of the original UPSKILL trial in their area. The process of recruiting former UPSKILL trial participants for focus groups began with SRDC re-engaging with UPSKILL local partners, many of which had ongoing relationships with participating hotels and could provide valuable information about where focus group organization, recruitment and delivery would likely be most successful.

SRDC provided local partners with a detailed briefing on the focus group research, including its rationale and lines of inquiry, the desired timing and specifications for the focus groups, and the hotels we wished to target. Local partners were asked about any changes at the selected sites that would potentially impact focus group recruitment, such as high turnover or a change in management.

In addition to these initial discussions with UPSKILL local delivery partners, we analyzed UPSKILL administrative data to identify the location of hotels with the largest number of participants. We were particularly interested in locations where a number of participants had received at least

10 hours of LES training through UPSKILL, in order that we could explore potential impacts in our focus group discussions.

Based on this information, we determined that four provinces – NL, NS, ON, and BC – offered the best opportunities for successful implementation of the UPSKILL Health focus groups. We then set about contacting the hotels to inform them about our plans to hold focus groups with their employees, obtain their permission and endorsement. Obtaining permission prior to contacting former UPSKILL participants from those hotels was important as it lent credibility to our recruitment messages to participants, many of whom we expected either not to recall participating in UPSKILL specifically and/or to be cautious towards an invitation from SRDC, an organization whose name they would not likely recognize.

SRDC first contacted the management at participating hotels in Toronto by phone and email to inform and engage them in UPSKILL Health. Contact was eventually made with one hotel, and sessions were set-up. While recruitment of participants was challenging, recruitment of participants in another local hotel, at which we were not able to engage management, proved impossible. This demonstrated the importance of having hotel buy-in prior to recruiting focus group participants in the following sessions.

When approaching a hotel, SRDC used multiple strategies to establish contact, starting with a 'warm' call from the local delivery partner advising the main contact person at the hotel that they would be receiving a request from SRDC about UPSKILL Health. SRDC attempted to contact each hotel on multiple occasions, by phone and by email, over the course up to four weeks. Continued non-response resulted in SRDC moving on to the next hotel on the list.

There were significant delays in making contact with hotels as a result of changes in staffing, the busy nature of hotel management, and the gap between the UPSKILL trial and UPSKILL Health data collection. As a result of these circumstances, practical considerations became paramount in our recruitment, which in turn meant that ours ended up being more of a convenience sample than originally anticipated. While we had hoped to conduct focus groups across a more geographically diverse area, for example, we ended up only conducting them in large or medium-sized metropolitan areas of BC and ON, and generally in medium to large hotels. While there other advantages to this strategy – for instance, we were likely able to involve more immigrants than had we gone to the Prairies or Atlantic region – this may somewhat limit the transferability of our findings (see the Discussion section for further detail).

The delays in establishing contact with hotels also resulted in significant delays organizing the focus groups. Although the original intent was to hold the focus groups in late October/early November 2014, focus groups were held over the course of three months beginning in December 2014.

Once on board, SRDC also asked for the hotel management's assistance distributing information to employees about the focus groups. The protocol for this interaction is outlined in Appendix D. When possible, hotels were also asked to provide a venue for the focus group. While SRDC was cognizant of the fact that this may have discouraged participation from participants no longer employed at the hotel, for those who remained at the same location, it was a convenient location for

scheduling, and assured participants of UPSKILL Health's legitimacy, given that all of their prior interactions with the UPSKILL project had also occurred on site. SRDC was able to accommodate several former employees by scheduling alternative sessions, including telephone interviews. Management was also asked for their input as to the preferred timing of the focus group.

Participant recruitment

Two basic criteria were set out for participation in the focus groups: 1) all focus group participants had to be members of the UPSKILL program group (i.e., those who received the intervention, rather than those in the control group) in order to discuss any perceived impacts of the training; and 2) all participants had to have completed the follow-up survey. These two criteria ensured that focus group participants had participated throughout the duration of the UPSKILL trial (i.e., they did not drop out of the study), and had at least the potential to realize skill gains from the training intervention. This also meant they would be able to comment on the ways in which both low LES and LES training may have affected their work and health.

Use of the follow-up survey as a required condition of participation for UPSKILL Health also ensured that only those who had consented to be contacted for future research projects were invited to participate in the focus groups. As noted in Appendix E, the contact page of the UPSKILL follow-up survey contained the line "We may contact you in the future for further research related to your participation in UPSKILL." The follow-up survey also allowed SRDC to link participants' qualitative data to their quantitative results, which indicated any changes in key indicators (including LES indicators and psychosocial variables) that may have occurred between the initial survey and the post-intervention follow-up survey.

To maximize transferability of the results of the UPSKILL Health qualitative study to the larger group of UPSKILL participants and potentially, to other groups of workers with low levels of LES, SRDC tailored recruitment to achieve as much diversity as possible, particularly in terms of gender, age, occupation and immigrant status. In preparation for the focus groups, SRDC reviewed participant demographics and program impacts in these areas, particularly as they varied by region and the specific locations planned for the focus groups. However, as with the original UPSKILL sample, participants were more likely to be female, and/or immigrants, particularly in certain regions, and housekeeping staff was likely to be over-represented compared to other occupations.

SRDC contacted all prospective participants directly by telephone and/or email, using the contact information they provided at the time of the follow-up survey for the UPSKILL trial. SRDC opted to use this method of contact for UPSKILL Health to ensure that all eligible participants were given the opportunity to participate, regardless of their employment status. This method also allowed SRDC to ensure that hotel managers were not coordinating recruitment. By personally contacting participants, SRDC attempted to ensure that they were fully aware of the particulars of the study, including participant privacy and its voluntary nature.

A structured protocol was developed to ensure that discussions focused on the specific questions of interest. Whereas the protocol for key informant interviews was purposefully designed to be quite flexible, a structured focus group protocol allowed facilitators to better manage the group discussion, to promote comprehension for participants, and to permit comparisons and contrasts

among different sub-groups. The complete protocol for the focus group discussions is provided in Appendix F.

Due to the large proportion of immigrant participants in UPSKILL and in recognition that many focus group participants were likely to still have low levels of LES, SRDC constructed the focus group protocols such that all explanations and questions were presented in simple, plain language. Likewise, focus group facilitators adapted their facilitation style to ensure questions were clear and easy to answer, while still stimulating group discussion.

SRDC was likewise cognizant of the gender and cultural implications of literacy, health literacy, and health outcomes, and the ways in which these might affect a participant's experiences. To the extent that these could be anticipated in advance, SRDC addressed these issues in its recruitment and facilitation. For instance, knowing that the UPSKILL sample was disproportionately female (particularly in the housekeeping job class), we attempted to hold at least one group for women only, to ensure they felt comfortable participating fully in the discussion in light of any potential heterogeneous group dynamics.

All focus groups began with a short introduction outlining the purpose of the project and participants' rights as study participants, particularly with respect to confidentiality and privacy of personal information. As is SRDC's standard practice, it was important to address the limits to confidentiality inherent in group discussions, and to request everyone's cooperation not to disclose personal information shared with the group. Participants were asked to sign a short, plain language consent form. This document is presented in Appendix G.

Two SRDC project team members attended each focus group. One person took the lead role facilitating the group discussion, and the second took handwritten notes and oversaw the logistics of the event (e.g., arranging audio recording, documenting attendance, paying honoraria and cost reimbursement, etc.). While SRDC team members varied by region, one team member was present at all focus groups to ensure consistency of facilitation and analysis.

SRDC digitally audio recorded all focus group discussions. Typically, two small recorders were used to ensure that all participants' voices were heard, and in case one malfunctioned. Due to limited resources and the nature of the inquiry for this study (i.e., not a discourse analysis), recordings were not transcribed, but were used to expand on material from the notes. Participants were informed that focus group discussions would be taped at the time their eligibility was confirmed, and the group was asked again at the focus group if everyone was comfortable with this procedure (all participants gave consent).

The majority of focus groups were held in conference rooms in participating UPSKILL hotels. In instances where hotels preferred to limit participation to former UPSKILL participants who were still current hotel employees, SRDC made alternate arrangements to speak with UPSKILL participants by phone. When each potential participant was contacted to confirm eligibility, s/he was asked about special needs or anything that might pose a barrier to participation. The time of day was chosen in consultation with the hotels so that the greatest number of participants could attend. While hotel management was consulted in order to identify preferred timing of the focus groups, employees were also consulted to ensure that the focus group time was suitable to their

schedules as much as possible. SRDC's previous experience working with these hotels indicated that the best time to conduct the focus group would be in late afternoon, after the end of the day shift for most of our target occupations.

In order to encourage participation, SRDC offered participants an honorarium of $50 in recognition of the value of their time. In order to reduce the burden of participation and improve opportunities to participate in UPSKILL Health, SRDC also provided remuneration for transportation and child care costs, as needed.

3.4 Description of focus group participants

In total, SRDC held four focus groups with 32 UPSKILL participants from five hotels in Ontario and British Columbia. Table 1, below, provides a brief summary. To ensure participants' privacy, hotel names are not reported here.

Table 1 UPSKILL Health focus group locations and participation

Province	City	Number of hotels	Participants
Ontario	Toronto	1	**2**
	Thunder Bay	1	**7**
British Columbia	Coquitlam	1	**7**
	Richmond	2	**16**
		TOTAL	**32**

While the participation rate in Toronto was low, this reflects the relatively small number of UPSKILL participants there. The profile of UPSKILL hotels and participants in Toronto was similar to those in BC, so we did not perceive any recruitment effect on the sample. A comparison of the characteristics of these participants, and the hotels from which they were recruited, is presented below.

Gender

A total of 25 women (78.1 per cent) and 7 men (21.9 per cent) participated in the focus groups, a similar breakdown compared to the original UPSKILL sample (72.3 per cent and 27.7 per cent, respectively). The large proportion of women can be largely attributed to the number of housekeeping room attendants who participated in the project, and the preponderance of women in this occupation. All housekeeping room attendants in the qualitative study were women, representing over half the female participants.

Occupation

The largest proportion of focus group participants worked as housekeeping room attendants (40.6 per cent). The next largest group was composed of front desk agents (28.1 per cent), followed by food and beverage servers and kitchen staff (15.6 per cent each). This pattern was similar to that of the entire UPSKILL sample, which had housekeeping room attendants at 43 per cent, front desk agents at 25 per cent, food and beverage servers at 21 per cent, and kitchen staff at 11 per cent. Housekeepers tended to comprise most of the immigrant participants, and were also generally older than participants in the other occupations.

Immigrant status

The qualitative study included a large proportion of immigrants (62.5 per cent), the majority of whom identified their gender as female, and their occupation as housekeeping room attendants. While the original UPSKILL study also included a large proportion of immigrants (42.3 per cent), our figure is likely higher due to the selection of hotels in British Columbia. In the original UPSKILL study, immigrant participants in British Columbia out-numbered non-immigrants by about two to one and represented by far the largest proportion of immigrants across the regions.

Employment tenure

The average tenure of the focus group participants was 15.6 years, with a wide range of 3 to 25 years, and a median of 11 years. This is noticeably longer than was seen in the original UPSKILL sample (which had an average tenure of 5.6 years), likely skewed by several particularly long tenures. Two focus group participants were no longer employed at the hotel at which they worked during the UPSKILL trial.

Skills gains following UPSKILL

As was mentioned in the overview of UPSKILL measures, LES gains were measured using a TOWES-based Essential Skills assessment that measured respondents' document use and numeracy skills, and reported scores for those categories on a scale of 0 to 500. Scores were further categorized into five levels, with higher scores and levels indicating greater skills proficiency.

On average, participants in the UPSKILL Health qualitative study increased their document use scores by 16.6 points between their baseline assessment and their first follow-up, which is slightly higher than the average 12-point increase experienced by the original UPSKILL sample. The skills gains among focus group participants were largely driven by women and housekeepers.

Focus group participants also saw an average increase in their numeracy scores by 17.6 points between the baseline and follow-up assessments, compared to an average increase of 10.1 points among the original UPSKILL sample. Numeracy gains were highest among the food and beverage servers and the housekeeping room attendants.

Hours of UPSKILL training

On average, focus group participants undertook 18 hours of UPSKILL training, which was virtually the same as for the larger UPSKILL sample (17.7 hours). Among focus group participants, housekeeping room attendants had the highest average training duration by occupation group, at 20.9 hours, compared to an average of 17.9 hours among front desk agents, 14.5 hours among kitchen staff, and 14.3 hours among servers; these differences are likely due to scheduling and logistical issues in the original UPSKILL trial. Female focus group participants undertook 18.7 hours of training on average, compared to 16.7 hours for men. Training hours were similar on average between immigrants and Canadian-born focus group participants.

Hotel characteristics

Among the hotels visited for the qualitative phase of the UPSKILL Health project, three were unionized and two were not. Focus group participants were split evenly between unionized and non-unionized workplaces.

Participating firms also ranged in size. Two firms, representing 9 participants, had over 200 employees; one firm, with 7 participants, had between 50 and 200 employees; and two firms, representing 16 participants, had less than 50 employees.

Implications of focus group composition

While the composition of the focus groups was similar to that of UPSKILL overall in terms of gender, occupation, and duration of training, there were several differences. Participants in the qualitative study were somewhat more likely to be immigrants, to have longer employment tenures, and to have experienced skills gains following the UPSKILL intervention than the larger UPSKILL sample.

The larger proportion of immigrants nuances our analysis around the particular perspectives of those not born in Canada, and for whom English may be a second language. Different cultural understandings of health and well-being may have influenced participants' responses, as well as any challenges in understanding questions or formulating answers related to language ability.

Given the approximately two-year gap between the end of UPSKILL and the beginning of the UPSKILL Health qualitative study, workers who were still available to participate were likely to belong to a more stable segment of the workforce. While we were able to connect with two participants who had left their positions following UPSKILL, locating focus groups in participating hotels and using hotel management to promote the groups skewed participation towards those who remained in the same workplace. If employment tenure can be said to reflect job security, than our participants enjoyed more security than the broader UPSKILL community, which may have influenced the way in which they experienced and reacted to work stressors.

Finally, the greater than average skills gain in our qualitative sample could potentially translate into greater effects on physical or mental health, or other relevant UPSKILL outcomes such as health

literacy. Additionally, given the verbal communication skills required for a group discussion, those who felt more confident in their LES were likely more willing to participate.

We conclude, therefore, that the qualitative sample does not necessarily reflect the experience of all those who participated in UPSKILL in general. Since our purpose in carrying out the UPSKILL Health qualitative sub-study, however was exploratory and conceptual in nature, we do not see this as a significant drawback.

3.5 Data analysis

Consistent with the exploratory nature of the UPSKILL Health study, SRDC took a pragmatic, constructivist grounded theory approach (Charmaz, 2000) to the qualitative data analysis. In other words, we used systematic methods of data categorization and constant comparison for the analysis (e.g., Strauss & Corbin, 1998), yet remained sensitive to multiple ways of interpreting the data. Development of the focus group and interview questions was informed by the previous research done for the UPSKILL Health project i.e., the literature review and the quantitative analysis) as were the initial codes we developed to describe and categorize the data; however, the coding was modified to include emergent codes (i.e., derived from the data itself; see Glaser & Strauss, 1967). However, analysis of the qualitative data focused on theory *building* as opposed to theory *testing* and was therefore not driven by explicit, a priori hypotheses from the literature or from the quantitative analyses. The qualitative analysis was done largely independently of quantitative analysis, with synthesis of both lines of evidence to be undertaken in the final report.

The analysis was conducted using a team-based approach, overseen by the key facilitator and composed of three other SRDC staff experienced in qualitative research. A note-taker present at the focus groups and interviews drafted summary notes immediately following the conclusion of each discussion. These notes were supplemented and validated by the recordings as needed, which also facilitated inclusion of verbatim quotes. SRDC's experience conducting focus groups allowed for detailed note-taking techniques during the sessions that included identifying subtle contextual factors, such as group dynamics among participants, as well as labeling notes with accurate time references in order to rapidly locate and accurately report quotes of interest.

Key informant interviews were initially analyzed for any potential implications for conducting focus groups (e.g., recruitment challenges). Then, focus group data was fully analyzed, in keeping with the emphasis in the study on participants' experiences and the larger amount of focus group data. Once the coding structure was populated and themes began to emerge, interview data were re-analyzed in order to provide confirming and/or contradictory support to the focus group findings.

Finally, SRDC conducted a conceptual, thematic level analysis on the gathered data using a custom grid system in Excel to capture and categorize the data and supporting quotes, and to document prevalence and confirming and contradictory evidence. The focus of the analysis was on the manifest content of the data and did not include in-depth analysis of latent themes or meanings.

Gender analysis

From the beginning, this study sought to explore gender differences in the physical and mental health outcomes of UPSKILL. We recognize that participants have multiple identities beyond gender, and that individually and together, these various identities can profoundly affect one's experience of training and employment. We were particularly interested to learn how gender, language, and occupation intersect to affect employment from participants' perspectives.

Our efforts to explore the intersection of these identities were limited by the relatively small scale of the project, but were informed by the Inter-sectional Feminist Framework (IFF) developed by the Canadian Research Institute for the Advancement of Women (CRIAW). This framework is essentially a way of thinking about "interconnecting and interacting causes of marginalization, poverty and exclusion" (CRIAW, 2006, p. 1) and especially, how "different systemic conditions…work together to reproduce conditions of inequality" (p. 4). The results of this analysis are integrated into the broader findings.

Credibility and dependability

Whereas quantitative research focuses on the validity and reliability of findings in relation to an objective, external "reality," qualitative research frameworks re-frame these concepts in ways that are more suited to the subjective nature of the phenomena being explored. Validity is more appropriately framed in terms of the credibility and transferability of research results, and reliability and objectivity as dependability and confirmability, respectively (Lincoln & Guba, 1985). Taken together, these criteria can be used to judge the overall "trustworthiness" or quality of qualitative research findings.

SRDC used several techniques known to enhance the trustworthiness of qualitative research findings (see Johnson, 1997), including successive reviews of the data during analysis, as noted above. In all, four SRDC team members were involved in data collection and/or analysis, and we collaborated on the development of the coding structure and emerging themes to ensure accuracy and achieve consistency of interpretation. Two SRDC researchers conducted the first round of analysis, meeting afterwards to discuss new codes that emerged in the first categorization process.

A second round of analysis fine-tuned the coding and identified themes, sub-themes and potential patterns across sub-groups of participants (e.g., by region/location, gender, immigration status, occupation); these in turn were shared with the larger project team for interpretation and validation. As mentioned in the previous section, one SRDC researcher involved in the project took the role of coordinating facilitator: attending all focus group sessions, as well as coordinating the analysis of the gathered data. This allowed the coordinator to ensure consistency across all focus groups, in terms of both facilitation and the development of coding structures for the analysis and subsequent thematic interpretation. We also used verbatim quotes from participants extensively to ensure we accurately reflected participants' perspectives.

3.6 Methodological challenges and limitations

Time lapse between the original UPSKILL trial and UPSKILL Health

The two year time lapse between the delivery of UPSKILL training and the qualitative health sub-study resulted in recruitment challenges and may have also resulted in a certain loss of depth and/or accuracy in participants' recall of their experiences resulting from UPSKILL.

Challenges recruiting hotels and participants were evident, because both hotel contacts and participants were more likely to have moved or changed employment. Delays launching focus group recruitment also resulted in a more condensed timeframe in which to organize and conduct these discussions. This led SRDC to impose shorter timeframes on hotels to confirm their willingness to help with the logistics involved in organizing the groups.

The passage of time also meant that participants were less likely to remember participating in UPSKILL and to recall specific details about the training they received. In a number of instances, facilitators found it necessary to spend a good portion of the introductory segment of the discussions providing participants with details about the UPSKILL training – including when the training took place, the type of content that would have been covered during sessions, the format of the sessions (at work, in small groups), and the inclusion of surveys and on-site work assessments. As well, the time lapse meant participants were more likely to have undergone additional training since UPSKILL, which may have led some to confuse certain facts/impressions.

The exploratory nature of UPSKILL health

The exploratory nature of the UPSKILL Health study means that we had to make difficult decisions about where to focus our qualitative data collection and analyses, with the result that some areas received less attention than others. In particular, we focused on getting feedback from participants on a broad range of issues related to LES, mental health and work stress, coping strategies, job performance and health literacy. There may yet be other aspects of the conceptual model that could provide useful information with further exploration.

A further limitation is that discussions with participants did not lend themselves to an in-depth study of exactly which literacy or essential skills they thought were most linked to their subjective experience of coping at work. Time constraints and language barriers prevented a full exploration of the different scenarios participants encountered or the complex, nuanced interplay between job tasks, coping strategies, workplace factors and individual circumstances that affected their abilities or feelings about work.

As a result, our analysis lends itself to providing impressions and general direction rather than definitive answers to the research questions. It sheds light on the *connection* between variables of interest (such as LES training and stress) rather than the specific mechanisms at play (e.g., changes in LES levels or other structural features of the training such as group work, role playing, external trainers, etc.).

Incomplete picture of housekeepers' experiences

The breadth of experiences and opinions from housekeepers did not emerge as fully as expected. First, few housekeepers responded directly to SRDC recruitment efforts by phone and email, perhaps due lower literacy and comfort in speaking English. This group in particular may have been less likely to understand our request in written emails or in voicemails. As noted by one key informant prior to the focus groups, "*despite ESL participants being a key group that may have benefited most from training, they may also be the hardest group to get feedback from, since these participants may or may not have the language abilities needed to participate in focus groups*" [UPSKILL trainer A].

Those more likely to feel comfortable or confident expressing themselves in front of others, and in English, were more likely to respond to our focus group invitations. This likely resulted in self-selection bias and an over-representation of participants whose first language was English, and those in occupations which generally require more extraversion (i.e., front desk agents, servers).

As expected, SRDC researchers noted that in groups combining women housekeepers – many of whom were ESL learners – and native-English speakers or members of other occupational groups, housekeepers appeared more reluctant to communicate or share their experiences.

Credibility and dependability

As with any qualitative research that uses purposive rather than random sampling to recruit participants, those who participated in the UPSKILL Health qualitative sub-study cannot be expected to represent the full range of experiences resulting from the UPSKILL training. However, given the extensive efforts that were made to maximize diversity of perspective and the extensive description of study methods and context, it may be possible to transfer our results to other contexts or settings in specific, limited ways, keeping in mind the limitations of the study.

4. Findings

This section describes the main findings of the UPSKILL Health qualitative sub-study, synthesizing results from the key informant interviews with LES trainers and practitioners with those of the focus group discussions with UPSKILL participants. Results are presented in response to four research questions for the qualitative sub-study identified in the Methodology section (3.2).

4.1 How did UPSKILL participants deal with low levels of LES at work?

To address this research question, we explored how UPSKILL Health focus group participants with low levels of LES coped in their jobs when they encountered situations in which they felt uncertain about their abilities. We asked participants to think back to before the UPSKILL training and describe situations in which they didn't know how to do something at work related to reading, counting, writing, communicating, or thinking tasks.

It is important to note that our discussions with participants did not include explicit use of terms such as literacy or essential skills. Instead, we provided examples of challenging situations, such as calculating the costs or amounts of a product, or being asked a question by a hotel guest to which they didn't know the answer. In addition to learning about the situations themselves, we were also interested in understanding the coping strategies participants used to handle these situations and their subjective experiences of those situations.

4.1.1 The experience of low LES at work

The diversity of focus group participants' characteristics, identities, and individual circumstances at work and at home defy any attempt to define a universal experience of having low levels of LES. Nevertheless, we did hear certain commonalities of experience from participants in terms of LES and their work. We present our understanding of these common experiences, in order to highlight some of the ways in which LES and work can be inter-related and can affect both the immediate and longer-term success of workplace training, as well as workers' physical and mental health.

The majority of participants could recollect at least one example of a work task that relied on LES with which they had struggled. Often, the examples provided and the strategies used in response were not connected specifically by participants to their reading, writing, or numeracy skills. Participants were much more likely to describe examples in which oral communication, working with others, and to a lesser extent, critical thinking and organizing skills proved challenging in their work.

Housekeepers

Housekeepers often described their work environment as being busy yet fairly predictable in the volume and scope of day-to-day tasks. The situation most often identified by this group as one in which they felt unsure was oral communication with hotel guests and other hotel employees outside of the immediate housekeeping group.

The housekeeper participants – all of whom were women and the vast majority also immigrants and ESL learners – frequently described how their lack of English skills affected their confidence in speaking with guests and colleagues: "*Before [the training], we were shy about talking to the guest – we had no confidence*" [Housekeeper G]. Moreover, many indicated that this lack of language skills often resulted in stress – such as when guests entered the rooms they were cleaning.

One trainer commented about UPSKILL participants more generally that many "… *are fearful of the fact that they are not able to answer guest questions and inquiries, they shy away because of that language barrier*" [UPSKILL trainer A].

Housekeepers also reported that language barriers at times left them feeling isolated from other employee groups, a notion echoed by employees in other occupational groups who had similar challenges: "*Because of language barriers, we miss so many things*" [Food and beverage server A].

For housekeepers, this feeling of isolation appeared to be exacerbated by a perception that they had lower status in comparison with other employees at the hotel.

> *"For some [housekeepers, UPSKILL training is] probably the first time they have been exposed to that kind of understanding – that they have a role in the hotel, that they are viewed as key components in the big picture."*
>
> ~ UPSKILL trainer A

Front desk agents

Front desk agents described their work as intermittently chaotic, entailing frequent and rapid changes between tasks that involved implementing well-established, operational procedures (e.g., check-ins), and handling frontline customer interactions, which may in contrast be quite fluid and unpredictable. Participants in this occupation described their working environments as "*high energy*" and largely unpredictable, requiring them to follow procedures yet remain flexible and responsive to a wide range of guest personalities and inquiries. One focus group participant commented that, "*every day is a different situation*" [Front desk agent H].

In a number of instances, front desk agents also spoke of the importance of being well informed, not only of hotel events and operations but also of local events and news, so they could engage in pleasant discussions with guests and provide suggestions of things to do in the area. One participant noted that, "*Everyone comes to the front desk. We have to know everything that's going on – you have to be on your toes*" [Front desk agent D].

Given their role at the hotel, it came as little surprise that the front desk agents with whom we spoke tended overall to be more proficient English speakers than participants from other occupational groups. They described how the requirements of their job for thinking and oral communication demanded skills in conflict resolution, and that the nature of their work often led them to feel rushed and at times overwhelmed or frustrated.

Although the majority of front desk agents with whom we spoke were native English speakers, the few who were not mentioned how language barriers added an extra dimension of stress to their work. Specifically, they described the additional challenge of expressing themselves and conveying important information in their non-native language to guests who sometimes were also non-native English speakers. Regardless of their language abilities, front desk agents generally identified the communication-related aspect of their work as being one that they enjoyed the most, but which was also the source of stress when misunderstandings or conflict with guests arose.

Kitchen staff

Kitchen staff often described their experiences at work as hectic and unpredictable, requiring frequent calculations to correctly convert proportions for large-scale recipes while efficiently organizing long lists of ever-changing tasks, whether in writing or in their heads. Although we only spoke with five kitchen staff, these employees clearly described the pressure of having to perform these calculations [Kitchen staff C].

> *"Sometimes, we have to cook for 800 people. So, the chef will tell you – if we have different kinds of mixed vegetables – for one person, you have 4 ounces, so you have to calculate all the vegetables from ounces to pounds to get the right amount."*
>
> ~ Kitchen staff C

Kitchen staff participants in our focus groups also noted that they sometimes felt disconnected from other restaurant staff, or the larger organization, as a result of not understanding how their roles intersected with others'. One focus group participant remarked that before UPSKILL, *"There are so many things we didn't know… Before, I didn't know how many rooms were in the hotel… Before, we used to come here, go straight to work, and then come out"* [Kitchen staff B]. They also described how frequent turnover among kitchen staff, combined with mandatory inspections to ensure adherence to health and safety regulations, meant a workplace environment characterized by constant training and ever-changing group dynamics.

Their descriptions of the kinds of tasks in which they were unsure or struggled mostly involved numeracy skills (recipe calculations), thinking skills (job task planning and organizing, memorization), and working with others.

Food and beverage servers

The five restaurant and banquet servers who participated in the focus groups tended to identify working with others and cognitive tasks such as memorization and organizing as areas in which they were more likely to struggle. They described fast-paced work that relied on communication and teamwork with kitchen staff and other servers, in an environment with frequent staff turnover

and pressure to memorize and recite significant volumes of information about continuously changing menus.

Participants from the food and beverage group were less likely to be immigrants and/or non-native English speakers and had significantly fewer years of employment at the hotel in comparison with other occupational groups. Perhaps because of these factors, this group was less likely to report feeling uncomfortable or shy communicating with guests or colleagues but much more likely to report struggles in their work related to effectively interacting with colleagues and guests; specifically, managing conflict. For example, one participant commented that, "*I speak English, but still, I want to say more things. You're limited. Sometimes I want to say things, but I don't*" [Food and beverage server A].

4.1.2 Low LES and stress

Once focus group participants had described the kinds of situations in which they felt limited by their level of literacy and essential skills, they were further prompted to explain how they felt in these potentially challenging situations, and particularly, the extent to which they found them stressful. As seen in the Focus Group Protocol (Appendix F), we did not use the words *mental health* in our discussions with focus group participants, but rather asked about stress, a more neutral and colloquial term we used as a proxy for mental health. Research has suggested that understanding of the term 'mental health' among qualitative study participants without a background in the health field can be uncertain, and that negative stigma associated with the term can result in misinterpretation (DeRoche & Lahman, 2008).

Participants identified six main areas of job stressors:

- high work load;
- low control, high unpredictability of workplace activities, often compounded by fearfulness about communicating in English;
- ineffective supervision;
- low social support and/or conflict with colleagues;
- long working hours; and
- lack of acknowledgements or rewards.

The majority of participants described the *affective* effects of stressors rather than effects on their physical health or well-being. That is, they often described the effects of stressors using words that indicated immediate, affective responses – for example, feeling "*rushed*", "*pressured*", or "*overwhelmed*" – or using more internalized attributions to general personality traits, such as being "*shy*", lacking confidence, or feeling "*incapable*". Whether the effect was experienced as situation-specific or in a more generalized manner, participants were clear that, when confronted with situations in which they were unsure of their ability to perform a skill-related task, the emotional experience was negative and stressful.

Interestingly, despite the fact that all focus group participants had low LES in common, many among those who were also ESL learners readily identified how their limited English skills were an additional source of significant stress and concern at work. This is an important finding in that it points to a nuance in the source and/or intensity of stressors at work between native versus non-native English speakers. Immigrant adults with lower levels of LES who also have weak language skills may be at risk of experiencing additional stress at work because of concerns about not having the necessary language skills to communicate in English, above and beyond the stress experienced by native English speakers with similar levels of LES.

We also examined gender differences in reported stress at work. Compared to the male participants in the focus groups, women were much more likely to report stress at work, even accounting for the greater numbers of women in the study. Similarly, among women participants, housekeepers were especially likely to describe feeling stressed. Employees from larger hotels (i.e., more than 200 employees) were more likely to report stress than those in smaller hotels.

4.1.3 Strategies for coping with low LES

One area of particular focus in our discussions with focus group participants was identifying the coping strategies used in response to stressful circumstances at work related to LES. More specifically, we asked them to identify the tips and tricks they used to manage the workplace situations or tasks they felt had challenged their existing LES, prior to undertaking LES training through UPSKILL.

Our analysis of the use of coping strategies among focus group participants was guided by the Transactional Model of Stress and Coping (Lazarus, 1966; Antonovsky, 1979), a framework for evaluating the processes and outcomes of coping with stressful events. Still in wide use today and considered a mainstay of research in the field of stress (Rao, 2009), this model defines stress as "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (Lazarus & Folkman, 1984, p. 19).

Coping with stress (or stressors), then, is what a person thinks or does to try to manage these person-environment transactions (Zeidner & Endler, 1996). This is thought to occur through a two-step appraisal process: a *primary appraisal* whereby an individual evaluates the significance of a potential stressor or threatening event as stressful, positive, controllable, challenging or irrelevant, followed by a *secondary appraisal* process in which a person evaluates the controllability of the stressor and their coping resources (Cohen, 1984).

Coping strategies arise from a person's efforts to mediate these primary and secondary appraisals, and can be directed at changing elements of the stressful situation (i.e., problem-oriented coping) and/or changing the way one thinks or feels about the stressful situation (i.e., emotional regulation or emotion-oriented coping; see Lazarus, 1966, 1991). Outcomes of coping have been linked to stress, emotional well-being, functional status (Glanz, Rimer, & Lewis, 2002), and resilience (Rutter, 2001; Connor & Davidson, 2003), with resilience serving as an index of mental health (Maddi & Khoshaba, 1994; Ramaniah, Sharpe, & Byravan, 1999).

We asked focus group participants to describe how they coped at work prior to UPSKILL when there was a reading or counting task or situation related to LES which they did not know how to do. Many focus group participants (63 per cent) identified at least one tip, trick, or strategy related to challenging work tasks, and our analysis of their responses included two levels of content analysis: first, a manifest analysis examining the *surface meaning* present in the description, and a second, latent analysis examining the *deeper, embedded* meaning conveyed by the description (Holsti, 1969; Berg, 2001).

Asking for help and seeking independent solutions

At the manifest level, participants described only two coping strategies:

1. Asking for help, whether from colleagues or a manager; and
2. Seeking an independent solution.

Asking for help was the most commonly reported strategy, with about half of participants identifying this as their primary strategy when they didn't know how to do something at work. Seeking help from a manager or supervisor was more commonly reported (by two thirds) than seeking help from colleagues and co-workers (about one-third).

A sub-group analysis on help-seeking did not reveal any differences by gender, immigrant status, or unionized/non-unionized workplace, with each group being just as likely to ask for help from management or colleagues. However, we did find differences based on occupational role and hotel size. For instance, front desk agents and food and beverage servers were much more likely to report approaching management for help compared to kitchen staff and housekeepers. Participants in the latter two occupations were less likely to report seeking help from others, and more likely to report relying on themselves to find a solution.

As for hotel size, we found that this did not affect the likelihood of a participant reaching out to management for help. However, participants from small hotels (i.e., fewer than 50 employees) were much more likely to report seeking help from coworkers than those working at mid- or large-sized hotels (we explore in greater detail the link with social capital at work in a later section). This may suggest that in smaller hotels, the closer relationships among employees may be a common and important source of support for coping with low levels of LES. About one quarter of focus group participants identified coping with workplace tasks they didn't know how to undertake by seeking independent solutions. Relying on internal reasoning and critical thinking skills enabled many to use logic to arrive at a solution, while others investigated potential answers by looking up information online or via other sources. Participants described these strategies using phrases such as, "*figure it out*" and "*think about it*".

Kitchen staff and housekeepers in our focus groups tended to be more likely to seek out independent solutions compared to servers and front desk staff. Women were more likely than men to report relying on their internal problem-solving or information-seeking abilities to find solutions.

No other discernable differences in response patterns by subgroup were identified.

Problem-oriented versus emotion-oriented coping

We undertook a more in-depth, latent-level analysis of the coping responses used by participants by re-examining descriptions from each focus group participant and including broader contextual information, such as additional nuance or information provided throughout the conversation but not in direct response to the question about coping, as well as non-verbal cues, and accounts from trainers. We used the Transactional Model of Coping to structure the greater variation and nuance in coping strategies identified through this latent-level analysis.

As described earlier, *problem-oriented* coping strategies rely on active efforts to address and manage the stressor, whereas *emotion-oriented* strategies seek to manage or regulate the *affective*, or subjective experience of stress/distress (i.e., trying to reduce the negative emotional response associated with stress) rather than the stressor itself. These two main categories of coping strategies each encompass different strategies, identified below:

Problem-oriented strategies:

- *Planning*: thinking about how to confront the stressor, planning one's coping efforts, logic/analyzing the situation, evaluation pros and cons of different options
- *Suppression of competing activities:* concentrating more completely on dealing with the stressor
- *Restraint:* holding back one's coping attempts until they can be of use
- *Seeking instrumental support*: seeking information or advice from a person who has direct impact on the situation

Emotion-oriented strategies:

- *Positive reinterpretation and growth/cognitive restructuring:* making the best of the situation by re-framing the stressor and viewing it in a more favourable light
- *Mental disengagement*: denying, distracting oneself
- *Behavioural disengagement:* avoiding, withdrawing effort
- Focus on and venting of emotions
- Seeking emotional support (e.g., from friends)

The use of the terms "problem-focused" and "emotion-focused" coping strategies characterizes a person's *attempt* to deal with the stressor and is not intended to characterize the outcome or likelihood of achieving a positive result. In other words, one strategy may be more appropriate and productive in one circumstance compared to another. Problem-oriented strategies are not always optimal or adaptive, and the use of both types of strategies to deal with stressful encounters or challenging external or internal demands is common. That said, emotion-focused strategies are often less effective than problem-focused methods in relation to health outcomes (Penley, Tomaka, & Weibe, 2012), and problem-focused approaches are optimal – or *adaptive* – when an individual has some control the source of stress. Emotion-focused coping is the more common and adaptive form of coping used when events are not changeable (i.e., out of the individual's control; Lazarus & Folkman, 1984).

Of course, focus group participants did not use such terms; however, when sufficient information on the use of coping strategies was available in the qualitative data, we attempted to discern the

pattern of problem- versus emotion-focused strategies. For example, our re-examination of one participant's responses throughout the focus group revealed that they described UPSKILL as having reduced their stress by making it easier for them to approach a co-worker or supervisor to ask for help, and made their work more efficient by showing them how to better organize and prioritize a long list of work tasks. In this example, we extrapolated the use of three problem-focused coping strategies, leading to decreased stress: seeking instrumental support, planning, and positive reinterpretation and growth.

Our latent-level analysis revealed that prior to UPSKILL, participants tended to use two problem-oriented strategies (planning and seeking instrumental support) and three emotion-oriented strategies (mental disengagement, behavioural disengagement/avoidance, and focus on and venting of emotions).

Of particular significance is the finding that housekeepers tended to use avoidance prior to UPSKILL when oral communication with guests was required. Recall that in the manifest level of analysis, housekeepers were more likely than other occupational groups to report seeking out independent solutions compared to servers and front desk staff. Upon closer examination, we identified that unlike other occupational groups, housekeepers tended to "shy away" or avoid situations such as communicating with guests and management, in order to cope with the stress these situations produced, as a result of their perceived lack of English language skills.

In addition, despite housekeepers and kitchen staff both being more likely to report seeking independent solutions as a coping strategy when faced with a task at work they were unsure of, our analysis revealed that housekeepers were less likely than kitchen staff and the other three occupational groups to use more than one coping strategy. This suggests that avoidance could be a primary and defining coping strategy for low LES at work among this particular occupational group. As will be highlighted in the next section, this underlines the significance of housekeepers identifying gains in confidence for communicating with guests and colleagues as one of the key benefits of UPSKILL and, we suspect, the main driver behind the reported stress reduction at work among this group.

Section 4.2.2 describes how UPSKILL may have positively affected participants' stress levels through changes in their use of coping strategies, namely by increasing the use of problem-focused strategies and decreasing the use of emotion-focused strategies in situations at work.

4.2 Did LES training affect UPSKILL participants' work experiences?

Of the 32 UPSKILL Health focus group participants with whom we spoke, the vast majority (88 per cent) reported some type of change in their lives *after* participating in UPSKILL. Of these, three quarters (75 per cent) identified or described a change related to physical or mental health. As described in this section, our analysis focused on whether the changes identified by these participants followed a discernable pattern by subgroup and/or by changes in the use of coping strategies.

4.2.1 Effects on mental health and stress

One of the most striking findings of the qualitative sub-study was that a large majority of focus group participants reported mental health benefits from LES training. Of the 75 per cent of focus group participants who identified some type of change after UPSKILL relating to their health, nearly all described these changes in terms of their mental health. In particular, over half indicated that LES training decreased or helped them manage their levels of stress at work. They expressed this in various ways, such as, "*My health has improved because my job pressure has reduced* [Food and beverage server A], and "*Before, we had no confidence. After, we have more confidence for work. Before, we have stress, we have tension, everything"* [Housekeeper G].

> *"Training helped [me] to not be so stressed out…Before, [it was] stressful, [I was] running around, looking for people. After the training, [I was] more polite, more patient, calm."*
>
> ~ Banquet server E

Participants from each of the four occupation groups reported reduced stress following UPSKILL training. However, women, immigrants, housekeepers, and those working in small, non-unionized hotels[5] were less likely to report reductions in stress following UPSKILL training. This may have been because these individuals had less control or influence over the scheduling of their UPSKILL training, as noted below.

A few focus group participants – mostly among the housekeeping and food and beverage staff – and trainers noted that the UPSKILL training had, in fact, *increased* perceived stress at work in some cases, as a result of scheduling and workloads that did not adjust for the training. Specifically, there were a few hotels that put the burden of accommodating the training on the workers; housekeepers, for instance, still had their daily quota of rooms to clean. As a result, "*We had to do our work faster on the days when we had classes*" [Housekeeper I].

Also, the shift-work associated with many occupations in the hospitality industry meant that LES training was sometimes scheduled in the middle of participants' shifts. We heard that some servers didn't like having to leave work to attend training, since it meant they "*had to give up tables and tips*" [Food and beverage server C]. One trainer also commented that despite SRDC's efforts to ensure that participation was voluntary, in a few instances, UPSKILL participants "*felt that training was imposed on them*" [UPSKILL trainer A], which may have contributed to increased feelings of stress.

[5] Many participants were in overlapping categories.

4.2.2 Changes in coping strategies

As described earlier, we examined the data for specific patterns of change in the use of coping strategies. Overall, more focus group participants reported using problem-focused coping strategies after UPSKILL, as well as a wider *range* of strategies. In addition, there was a decrease in the number of participants who described using emotion-focused coping strategies following UPSKILL. These patterns are based on systematic analysis of qualitative data from a small sample of UPSKILL participants and illustrate some of the specific ways in which participants described how LES training benefitted them in terms of both their work and their mental health.

When asked if the way in which they dealt with challenging situations had changed *after* participating in UPSKILL, the prevalence of talking to someone with a direct impact on the situation (i.e., instrumental support) did not change. However, considerably more participants described engaging in a wider variety of problem-focused strategies, namely planning (i.e., logical analysis of the situation and evaluating pros and cons), and suppression of competing activities (i.e., working harder and prioritizing).

We also noted changes in the pattern of emotion-oriented coping, with fewer participants describing situations in which they used mental and behavioural disengagement strategies (i.e., avoiding/denying) and more participants engaging in positive re-interpretation and growth.

Front desk agents in particular commented on how UPSKILL had provided them with the knowledge and attitudes needed to solve workplace problems more effectively. Similarly, the ability to think critically about a problem to come up with an answer themselves was also identified as a direct impact of training, most notably by *"being a bit more thorough and calm and relaxed"* [Front desk agent D]. Similarly, some trainees also discussed how their improved problem-solving abilities came from learning how to prioritize more effectively: "*Writing on those sheets on the wall I found helpful. We were learning to prioritize, and we learned that people prioritize in different ways. So after that, when we went back to the workplace, we knew that people work in different ways"* [Kitchen staff A].

In light of the earlier finding that women, housekeepers, immigrants, and those working at smaller hotels were less likely to report reduction in stress at work after UPSKILL, we examined the pattern of coping strategies reported by a subgroup of female, immigrant housekeepers. Compared to other participants, this group was equally likely to report talking with someone for instrumental support before UPSKILL as afterwards. In addition, this group tended not to report use of a wider range of problem-solving strategies. The only strategy that increased in reported use among housekeepers was information seeking, which typically falls under the problem-focused *planning* strategy.

Although not nearly as substantial a change as the reported increase in use of problem-focused strategies, we observed a decrease in the number of participants reporting the use of *any* type of emotion-focused strategy after LES training. In particular, the use of emotion-focused strategies that involved avoidance or denial of the challenging situation was seldom mentioned as a strategy participants used after UPSKILL. No discernable difference was found among the housekeeping group – their pattern of change in this area was the same as the full focus group sample.

Focus group participants did mention more often seeking social support from friends (i.e., emotional support). Interestingly, another difference emerged here between housekeepers and focus group participants overall: housekeepers did not appear any more likely after UPSKILL to seek out social support from friends.

> *"People that took [UPSKILL] seemed to have a better relationship than new people who came in after the course was offered. I can tell the difference between the groups. The new group talks a lot more behind your back, rather than going to the person involved. A big part of training was about talking to each other, which is very important in the restaurant industry."*
>
> ~ Food and beverage server C

The pattern of emotion-focused coping strategies prior to and after UPSKILL was indicative of an overall increase in *adaptive coping* (i.e., leading to reduced stress) by focus group participants and, we suspect, linked to the widespread reported reduction in stress. Recall that adaptive coping entails the use of problem-focused coping strategies when the stressor is at least partly under the individual's control, whereas emotion-focused strategies are more likely to be adaptive when control over the stressor lies beyond the individual's influence.

One plausible explanation is that for at least three of the six job stressors identified – unpredictability of workplace activities, ineffective supervision, and low social support/conflict with colleagues – UPSKILL provided participants with the opportunity to exert more control through improved communication skills. For some participants, for example, improved communication skills may have been brought about by better mastery of English (e.g., ESL learners in the housekeeping group who felt better equipped to handle unplanned interactions with guests).

For others, improved communication skills may have facilitated more effective and assertive conflict resolution with colleagues or supervisors. Although the scope of our discussions with focus group participants did not include obtaining a specific description of the relative *controllability* participants felt they had over their sources of workplace stress, the evidence that many participants experienced a reduction in stress which they attributed to UPSKILL would be highly suggestive of more adaptive coping.

4.2.3 Attitudes towards work

Job satisfaction

When asked if their level of job satisfaction had changed since UPSKILL training, about half the focus group participants said that they felt more satisfied with their jobs since completing the training, and half reported no change in satisfaction. For those who found that training increased satisfaction, the change appears to have been rooted in more positive affective responses towards their organization, that could in part have arisen from the perception of greater support and more

positive relationships with co-workers, and the training's focus on problem-solving and conflict resolution: *"I think the training itself was a good outlet. Because the instructor was there, and they would say, 'what kind of problems are you having and what can we do about it?' Because in the day-to-day environment here, you don't have the time."* [Food and beverage server B]

Motivation and engagement at work

Several participants with whom we spoke described how UPSKILL led them to feel more motivated at work, largely due to the effect of training in re-framing their role as integral to the success of the organization. In addition, some said they felt they had more control over how well they do their jobs.

Changes in this area were not as prevalent or strongly expressed as those in some other domains, but there was a sense that training had, at the very least, helped re-engage learners in their work. For example, one participant commented that, *"You get lazy, and don't really do it [safety precautions], and this was a reminder"* [Food and beverage server D].

In other instances, participants shared that UPSKILL had re-engaged them at work as a result of the opportunity to work through conflict, as an "outlet" to discuss problems and to work collectively towards solutions. As noted by one participant, this process of relieving stress or tension through collective problem-solving had a re-invigorating effect on participants: *"We did discuss things, and get things out, and found options for them. Just getting them out makes a big difference. Kind of like a fresh start"* [Front desk agent D].

4.3 What influences the relationship between LES, health and job performance?

This section explores the role played by psychosocial factors and health literacy in explaining how LES may link to health and workplace performance. To examine this research question, a series of sub-questions were included in our discussions with focus group participants and key informants, such as:

- Do you do your work any differently now that you've taken the training?
- Do you find you are any more or less stressed at work now?
- How have your tasks at work changed, if at all, in the last year or so?

These questions were designed to investigate:

- What was the interplay between LES and psychosocial factors, and how might this help explain the health-related effects of UPSKILL?
- How did participants' LES intersect with health literacy, and was there any evidence that these affected health?
- Was there any evidence that workplace performance was affected by the reported changes in health, whether directly through improved health literacy or indirectly through changes at the psychosocial level?

4.3.1 LES, psychosocial factors and health

If using different coping strategies is evidence of behavior change, the conceptual model developed in Phase One suggests that the mechanisms underlying those behavioural changes likely involve psychosocial factors such as self-efficacy/self-confidence and social capital.

Self-efficacy and self-confidence

In describing how UPSKILL led them to feel less stress at work, participants frequently expressed how changes in their self-confidence had enabled them to bring about changes in their on-the-job attitudes and behaviours. In many ways, these attitudes and behaviours closely resemble the changes in coping strategies discussed in section 4.2.

Self-efficacy: Increased confidence in communication and interpersonal interactions

Just as we used the word "stress" in our discussions with UPSKILL Health participants as a proxy for the broader concept of mental health, we sometimes asked participants to what extent they felt more confident in their ability to engage in a task, as a proxy for self-efficacy.

There is considerable use of the term "confidence" and "self-confidence" in the definition, measurement and operationalization of self-efficacy. For example, Feinstein, Sabates, Anderson, Sorhaindo, and Hammond (2006) define self-efficacy as the "…*confidence* in her/his ability to organise and execute a given course of action to solve a problem or accomplish a task" (p. 194). Although there is still debate regarding the appropriateness of using these terms interchangeably, self-confidence is a widely-used term in the adult education and training literature and is closely related at a conceptual level for the exploratory nature of this study. Moreover, it provided a plain-language term to help participants easily understand and respond to our line of inquiry on self-efficacy.

Many participants described how UPSKILL's LES training provided them with additional coping strategies to respond to their job demands with greater self-confidence. Changes in self-confidence were frequently mentioned by housekeepers and front desk agents, notably in terms of communicating and interacting with colleagues and guests. One participant commented that, "*Before, we had no confidence. After, we have more confidence for work*" [Housekeeper G].

Whereas housekeepers often noted feeling more self-confident after UPSKILL training in basic communication with guests, front desk agents, kitchen staff, and food and beverage servers were more likely to describe how they felt increased confidence in interactions requiring more complex communication with guests and colleagues. One trainer interview highlighted an example wherein a front desk agent was able to use skills learned in UPSKILL training to address a guest's inappropriate behavior towards her, and to speak with her manager about the incident. This trainer commented, "*They did not know that they have that authority… The class allowed them to bring that to the forefront*" [UPSKILL trainer A].

Changes in self-confidence occurred through a combined influence of LES training in three areas: enactive mastery, vicarious experience, and verbal persuasion/encouragement.

Enactive mastery

Participants provided many examples of how LES training provided them with opportunities to practice – or perform – skills and behaviours required in their jobs. Specifically, many participants recalled the UPSKILL role-playing scenarios being *"thoroughly enjoyable", "memorable",* and *"helpful"* in providing opportunities to put their newly acquired knowledge into practice.

This opportunity to practice and refine the target behaviours and to achieve the desired level of job performance was the most powerful way in which participants' self-efficacy beliefs were influenced by their LES training. In other words, role playing offered a chance for participants to master important skills, which they described as leading to greater confidence: *"In the thought process training, I told my manager not to make me read out loud. But, before the end of the training, I told myself I had to do one paragraph. When my manager skipped me, I was actually disappointed. I did end up volunteering to read out loud, and I was proud of myself*" [Food and beverage server D].

In addition to role-playing, some participants also remarked that the straightforward, step-by-step instructions and training materials provided them with the clear instructions needed to learn and perform a skill to a new level. Common references included "*the structure*," "*the steps*," and "*procedure*," and participants remarked that this helped give them greater confidence and reduced stress: *"I remember there was a section about health and safety issues. There were some scenarios and prompts that we needed to use for each situation – to relieve the stress. I think that was pretty helpful"* [Front desk agent G]. Likewise, one participant found that training "*reduces stress levels a little bit, because it gives you a few more tools to use with regards to people, and information, and that kind of thing*" [Front desk agent B].

We heard from a number of focus group participants and LES trainers that, for the housekeeping group in particular, a key takeaway from training was that the scripts they used could also be used to help them speak with guests. According to housekeepers, these scripts could be used to practice ahead of time and help make housekeepers feel more confident verbally interacting with guests. One trainer noted that the changes he witnessed in housekeepers' self-confidence were readily apparent even after only a few chances to practice these scripts: *"Maybe not 10-15 minute [verbal] exchanges, but even just a few words, and [being] able to read people a little more"* [UPSKILL trainer D].

Another area of change described by some front desk agents, kitchen staff, and food and beverage servers, was about their gains in confidence through role-playing communication and conflict resolution strategies with their supervisors or other members of the hotel management team.

> *"I think the training helped you with communicating how you ask [the manager], like slowing down the situation and not freaking out while you ask the question. Approach them nicely, meet them on their level, and let them know that you need help. You'd be asking the question more calm, so you'd probably be getting a more accurate answer for what you're looking for."*
>
> ~ Kitchen staff A

For several participating front desk agents, UPSKILL also appears to have decreased work stress by introducing or re-iterating important procedures and providing opportunities for improved self-efficacy/confidence enacting those procedures: *"Our work is very repetitive, so everything is based on the procedure. So, it's getting to know the procedure for a specific problem. Once you know the procedure, it's easy – you just follow it, and your stress level goes down"* [Front desk agent B].

In other words, even a relatively brief intervention such as UPSKILL appears to have provided some participants with an opportunity to experience enactive mastery and achieve a sense of accomplishment in their jobs, which in turn increased their level of confidence.

Vicarious experiences

Some participants commented that UPSKILL provided important opportunities for practical demonstrations by other trainees or trainers of workplace skills, again through the extensive use of role playing throughout training sessions. These instances of modelling by others – also known as vicarious experiences – were seen as powerful tools used in the training. The opportunity to observe the skill in question being practiced can be a significant source of information used in the formulation of an individual's self-efficacy beliefs. As expressed by one participant, "*you can't just tell me, you have to show me*" [Food and beverage server D].

In this respect, a number of participants reported that seeing their colleagues engage in role modeling of the desired task behaviours had the effect of validating their own level of performance in similar tasks. In essence, by observing others perform the required tasks in role playing scenarios, it provided participants with the opportunity to gauge and witness a) the level of performance sought – the "standard"; b) the behavioural practice and refinement of this "standard" through feedback from colleagues; and c) the successful execution of these tasks and/or verbal encouragement from trainers and peers when further improvements were still needed.

Verbal persuasion and encouragement

Throughout our discussions, focus group participants spoke frequently about how UPSKILL training had provided them with important opportunities to engage their colleagues in meaningful conversations and feedback about the ways in which work tasks should be accomplished. This feedback was a source of social persuasion, and provided guidance to participants about their success in performing task-related behaviours. Although not as powerful a source of self-efficacy beliefs as enactive mastery and vicarious experience, it appears to have been significant. One participant remarked, for instance, that "*it was good to use it [the skill] in a classroom setting, rather than on the frontline where it's very busy, very hectic. Then you can sit back and talk about it"* [Front desk agent D].

Receiving praise from colleagues or managers also served as an important source of verbal encouragement leading to reported increases in participants' self-confidence. One participant commented that her "*manager recognized the training. He noticed, right away he noticed. And he said, 'thanks' "* [Food and beverage server A].

Social capital

After changes in self-efficacy beliefs, the psychosocial changes identified most frequently by participants after participating in UPSKILL were those related to elements of social capital.

Social capital refers to the resources or forms of support that are accessible in one's social networks (Putnam, 1995) and include trust and cooperative norms, referring to the trust, social norms and shared values that underpin societal functioning and enable mutually beneficial cooperation (Scrivens & Smith, 2013). The social capital outcomes of adult learning can be separated into two distinct categories of social capital: bridging and linking social capital, and bonding social capital. Bonding social capital refers to relatively homogenous networks connected primarily by close or strong ties. In contrast, bridging social capital refers to networks that include important connections with those unlike ourselves, usually characterized by distant or weak ties. Weak ties that include vertical linkages with persons of higher socio-economic status or in positions of power and influence are referred to as linking social capital (Gyarmati, de Raaf, Palameta, Nicholson, & Hui, 2008; Balatti, Black, & Falk, 2006; Helliwell & Huang, 2005).

Rather than specifically focusing our focus group discussions with UPSKILL participants on network size and/or composition, we asked participants to tell us the first thing that came to mind when they thought about how training had helped them in their activities at work and what aspects of their work had changed after training. Many participants described changes in elements of social capital, particularly regarding feelings of trust and reciprocity with colleagues, a sense of belonging, and having new and/or more in-depth contact with colleagues within and outside of their occupational group at the company.

Feelings of trust and reciprocity

Among focus group participants who reported a decrease in work stress, many described the training as enhancing feelings of trust and reciprocity within their work teams. Regarding teamwork, one participant commented that, "*you trust them more afterwards. You went through the training together, so sometimes if you don't remember something, you know that he did the same thing, so you can count on them*" [Front desk agent E].

Increased feelings of reciprocity toward other hotel staff were also evident when participants described how they not only had a better sense of whom they could approach for certain questions, but that they themselves had now become a source of knowledge and help for their colleagues: "*After the training, you learned more about other people, and you have more confidence about asking for help. In different departments, and I can go and ask them, and vice versa, they can ask me*" [Front desk agent E].

In a few instances, participants remarked that UPSKILL had provided an opportunity for their employer to demonstrate a positive investment in their employees. As one person, noted, it "*felt good to have a company invest in us like that"* [Food and beverage server A].

A sense of belonging, shared purpose

Some participants noted an increased sense of belonging tied to having gained a better understanding of the roles of other colleagues through UPSKILL training, whether within the same occupational team or across the organization more broadly: *"[UpSKILL] taught us to look at the kitchen as a whole"* [Kitchen staff E]. Another kitchen staff [B] commented, "*There are so many things we didn't know, that we get to learn about. Before I didn't know how many rooms in the hotel. More about the hotel, before we used to come here, go straight to work, and then come out.*"

Whereas front desk agents and food and beverage servers were more likely to identify a greater awareness of the bigger organizational picture and the roles and responsibilities of employees outside of their immediate occupational group, housekeepers and kitchen staff were generally less likely to report this.

> *"Everybody knows their department, but it's much more difficult to understand what other people do. When you're immersed in your job, your job is more important, but it's really not, it's just one department. So, what I'm saying is, maybe it can help you understand the jobs of other people in the organization that are not doing the same job that you're doing. I think it helps a little bit just in terms of the overall understanding of what other people do and where they fit and stuff like that."*
>
> ~ Front desk agent B

Bridging and bonding networks

In addition to helping workers establish more trust and reciprocity, which facilitated asking for help, training also led to participants feeling better able or more willing to approach individuals at work. In some instances, comments revealed changes in bridging networks when a participant referred to reaching out to individuals outside of their immediate occupational group or regular shift colleagues, and in other examples, we heard comments more indicative of changes in the bonding aspect of networks.

Comments such as the following were illustrative of the changes in the bridging aspects of social capital as a result of UPSKILL: *"I think before the training, people were really hesitant to ask people for help. So, after the training, you learned more about other people, and you have more confidence about asking for help. In different departments, and I can go and ask them, and vice versa, they can ask me."* [Front desk agent E]. Increasing bridging social capital through LES training was equally evident in the following comment: "*Communicate with the coworkers, not in our department only. The result was good. How many years we work here? After the training, we become friends, we start talking, laughing, talking*" [Food and beverage server A].

Evidence of changes in bonding social capital was gathered from quotes such as the following, from a food and beverage server: "*People that took the course seemed to have a better relationship than new people, who came in after the course was offered… The training brought the team closer together.*

The training also helped me learn who to go to for things. We learned the downfalls and strengths of people [we] work with." [Food and beverage server B].

Gains in elements of social capital may not have extended as much to the housekeeping group. Whereas the other occupational groups were characterized as having relatively high levels of staff turnover within them, most of the housekeepers reported entering training as a fairly "tight knit" group, with many having worked together over the course of many years. This may have reduced the potential for UPSKILL to have an influence on the social networks and dynamics of these groups.

Psychosocial factors and physical health

Very little information about the link between UPSKILL, psychosocial factors and changes in physical health was obtained from participants. The one exception to this was that housekeepers and front desk agents reported feeling more confident in their knowledge and abilities around emergency procedures and safe handling practices for their equipment. The mechanisms underlying changes in housekeepers' confidence on work tasks related to physical health mirror those described for changes in stress or mental health – opportunities to practice skills to achieve the desired level of job performance, observing or participating in demonstrations/role playing, and social persuasion. In this respect, we see a clear link with health literacy, as described in the next section.

4.3.2 LES, health literacy, and health

This section explores whether the LES levels of focus group participants were connected to health literacy, and if so, whether there was any evidence that these factors in turn affected participants' health. As before, we used stress as a proxy for mental health and examined our discussions with participants for any link between health literacy and stress. We also examined potential linkages among health literacy, physical health, and safety at work.

Focus group facilitators and participants did not use the term "health literacy". To address this line of inquiry, we asked participants if they had experienced any changes in how they handled information about their health or their family's health. We found that several prompts and examples were often needed to illustrate how a training program like UPSKILL might impact a person's ability to find, read, or make sense of health-related information and how this might, in turn, affect their health.

Interestingly, feedback from one training practitioner pointed to reactions from participants at the outset of UPSKILL that the health-related questions on the UPSKILL surveys struck some as being "*very strange*" and "*opaque*". By this s/he meant that the link between the training program and broader outcomes of learning such as health was not very evident or clear to participants. The depth of analysis was also affected by the limited language ability of participants, the housekeeping group in particular.

Although not a dominant theme in discussions, health literacy was occasionally connected to physical health via potential improvements in safe working practices for some participants, namely

housekeepers and front desk staff. The following section describes perceived effects of LES training on health literacy and physical health for these groups, to the extent permitted by the available data.

Knowledge of health and safety at work

We explored whether focus group participants felt UPSKILL had made any difference in their knowledge or attitudes related to their health and safety at work. As described below, only members from the front desk staff and housekeepers made reference to changes in this area, whereas food and beverage servers and kitchen staff did not. Possible reasons for this difference across occupational roles are suggested.

Emergency procedures

Front desk agents described feeling more knowledgeable about protocols to be used in event of an emergency, although none could recall ever actually needing to implement these protocols. Less frequently, front desk agents reported greater awareness of how to deal with health emergencies or injuries in the workplace.

> *"I remember there was a section about safety and health issues. There were some scenarios and prompts that we need to use for each situation – to relieve the stress. I think that was pretty helpful. Structured for emergency situations, too…I remember one of the [training] assignments, where we had no plan, so everyone had different answers on what to do if the fire alarm is on and you're at the front desk. So, one of our assignments was to ask our manager, 'what is the emergency plan?'"*
>
> ~ Front desk agent G

New front desk staff in particular were more likely to state that the UPSKILL training had provided them with *new* information about handling health emergencies, whereas those who had been in the position for some time already were more likely to say that the UPSKILL training provided them with a good opportunity to *refresh* their knowledge about emergency procedures.

Kitchen staff and food and beverage servers did not identify any changes in their awareness or practice of safe food handling, or their knowledge of how to respond to health emergencies. This appeared to be due to the fact that they received more regular, mandated training on workplace safety and health procedures (i.e., WHMIS, safe food handling, regulatory inspections, etc.) than housekeepers and front desk agents. One participant commented that, *"I don't remember anything specific about physical health from this training. Maybe from other training – like safe lifting, WHMIS. I did WHMIS six times in the last year for various jobs. We do that training all the time"* [Food and beverage server C].

Awareness of safe working rights and practices

Housekeepers were identified by trainers as the group that experienced the most gains in terms of increased awareness of health and safety practices. Many housekeepers mentioned that UPSKILL led to greater awareness of how to work safely. For example, one participant commented, "*We talked about chemicals and personal protective equipment… They showed us that we have to care"* [Housekeeper M].

Changes in awareness of safe working practices among housekeepers typically revolved around how to safely handle their cleaning equipment and chemical supplies to avoid workplace injury. In some instances, housekeepers commented that UPSKILL made also them aware of their rights with regards to workplace health and safety: *"Training taught [us] that you have certain rights. You have the right to say no. If you cannot do it [safely], they can't make you do it. We also learned that the company will cover you if you get injured on the job"* [Housekeeper M].

Workplace health behaviours

Whereas a considerable number of front desk and housekeeping staff indicated having more knowledge and awareness of health and safety at work after UPSKILL training, our admittedly limited data suggests this increase appears to have translated into actual behavioural change only among the housekeeping group. Housekeepers themselves provided many examples of safer health practices in the workplace following UPSKILL, including minimizing the physical demands of certain tasks such as vacuuming and pushing their carts, or working more safely with cleaning chemicals.

4.3.3 Effects on workplace performance

Our analysis also examined whether there was any evidence that participants felt their workplace performance had been changed by UPSKILL in terms of productivity and efficiency, either directly through improved LES or health literacy, or indirectly through changes at the psychosocial level.

A small proportion of participants characterized their efficiency at work prior to UPSKILL training as sub-optimal, such as being "*inefficient*", "*running around*", or doing "*unnecessary work*". The extent to which this was attributable to low LES specifically remains unclear, yet at least a few participants noted a change in the efficiency with which they did their work following training. In some instances, this gain in efficiency resulted from learning how to pay closer attention to certain details (e.g., a problem-focused strategy linked to more effective coping with work stress).

> *"When reading a paragraph or an order, there are key words there that are specific that I can pick out, like beef, or pasta, or rice. Sometimes the catering would write a description of the food and I would circle out the key words. For me, that [is] more efficient to read [because] these are the items we're putting out."*
>
> ~ Food and beverage server B

In another instance, a food and beverage server said they had improved their workplace performance by re-engaging in practices that encouraged higher sales: *"[UPKSILL] refreshed to do upselling more. You get lazy, and don't really do it, and this was a reminder."* [Food and beverage server D].

There was only a small amount of evidence suggesting that changes in psychosocial factors had an effect on participants' workplace performance. Although not necessarily characterized as an element of workplace performance by participants during our discussions, there was frequent mention of UPSKILL's effect on teamwork. For a few participants, this improved teamwork led expressly to making work "a little easier" because they were more knowledgeable about who to ask for help if needed. This in turn facilitated the process of seeking out information in order to get their work done more efficiently.

We could make no clear connection between changes in participants' health literacy and workplace performance based on the focus group or interview data.

4.4 Did participants experience any benefits from UPSKILL training outside of work?

The focus groups explored whether participants felt UPSKILL had affected their activities at home or in other spheres outside of work, especially in terms of physical or mental health.

As noted earlier, roughly one third of all focus group participants identified some type of health-related change *outside of work* after UPSKILL. About half of these said aspects of their mental health had been affected, and one third identified change in some part of their physical health. An analysis by occupation role revealed that servers were more likely to report changes in areas outside of work, whereas housekeepers were less likely to report such changes.

The reported changes in mental health were driven largely by servers and front desk staff who said that they had used the communication and conflict resolution skills learned in UPSKILL in their personal lives or at home, although this did not necessarily translate into any perceived reductions in stress or physical health. For instance, one front desk agent [C] observed that, "*In the training they also taught us to listen first when there was a complaint. At that moment it was about the guests - but you can also apply this at home. To listen first if somebody's angry or somebody needs something. Listen and then ask questions that are going to help to resolve the problem*."

Reported changes in physical health were driven largely by several participants in the housekeeping group who noted that UPSKILL led them to incorporate safety tips, particularly for cleaning, into their home lives. According to one housekeeper, *"Before, I didn't use gloves and masks when cleaning my bathrooms at home, and now I do"* [Housekeeper M].

Only a few participants said they had changed how they handle information about their health or communication with health professionals. A few individuals also noted that UPSKILL encouraged them to be more resourceful when searching out health information. For example, "*It helps you be more resourceful. You can Google for information now, getting in touch with different sources of information*" [Front desk agent D].

Attitudes towards continuous learning

Many focus group participants described their belief in the merits of training and continuous learning in general, although few identified UPSKILL as the reason for any change in their attitudes. In general, participants felt that training of any kind – regardless of whether it was offered at work or elsewhere – was beneficial. One participant commented that, *"I think all training is good. You always learn different stuff in training. There's always things that you can pick up on that you don't know"* [Front desk agent A].

That UPSKILL had an effect on attitudes towards continuous learning *at work* was not a theme that emerged during the focus groups. According to one trainer, however, front desk agents may have been more likely to take up more workplace training after UPSKILL, especially in the area of management and event planning or coordination.

Despite the lack of a evidence about the effect of UPSKILL on attitudes towards continuous learning, participants did identify that UPSKILL was of benefit to them insofar as it provided them with a certificate to put on their résumés, that they "*could then use to apply to other jobs*" (Housekeeper K). For housekeepers in particular – who said they were less likely as a group to receive training – leaving UPSKILL with tangible evidence of their accomplishment was identified as a significant benefit.

5. Concluding summary

The purpose of the UPSKILL Health qualitative study was to explore learners' perspectives on how LES affects their physical and mental health – in both the workplace and in other life domains – and the perceived impacts (if any) of LES training through UPSKILL .

The following section summarizes the key findings from our focus groups with UPSKILL participants and interviews with LES trainers who developed and/or delivered UPSKILL training. It also places these findings in the context of the broader literature on health-related outcomes of LES training, and outlines recommended next steps.

5.1 How did low levels of LES affect how UPSKILL participants cope at work?

Focus group participants described their experience of low LES in the workplace using words like "*frustrated*", "*rushed*", "*pressured*", and "*hesitant*", or more global self-attributes such as *"being shy"* and lacking confidence. This suggests that the psychological effects of low LES at work were more salient or conspicuous to participants than those related to physical health. Overwhelmingly, we heard how low LES in the workplace was linked to the experience of stress.

Work stress was the most commonly reported health-related effect of low LES in the workplace

Despite certain differences in how participants across each of the four occupational groups characterized the work environments and job demands that challenged their LES levels, stress was the resulting subjective experience. This is consistent with what we know about low LES at work: workers with low levels of LES can often have limited self-confidence and feel vulnerable to organizational change (Perrin, 1998), and trying to cope with the literacy demands of the workplace and society causes stress (Perrin, 1990).

Stress has been shown to be an intermediary variable or precursor to poor mental health, leading or contributing to a number of negative health outcomes, including mental health problems such as depression and anxiety. Stress has also been described as one of the most prevalent sources of work and occupational health risk (Feinstein et al., 2006).

We examined gender differences in workplace stress among UPSKILL participants with low LES, and found women more often reported stress than men, and female housekeepers were more likely to describe feeling stress at work. Evidence on the role of gender in mediating or moderating occupational stress is inconsistent (Gyllensten & Palmer, 2005). The intersection between gender, immigration status, and an occupational role with high physical demands and relatively low wages may help explain why the housekeeper group, in particular, was more likely to report stress compared to other groups. Recent research has also highlighted the role co-worker dynamics, supervisory support, workload, work pace, work hiring practices, and occupational hazards can

play in the health outcomes and stress levels of immigrant housekeepers (Sanon, 2013; Hsieh, Apostolopoulos, & Sönmez, 2015).

Our findings also indicated that English as a Second Language (ESL) in the presence of low LES serves as an additional mechanism for workplace stress, exacerbating stress caused by unpredictable or unplanned events at work requiring oral communication skills. Although teasing apart the unique contribution of ESL versus low levels of LES on workplace stress lies beyond the scope of this study, it speaks to the potential broader application of our results to a wider learner population, regarding training in the workplace and effects on stress levels.

Stress linked to pattern of coping strategies

In order to better understand how participants coped with stress at work, this study explored the pattern of problem-focused versus emotion-focused coping strategies reported by participants. Prior to UPSKILL, participants tended to use two problem-oriented strategies (planning and seeking instrumental support) and three emotion-oriented strategies (mental disengagement, behavioural disengagement, and focus on and venting of emotions). Housekeepers in particular were less likely to report reaching out to management for instrumental support, possibly as a result of limited English-language skills or other structural dynamics of power or inequity arising at the intersection of gender, ethnicity, and occupational role. We also found that participants from small hotels were more likely to seek help from coworkers, suggesting that in these hotels, the closer relationships among employees may be an important source of support for coping with low levels of LES.

The study's focus on coping strategies presents a unique contribution to UPSKILL Health. Whereas the quantitative study from UPSKILL health examined links between many psychosocial variables (e.g., self-esteem, self-efficacy, motivation, engagement, trust, resilience, etc.) and worker-level health outcomes (e.g., stress), the available data precluded a specific focus on the *intrapersonal, cognitive* mechanisms that could help explain how low levels of LES affect and are affected by workplace stress. Examining the pattern of coping strategies prior to and after UPSKILL training provided valuable insight into the link between LES, stress, and the potential health-related outcomes of training. However, we also found that coping strategies in response to workplace stress were used by individuals within a range of structural and organizational contexts, and as such, optimizing the outcomes of such coping strategies depends on addressing elements beyond the individual worker only.

Few participants initially reported effects on physical health from low LES at work

Unlike the breadth and depth of responses about the effect of low levels of LES on mental health via work stress, few participants described effects of low LES on their physical health. This is an interesting finding in and of itself. The link between UPSKILL training and broader outcomes of learning such as health was difficult for participants to conceptualize without significant prompting, let alone provide examples based on their experience in UPSKILL.

However, research has demonstrated the link between literacy and individual health outcomes at work and outside of work; individuals with low literacy skill get ill more often, experience more

workplace illnesses and accidents, take longer to recover, experience more mis-medications, and die younger (Rudd, Kirsch, & Yamamoto, 2004). This speaks directly to one of the ongoing measurement issues in the literature linking adult learning and health: not only do learners themselves find it difficult to articulate how learning benefits physical health, but very few studies report on the actual casual mechanisms that explain how or why adult literacy training can affect health and health promotion outcomes (Myers, n.d.).

5.2 To what extent did LES training affect participants' subjective experiences of coping at work, particularly in terms of their health?

A majority of those who reported changes because of UPSKILL identified changes related to their mental and physical health. To explain this, we explored the link between participants' experiences in UPSKILL training, changes in the pattern and use of coping strategies related to low LES, and their subjective experience of workplace stress.

Decreases in work stress linked to changes in coping strategies

Changes in mental health – described by participants as increases or decreases in work stress – constituted the most prevalent outcome reported by focus group participants.

There is a wide body of evidence linking coping strategies with effectiveness in reducing stress and, ultimately, increasing personal resilience. In the light of the connection between coping strategies and stress reduction, we analyzed whether participants reported changes in their pattern of coping strategies following UPSKILL. The evidence suggested an overall increase in *adaptive coping* by focus group participants which we suspect was linked to the widespread reported reduction in stress.

Adaptive coping mechanisms have been found to be protective factors for workers, mitigating the influence of many work stress indicators on job performance. On the other hand, maladaptive coping behaviours are likely to increase work impairments (Park, 2007). In turn, it is also argued that resilience has positive effects on physical and mental health. Individuals who are more resilient may experience lower levels of chronic stress in response to a given stressor or life event, and may be more inclined to adopt healthier practices to effectively deal with the stressors (in contrast to those who rely on nicotine, alcohol, drugs or engage in other risky health behaviours in order to cope). The fact that enhanced resilience is associated with improvements in both physical and mental health has important implications for optimal workplace functioning (Vaishnavia, Connor, & Davidson, 2007).

The increase in non-instrumental support-seeking after UPSKILL training might be explained by the changes reported by many participants in their feelings of trust and reciprocity with other hotel staff members, both within and outside their immediate occupational group. Many participants suggested that UPSKILL training had brought their work teams closer together and had extended the network of people they knew at the hotel outside of their immediate work teams. This increased connectedness to other hotel staff was almost unanimously endorsed by our focus group participants as a key benefit stemming from their participation in UPSKILL. However, housekeepers

were not any more likely after UPSKILL to seek out social support from colleagues outside of their immediate housekeeping team, indicating they may have benefited less from the training in terms of opportunities for bridging social capital, even as they appeared to benefit more in terms of language skills such as oral communication with guests and colleagues.

We found that women, immigrants, and those working in small, non-unionized hotels were also less likely to report reduced stress after UPSKILL. Knowing that there was considerable overlap among these categories of participants, we compared the pattern of coping strategies among the housekeeping group with the pattern of other occupational groups. Housekeepers were less likely than other occupational groups to reach out to supervisors when they needed help, and more likely avoid communicating with hotel guests and management as a way to cope with the stress of limited English language skills. Housekeepers were also less likely than other occupational groups to report using more than one coping strategy, suggesting that avoidance was a primary and defining coping strategy for low LES at work among this particular occupational group.

Interestingly, the reduction in stress reported by many participants did not translate to an equivalent increase in reported job satisfaction, yet still half of our focus group participants reported feeling more satisfied with their jobs after training. There are several possible explanations for this, the most obvious being that that work stress is only one factor among many that bear on a person's overall evaluation of job satisfaction, and many of those other factors were well beyond the intended scope and reach of UPSKILL's LES training.

On the other hand, it is of substantial interest that as brief a training as UPSKILL – in which the majority of participants received 20 hours of instruction – may nonetheless provide benefits in the form of increased job satisfaction to half of learners. Although the design of the study may preclude a definitive answer to the role of UPSKILL's specific content on job satisfaction versus exposure to any employee-focused, supportive intervention, this may represent a valuable line of inquiry for future exploration.

Safer working practices were the most common change related to physical health

Whereas stress reduction was the predominant effect related to mental health, improved knowledge and/or use of safe working practices was the most frequently reported area of change related to participants' physical health. Only members of the front desk staff and housekeepers made reference to changes in this area. Some front desk agents reported increased knowledge/awareness in dealing with health emergencies or injuries in the workplace. Housekeepers experienced the most gains in terms of increased awareness of health and safety practices. The volume of data available to conduct a more in-depth analysis was affected by the limited language ability of the group of hotel staff that most frequently noted change in this area, the housekeepers.

Whereas a considerable number of front desk and housekeeping staff indicated having more knowledge and awareness of health and safety at work after UPSKILL, this increase in knowledge and awareness appears to have translated into actual behavioural change only among the housekeeping group.

Despite the challenges in having participants identify how UPSKILL training benefited their workplace health, the findings of this study present a much needed contribution to the qualitative literature, having unearthed evidence that workplace LES training can confer physical health benefits to workers – primarily through knowledge of safer workplace practices.

5.3 What is the specific role of psychosocial factors and health literacy in the relationship between LES and health and, ultimately, workplace performance?

We sought to uncover whether the effects of UPSKILL on stress and supporting safer workplace practices could also be explained through changes in psychosocial factors, namely self-efficacy and social capital.

LES training was associated with gains in self-confidence, stress reduction

Focus group participants frequently noted that increases in self-confidence were key to reducing stress at work. In many instances, work stress reportedly decreased as a result of training as participants performed and mastered new skills across various work scenarios, observed colleagues successfully applying new skills, and received feedback from trainers, colleagues and occasionally supervisors about their improved skills and abilities.

Increased self-confidence is considered to be one of the most commonly attributed private, non-market outcomes of learning noted in the adult education and training literature, and across a variety of education program types (e.g., literacy and essential skills programs, vocational, recreational, formal and informal education). Increases in self-confidence as a result of enhanced reading, writing and numeracy skills have been thought to derive from learners' greater ability to counter past negative influences in learning contexts and to generate greater feelings of independence and engagement (Bossort, Cottingham, & Gardner, 1994).

Changes in self-confidence were most frequently reported among housekeepers and front desk agents, particularly in regards to communicating and interacting with colleagues and guests. At least with respect to the housekeeping group, the frequency and scale of noted change in confidence after UPSKILL may point to the potential of training to confer even greater psychosocial benefits to vulnerable groups, in turn perhaps also leading to relatively larger health-related effects.

LES was linked with some changes in elements of social capital

After changes in self-confidence, social capital was the second most frequent psychosocial change identified by participants, notably, feelings of trust and reciprocity, sense of belonging, and growth in bonding and bridging networks.

Adult learning has been linked to positive changes in social capital which, in turn, has been linked to improved health (Centre for Literacy of Quebec, 2010). The literature on social capital points to the development of bridging and linking social capital as a key immediate outcome of adult learning, which plays an intervening role in the realization of socioeconomic outcomes. Bonding social

capital appears to be an intermediate outcome that may or may not interact with other outcome variables.

Focus group participants described UPSKILL as having enhancing their feelings of trust and reciprocity within their work teams (bonding social capital) and towards other hotel staff (bridging social capital). Participants described not only having a better sense of whom they could approach for certain questions or support and to identify who the right person would be to ask for help in specific situations. Some participants noted an increased sense of belonging as a result of having gained a better understanding of the roles of other colleagues through UPSKILL training, although housekeepers and kitchen staff were generally less likely to report this.

Gains in elements of social capital may not have extended as much to the housekeeping group. Whereas the other occupational groups were characterized as having relatively high levels of staff turnover within them, most of the housekeepers reported entering training as a fairly "*tight knit*" group, with many having worked together over the course of many years. This may have reduced the potential for UPSKILL to have an influence on the networks and dynamics of these groups. Some evidence of health literacy.

Although we heard that the health questions on the UPSKILL survey did not resonate with many participants, as noted earlier, the connection between adult learning and health is well established in the literature. Our own exploration of the connection between participants' LES, health literacy and workplace performance was somewhat limited, as many focus group participants struggled to make the connection between health (which they interpreted as physical health) and training.

Nevertheless, housekeepers and front desk agents reported feeling more confident in their knowledge and abilities around emergency procedures and safe handling practices for their equipment. For example, a small number of housekeepers described a link between being better able to read and understanding labels and instructions for working with hazardous materials, and that in some cases, they used this information when cleaning at home. A few housekeepers also reported having a better sense of their rights with respect to safe work.

In the case of these participants, the mechanisms underlying their changes in confidence in the areas related to their physical health mirror those described for the changes in stress/mental health: opportunities for more enactive mastery and performance accomplishments, vicarious experience, and social persuasion.

5.4 Were there any benefits from UPSKILL in other life domains, such as participants' home/family life or their health outside of work?

We examined whether participants described any health-related benefits from UPSKILL in other parts of their lives. For example, outside the workplace, literacy training could enable individuals to better read and comprehend instructions for taking medicine, to understand the inclusions and exclusions of a health plan, and to decide on a course of action when public health warnings and emergency bulletins are issued (Zarcadoolas et al., 2006). Also, participation in adult learning has been found to contribute positively towards giving up smoking and exercising more, leading to improvements in health outcomes such as general wellbeing (Feinstein et al., 2003).

Modest evidence of spillover effects of LES outside of work

Much of the literature on the outcomes of adult learning focuses on individual economic outcomes such as employment or earnings. There is now, however, a substantial literature demonstrating that education is associated with a number of non-market outcomes, including longer life expectancy and better health (see for example Feinstein et al., 2003; Lefebvre et al., 2006). Our analysis attempted to identify if and how UPSKILL had an effect on aspects of participants' health outside of work.

Roughly one third of participants identified some type of health-related change after UPSKILL outside of work, whether associated with mental health or physical health. The changes in mental health were driven largely by servers and front desk staff who said that the communication and conflict resolution skills learned in UPSKILL training had been useful in their personal lives or at home, although this did not translate into any perceived reductions in stress or physical health at home. Changes in health literacy awareness or practices were minimal, with only a few participants saying they had experienced changes in how they dealt with health information or communicated with health professionals.

Hammond and Feinstein (2006) hypothesize that benefits to physical health from education are derived from adoption of healthy behaviours and better access to health services. Benefits to well-being, on the other hand, are thought to derive primarily from improved economic circumstances and effective coping with stress, and are thought to be more immediate than physical health outcomes. This may help explain why, as described earlier, the link between UPSKILL training, and health literacy and health outside of work was not evident to participants and failed to elicit many reactions or examples from them. That participants had difficulty identifying how UPSKILL may have affected their health outside of work may not imply that there was an absence of such effects, but rather that spillover effects from workplace training and adult education more broadly may be more subtle and less amenable to recognition or recollection by participants directly.

5.5 Next steps

Questions moving forward

Although some participants were understandably hesitant to attribute changes in their experiences *solely* to UPSKILL after such an extended period of time since their training, we were most interested in understanding the breadth of changes recalled by participants. Capturing the possible wider benefits of learning – such as the effects on longer-term health outcomes – requires looking at more than the causal attributions of training recalled by learners, however. In fact, the wider benefits to learning may in some instances occur so subtly or distally from the main content of training or education that they escape the attention of the learners themselves. This is certainly an area for further exploration, given the growing evidence for education as a social determinant of health.

We also identified several differences in experience between housekeepers and those in other occupational categories. This raises questions about the intersection of gender, immigrant status,

and possibly, racialization in the workplace in terms of how health and other benefits are derived from training, in the hospitality sector and more broadly. This speaks to the potential for interventions such as LES training to address systemic health inequities for groups of more vulnerable workers, such as housekeepers.

Preparing for the synthesis report

As part of the preparation of the synthesis report to be submitted to PHAC in September 2015, the findings of this qualitative study will be used help interpret the quantitative data related to impacts of LES on physical health, health literacy and mental health, and to help understand unexpected results from the previous UPSKILL impact analysis.

References

Agency for Healthcare Research and Quality (2011). *Health Literacy Interventions and Outcomes: An Updated Systematic Review*. Rockville, MD; AHRQ. Available at: http://archive.ahrq.gov/research/findings/evidence-based-reports/er199-abstract.html

Antonovsky, A. (1979). Health, Stress, and Coping. San Francisco: Jossey-Bass.

Baker, D. (2006). The meaning and the measure of health literacy. *Journal of General Internal Medicine, 21*, 878-883. Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1831571/

Balatti, J., Black, S., & Falk, I. (2006). *Reframing adult literacy and numeracy course outcomes: A social capital perspective*. National Centre for Vocational Education Research. *Available at:* http://www.ncver.edu.au/research/proj/nr4L05.pdf

Berg, B. (2001). Qualitative research methods for the social sciences. Boston: Allyn and Bacon.

Berkman, N., DeWalt, D., Pignone, M., Sheridan, S., Lohr, K., Lux, L., Sutton, S., Swinson, T., & Bonito, A. (2004). *Literacy and Health Outcomes, Literacy and Health Outcomes*, prepared for Agency for Healthcare Research and Quality (AHRQ), U.S. Department of Health and Human Services, Evidence Report/Technology Assessment No. 87. http://archive.ahrq.gov/downloads/pub/evidence/pdf/literacy/literacy.pdf

Bossort, P., Cottingham, B.; & Gardner, L. (1994). Learning to Learn: Impacts of the Adult Basic Education Experience on the Lives of Participants. British Columbia Ministry of Skills, Training and Labour. Retrieved from www.nald.ca/library/research/pat/L2L/cover.html

Braverman, P., Egerter, S., & Williams, D. R. (2011). The Social Determinants of Health: Coming of Age. *Annual Review of Public Health, 32*: 381-398.

Burton, J. (2010). *WHO Healthy Workplace Framework and Model: Background and Supporting Literature and Practices*, World Health Organization, February 2010. http://www.who.int/occupational_health/healthy_workplace_framework.pdf

Campbell, A. (2010). *What You Don't Know Can Hurt You: Literacy's Impact on Workplace Health and Safety.* Conference Board of Canada. http://www.conferenceboard.ca/e-library/abstract.aspx?did=3661

Canadian Centre for Occupational Safety and Health (CCOSH, 2012). *Health Promotion / Wellness / Psychosocial*, website, September, 2012, http://www.ccohs.ca/oshanswers/psychosocial/

Canadian Research Institute for the Advancement of Women (CRIAW). (2006). *Intersectional Feminist Frameworks: An Emerging Vision.* Ottawa, ON: CRIAW.

Centre for Literacy of Quebec. (2010). Social Capital Outcomes of Adult Learning and Literacy Initiatives: How Do We Measure Them? A Literature Review. Retrieved from http://www.centreforliteracy.qc.ca/inst/sli2010/Publications/SI-2010-Lit-Review-FINAL.pdf

Charmaz, K. (2000). Grounded Theory: Objectivist and Constructivist Methods. In Norman K. Denzin & Yvonna S. Lincoln (Eds.), *Handbook of Qualitative Research,* 2nd edition (pp. 509-535). Thousand Oaks, Ca: Sage.

Chew, L., Bradley, K., & Boyko, E. (2004). Brief questions to identify patients with inadequate health literacy. *Family Medicine,* 36, 588-94.

Cohen, F. (1984). "Coping" In J.D. Matarazzo, S.M. Weiss, J.A. Herd, N.E. Miller & S.M. Weiss (eds.), Behavioral Health: A Handbook of Health Enhancement and Disease Prevention. New York: Wiley, 1984.

Connor, K.; & Davidson, J. (2003). Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety*, 18, pp. 76–82.

Creswell, J., & Plano Clark, V. (2007). *Designing and conducting mixed methods research.* Thousand Oaks, CA: Sage.

De Coulon, A., Meschi, E., & Yates, M. (2010). *Education, basic skills and health-related outcomes.* National Research and Development Centre for adult literacy and numeracy. http://www.voced.edu.au/content/ngv22305

DeRoche, K., & Lahman, M. (2008). Methodological Considerations for Conducting Qualitative Interviews with Youth Receiving Mental Health Services. *Forum: Qualitative Social Research Sozialforschung, 9*(3): Art. 17.

Feinstein, L. (2002). *Quantitative Estimates of the Social Benefits of Learning, 2: Health (Depression and Obesity).* Report No. 6, Centre for Research on the Wider Benefits of Learning, Institute of Education.

Feinstein, L., & Hammond, C. (2004). The contribution of adult learning to health and social capital. *Wider Benefits of Learning, Research Report No. 8.* London: Institute of Education.

Feinstein, L., Hammond, C., Woods, L., Preston, J., & Bynner, J. (2003). *The contribution of adult learning to health and social capital.* Report 8. London: institute of Education: Centre for Research on the Wider Benefits of Learning.

Feinstein, L.; Sabates, R.; Anderson, T.; Sorhaindo, A.; & Hammond, C. (2006). What are the effects of education on health? Chapter 4 of Measuring the Effects of Education on Health and Civic Engagement: Proceedings of the Copenhagen Symposium, Paris OECD, 2006. Retrieved from www.oecd.org/edu/innovation-education/37425753.pdf

Gilmour, H. & Patten, S. (2007). Depression at Work, *Perspectives*, November 2007, Statistics Canada Cat. No. 75-001-XIE. http://www.statcan.gc.ca/pub/75-001-x/2007111/article/10406-eng.pdf

Glanz, K., Rimer, B. & Lewis, F. (2002). Health Behavior and Health Education. Theory, Research and Practice. San Francisco: Wiley & Sons.

Glaser, B., & Strauss, A. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research.* Chicago, IL: Aldine Publishing Company.

Gyarmati, D.; De Raaf, S.; Palameta, B.; Nicholson, C.; & Hui, T. (2008). Community Employment Innovation Project (CEIP) – Encouraging Work and Supporting Communities: Final Results of CEIP. Social Research and Demonstration Corporation. Retrieved from www.srdc.org/en_publication_details.asp?id=215&kw=&project=&theme=8&author=&yeart=2010&monthf=1&yearf=1994&montht=7&Submit3.x=36&Submit3.y=11

Gyarmati, D., Leckie, N., Dowie, M., & Palameta, B. (2014). *UPSKILL: A Credible Test of Workplace Literacy and Essential Skills Training.* Ottawa, ON: Social Research and Demonstration Corporation. Accessed from http://www.srdc.org/media/199774/upskill-technical-report-en.pdf

Gyllensten, K.; & Palmer, S. (2005). The role of gender in workplace stress: A critical literature review. Health Education Journal, 64(3), pp. 271-288. Retrieved from http://www.researchgate.net/profile/Stephen_Palmer5/publication/229019907_The_role_of_gender_in_workplace_stress_a_critical_literature_review/links/0c96051657d35aa9ec000000.pdf

Haggarty, J.; Bailey, S; & Kelly, S. (2013, June). *Absenteeism, Presenteeism and Psychiatric Symptoms: Is Trouble in the Work Domain a Significant Predictor in Primary Care Assessment and Referral?* Paper presented at the 14th Canadian Collaborative Mental Health Care Conference, Montreal, QC.

Hammond, C., & Feinstein, L. (2006). Are those who flourished at school healthier adults? What role for adult education? [Wider Benefits of Learning Research Report No. 17]. London: Centre for Research on the Wider Benefits of Learning. Retrieved from http://eprints.ioe.ac.uk/15341/1/WBLResRep17.pdf

Helliwell, J., & Huang, J. (2005). *How's the job? Well-being and social capital in the workplace.* Cambridge: National Bureau of Economic Research.

Holsti, O. (1969).Content analysis for the social sciences and humanities. Reading, MA: Addison-Wesley.

Hsieh, Y. C., Apostolopoulos, Y., & Sönmez, S. (2015). Work conditions and health and well-being of Latina hotel housekeepers. *Journal of Immigrant and Minority Health, 2015 May 23.*

Jackson, A. (2009). The Unhealthy Canadian Workplace. Chapter 7 of: Dennis Raphael (editor), *Social Determinants of Health*, second edition. Toronto: Canadian Scholars' Press Inc. http://books.google.ca/books?hl=en&lr=&id=QL1nJVEOJqEC&oi=fnd&pg=PP1&dq=raphael+education+health&ots=Zt_fIgLkJI&sig=g3dDF7r-qcn4l0TDRv0HHLue5JE#v=onepage&q=education%20&f=false

Johnson, B. (1997). Examining the validity structure of qualitative research. *Education, 118*(3), 282-292.

Lalonde, M. (1974). *A New Perspective on the Health of Canadians.* Ottawa: Ministry of National Health and Welfare.

Lazarus, R. (1991). Progress on a cognitive-motivational-relational theory of emotion. *American Psychologist, 46*(8), 819.

Lazarus, R. (1966). Psychological Stress and the Coping Process. New York: McGraw-Hill.

Lazarus, R. S., & Folkman, S. (1984). Stress, Appraisal and Coping. New York: Springer.

Lefebvre, S., Belding, P., Brehaut, M., Dermer, S., Kaskens, A., Lord, E., McKay, W., & Sookermany, N. (2006). "I've Opened Up": Exploring Learners' Perspectives on Progress. Level 1 and Level 2 Learners in Community-Based Adult Literacy Programs. Available at http://www.nald.ca/library/research/openup/openup.pdf (accessed Jan. 10, 2010).

Lincoln, Y.; & Guba, E. (1985). *Naturalistic Inquiry.* Newbury Park, CA: Sage Publications.

Lowe, G. (2006). Under Pressure: Implications of Work-Life Balance and Job Stress, *Human Solutions Report* 2006-07: Job Stress, Fall 2006. http://www.grahamlowe.ca/documents/182/Under%20Pressure%2010-06.pdf

Maddi, S.; & Khoshaba D. (1994). Hardiness and mental health. *Journal of Personality Assessment*, 63, 265-274.

Marchand, A. and P. Durand (2011). Psychosocial and Biological Indicators in the Evaluation of and Intervention in Mental Health Problems at Work. *Healthcare Papers* 11(Special Issue), p. 6–19. http://www.longwoods.com/content/22407

Marmot, M., Bell, R., & Goldblatt, P. (2013). Action on the social determinants of health. *Revue d'Epidémiologie et de Santé Publique, 61*(Supplement 3): S127-32.

Marmot, M., Siegrist, J. & Theorell, T. (2006). Health and the Psychosocial Environment, Chapter 6 of Michael Marmot and Richard G. Wilkinson (eds.) *Social Determinants of Health*, second edition, Oxford University Press.

McGivney, V. (1997). *Evaluation of the Gloucester Primary Health Care Project*. GLOSCAT, unpublished report, 1997.

Mental Health Commission of Canada (2013). *Making the Case for Investing in Mental Health in Canada.* http://www.mentalhealthcommission.ca/English/node/5020#sthash.tpEh1Dez.dpuf

Myers, K. (n.d.). Private Non-Market Outcomes of Adult Learning: A literature review. Unpublished review prepared for the Social Research and Demonstration Corporation.

National Institute for Occupational Safety and Health (1999). *Stress…At Work Booklet* (online), by the NIOSH working group : Steven Sauter, Lawrence Murphy, Michael Colligan, Naomi Swanson, Joseph Hurrell, Jr., Frederick Scharf, Jr., Raymond Sinclair Paula Grubb, Linda Goldenhar, Toni Alterman, Janet Johnston, Anne Hamilton, and Julie Tisdale), US Department of Health and Human Services (DHHS), Publication Number 99-101 (online), 1999. http://www.cdc.gov/niosh/docs/99-101/

Park, J. (2007). Work stress and job performance, *Perspectives*, December 2007, Statistics Canada catalogue no. 75-001-XIE. http://www.statcan.gc.ca/pub/75-001-x/2007112/article/10466-eng.pdf

Penley, J.; Tomaka J.; & Wiebe, J. (2002). The association of coping to physical and psychological health outcomes: a meta-analytic review. *Journal of Behavioural Medicine*, 25(6), 551-603.

Perrin, B. (1998). *How Does Literacy Affect the Health of Canadians?* A Profile Paper, presented to Policy Health Promotion and Programs Branch, Health Canada (now Population Health Agency of Canada), 1998. http://en.copian.ca/library/research/howdoes/howdoes.pdf

Perrin, B. (1990). *Research Report: Literacy and Health Project Phase One*. Ontario Public Health Association, Toronto.

Public Health Agency of Canada (2009). The Chief Public Health Officer's report on the state of public health in Canada, 2009: *Growing up well – priorities for a Healthy Future*. Ottawa, ON: PHAC. Available at: http://www.phac-aspc.gc.ca/cphorsphc-respcacsp/2009/fr-rc/pdf/cphorsphc-respcacsp-eng.pdf

Public Health Agency of Canada. (2002). *What is the Population Health Approach.* Accessed on 9/12/2005 from http://www.phac-aspc.gc.ca/ph-sp/phdd/approach/approach.html

Putnam, R. (1995). 'Bowling Alone: America's Declining Social Capital', *Journal of Democracy* 6:1, Jan, 65-78. Available at: http://muse.jhu.edu/demo/journal_of_democracy/v006/putnam.html

Ramaniah, N.; Sharpe, J.; & Byravan, A. (1999). Hardiness and major personality factors. *Psychological Reports,* 84, 497–500.

Rao, K. (2009). Recent research in stress, coping and women's health. Current Opinion in Psychiatry, 22(2): 188-93.

Raphael, D. (2012) Educating the Canadian public about the social determinants of health: the time for local public health action is now! *Global Health Promotion, 19*(3): 54-9.

Rootman, I. & Ronson, B. (2005). Literacy and Health Research in Canada. *Canadian Journal of Public Health, 96*(2), S62-S77.

Rudd, R.; Kirsch, I., & Yamamoto, K. (2004). *Literacy and Health in America. Policy information Report.* Educational Testing Journal. Policy Information Center, Princeton: NJ. Available at: http://www.ets.org/Media/Research/pdf/PICHEATH.pdf

Rutter, M. (2001). Psychosocial adversity: Risk, resilience, and recovery. In J. M. Richman & M. W. Fraser (Eds.), *The Context of Youth Violence: Resilience, Risk, and Protection* (p. 13-41). Westport, CT: Praeger.

Sabates, R. & Feinstein, L. (2004). *Education, training and the uptake of preventative health care.* Wider Benefits of Learning, Report No. 12, 2004. http://www.learningbenefits.net/Publications/ResReps/ResRep12.pdf

Sanon, M. (2013). Hotel housekeeping work influences on hypertension management. *American Journal of Industrial Medicine, 56*(12): 1402-1413.

Scientific Advisory Committee to The Global Business and Economic Roundtable on Addiction and Mental Health (2002). *Mental Health and Substance Use at Work: perspectives from research and implications for leaders*, November 14, 2002. http://www.mentalhealthroundtable.ca/jan_2003/mentalhealth2_nov11_021.pdf

Scrivens, K., & Smith, C. (2013). Four Interpretations of Social Capital: An Agenda for Measurement, OECD Statistics Working Papers. Available at: http://www.oecd-ilibrary.org/economics/four-interpretations-of-social-capital_5jzbcx010wmt-en.

Smith Fowler, H., Mák, G., Brennan, K., Hui, T. S., & Gyarmati, D. (2015). *UPSKILL Health Study – Technical Report on worker and business outcomes.* Ottawa, ON: Social Research and Demonstration Corporation.

Smith, P.: & Polanyi, M. (2009). Understanding and Improving the Health of Work. Chapter 8 of: Dennis Raphael (editor), *Social Determinants of Health*, second edition. Toronto: Canadian Scholars' Press Inc. http://books.google.ca/books?hl=en&lr=&id=QL1nJVEOJqEC&oi=fnd&pg=PP1&dq=raphael+education+health&ots=Zt_fIgLkJI&sig=g3dDF7r-qcn4l0TDRv0HHLue5JE#v=onepage&q=education%20&f=false

Social Research and Demonstration Corporation. (2015). *UPSKILL Health and Mental Health Outcomes Study: Conceptual Model Testing.* Ottawa, ON: Social Research and Demonstration Corporation.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory,* 2nd Edition. Thousand Oaks, CA: Sage.

Vaishnavia, S.; Connor, K.; & Davidson, J. (2007). An abbreviated version of the Connor-Davidson Resilience Scale (CD-RISC), the CD-RISC2: Psychometric properties and applications in psychopharmacological trials. *Psychiatry Research, 152*(2-3), pp. 293–297.

Van Laar, D., Edwards, J. A., & Easton, S. (2007). The work-related quality of life scale for healthcare workers. *Journal of Advanced Nursing, 60*(3), 325-333.

Wen, J., Shi, Y., Li, Y., Yuan, P., & Wang, F. (2012). Quality of Life, Physical Diseases, and Psychological Impairment among Survivors 3 Years after Wenchuan Earthquake: A Population Based Survey. *PLoS ONE, 7*(8): e43081. Doi:10.1371/journal.pone.0043081

World Health Organization (2003). *Social determinants of health: The solid facts*. Denmark: The Regional Office for Europe of the World Health Organization. http://www.euro.who.int/__data/assets/pdf_file/0005/98438/e81384.pdf

Zarcadoolas, C., Pleasant, A., & Greer, D.S. (2006). *Advancing Health Literacy: A Framework for Understanding and Action.* San Francisco, CA: Jossey-Bass.

Zeidner, M. & Endler, N. (Eds.). (1996). Handbook of coping: Theory, research, applications. New York: John Wiley.

Appendix A: Key informant interview protocol

Introduction

- The UPSKILL Health and Mental Health Outcomes study (UPSKILL Health) is a sub-study of the original UPSKILL project, which SRDC designed and implemented with support from the Office of Literacy and Essential Skills (OLES) at Employment and Social Development Canada (ESDC, formerly HRSDC). UPSKILL's purpose was to evaluate workplace Literacy and Essential Skills (LES) training using the most rigorous evaluation methods. This large-scale randomized control trial began in February 2010 and ran until February 2014.
- You might remember that UPSKILL examined the impact of LES training in the workplace on a range of job performance and business outcomes. One of the outcome areas we included was health, and one of the intriguing findings of UPSKILL was that LES training had positive impacts on workers' health literacy and stress.
- SRDC is now conducting a sub-study of UPSKILL to look at the influence of LES and health. The study is financed by the Public Health Agency of Canada (PHAC). This is a much shorter project, and ends in June 2015.
- The UPSKILL Health project will identify how various personal and workplace factors – including workplace literacy training – influence workers' physical health and mental health. The UPSKILL data also provide us with the opportunity to learn how workers' health can influence job performance and business outcomes, and which sub-groups of workers might benefit most from workplace interventions such as LES training.

Program effects

As you know, this sub-study is looking at some other types of effects from LES training, beyond literacy, numeracy and document use.

1. In your experience, what other types of effects does LES training typically have on workers?*
    a. For instance, does their general work performance change, as far as you are aware?
    b. Are there changes in other aspects of participants' lives you've witnessed or heard about (e.g., in terms of their confidence or self-esteem, health)?
    c. Did you hear UPSKILL participants talk about how the training was affecting other parts of their lives? If so, what did they describe?
2. Some of our initial work analyzing UPSKILL data suggests that LES can effect self-efficacy and self-esteem, and in turn, mental health. We're also noticing a reduction in on-the-job stress for UPSKILL participants following the training, compared to control group members. How does this fit with your own understanding or experience? (Probe: How does stress play into the training experience?)

3. Work stress and job satisfaction also seem to play an important role in mental health. Do you have any thoughts on this, and any implications it might have for workplace training?*
4. The results also indicate that essential skills, numeracy in particular, can strongly influence an individual's health literacy, and in turn, directly affect mental health. As you may know, health literacy refers to a person's ability to the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions. Do you have any thoughts or observations on this?*

Program delivery and take-up

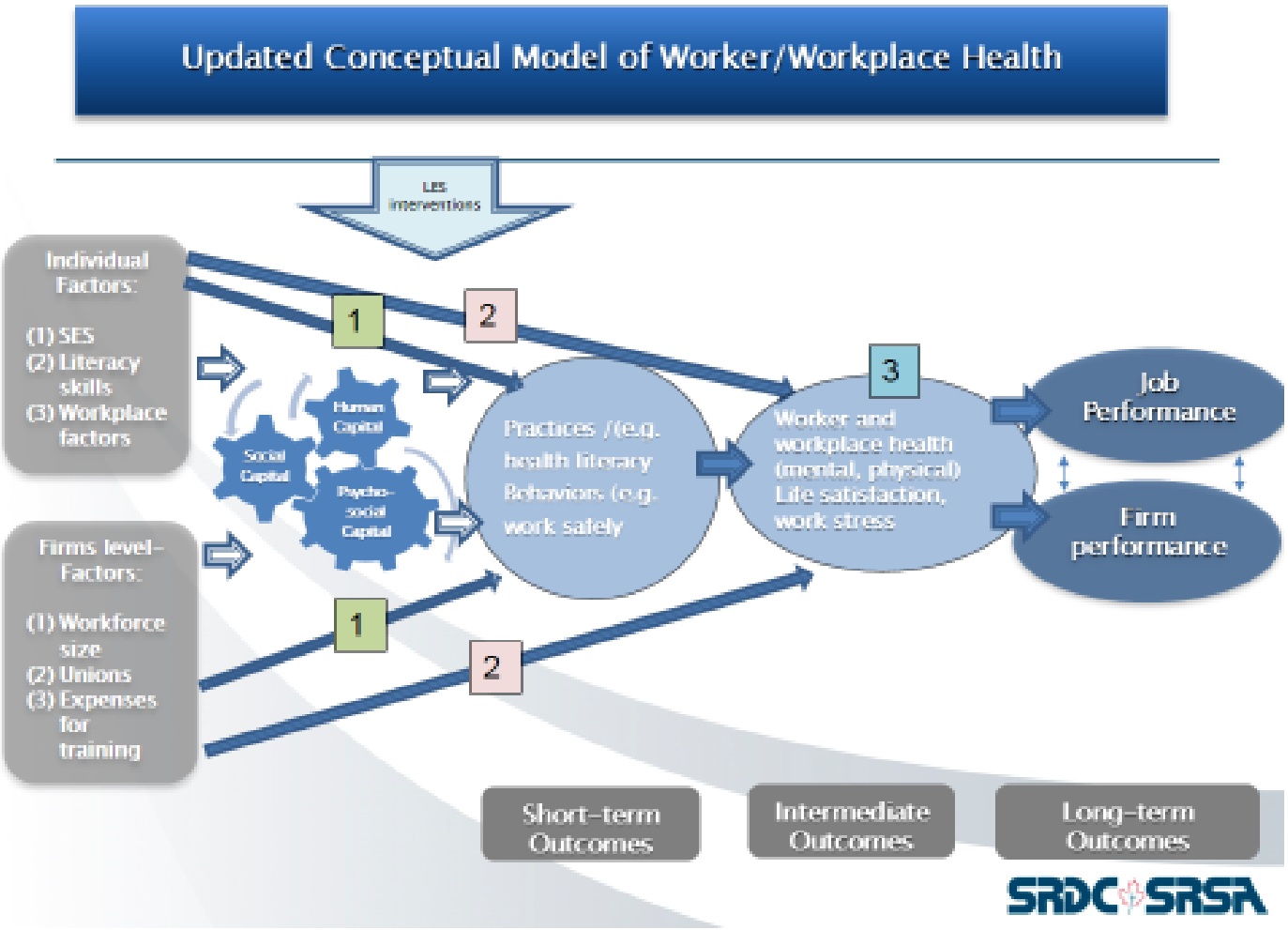
We are interested in getting your perspective on participants' experiences with LES training, in other words, what you've observed in delivering training, and what you may have heard from participants.

5. What have you observed about how people with low levels of literacy and essential skills approach the training process? What are they most interested in? (Probe: what kinds of goals do they describe for themselves, work-related or otherwise?)*
6. What kinds of things are they most concerned about, or that might put them off training, either in terms of content or delivery? (Probe: what kinds of barriers do people with low levels of literacy encounter?)*
7. In your experience, are there groups of people who tend to participate more actively in LES training? Do these groups also tend to benefit more? (Probe: What role do other socio-demographic traits play in the training (e.g., immigrant status, gender, age)?*
8. From your perspective, to what extent does an individual's level of stress effect their take-up and success in LES training?*
9. What role do you think self-esteem and self-confidence play with respect to take-up and success with training? Are there other aspects of personality that play a factor, in your opinion?
10. To what extent do the characteristics of a workplace effect the success of a workplace LES training program?
    a. Does the size of the hotel (e.g., big vs. small hotels) effect the program?
    b. Do the management practices of a workplace (e.g., authoritarian vs. participative management style) play a part in the uptake of a program?
    c. Do different occupations see different types of results from the training (e.g., front desk agents, housekeeping staff, food service workers)?
11. As a trainer, what are some suggestions on ways to avoid marginalizing and discouraging people with low levels of literacy and essential skills from participating in workplace training programs?

Current LES landscape

12. What are examples of innovation and promising practice in workplace literacy and essential skills training? (e.g., new teaching approaches, new enabling technology)
13. Is there anything else you think it's important for us to know about the ways in which participants experience literacy and essential skills training?

Appendix B: Updated conceptual model of LES and health



Appendix C: Informed consent protocol for key informant interviews

1. GREETING

Good morning/afternoon. This is [name of researcher] calling from the Social Research and Demonstration Corporation. May I please speak with [name of person]?

2. INTRODUCTION AND CONSENT

First of all, I want to thank you for agreeing to speak with me today.

As I mentioned before, SRDC is conducting a qualitative study on the experiences of people who participate to the UPSKILL program and how their participation changed their behaviors at work and in their day-to-day activities. As opposed to the original UPSKILL study, this sub-study aims to specifically investigate the links between the program itself and how the impact might be moderated by psychosocial variables of participants and their workplace characteristics. This sub-study will also focus on behavior changes that might have an impact mental and physical health of participants.

The project is being funded by the Public Health Agency of Canada and SRDC has been contracted to carry out the research. These expert interviews will provide important insights about the role of essential skills the quality of life and work life and health and for whom and under which circumstances these improvements are likely to occur.

This interview will last about 45 minutes and I will be recording and taking notes of our conversation for the analysis. Since this is a qualitative study, we will be using quotes from the interviews in our final report. The quotes will be reported anonymously; however, given that the number of key informant interviews is small, and that potential key informants have been previously identified, there is always the possibility that someone reading the report may be able to identify the information source. Therefore, please consider this interview as "on the record."

Of course, as with any interview, if there is any question you do not want to answer, please feel free to pass on it.

Do you have any questions before we begin? (YES/NO)

Can we go ahead with the interview? (YES/NO)

Appendix D: Hotel contact protocol

a. HOTEL CONTACT EMAIL

Hello [Contact Name],

You may remember that in [Year of UPSKILL Participation] a number of [Hotel Name] staff participated in a workplace training research project called UPSKILL. As part of that project, select employees received literacy training one-on-one and in groups. They also completed a number of surveys and performance reviews to see how well that training worked.

SRDC is now conducting some follow-up research on that training, and are hoping to put together a focus group and/or interviews with former UPSKILL participants from your hotel sometime in [Specify Time Period]. We plan to invite the [# of Employees] or so employees who completed at least 10 hours of UPSKILL training and the surveys to talk about their experience and any effect it may have had on their health. I am contacting you to provide information about the substudy, in case any of these former UPSKILL participants approach you with questions or concerns about participating.

The discussions will be about participants' experiences in UPSKILL, and how they find, use and deal with new information, including health information. We will only be asking general questions, nothing very personal, and as always, participation in the focus groups is strictly voluntary. The focus group and/or interviews will be held off-hours, so hotel employees' work will not be affected.

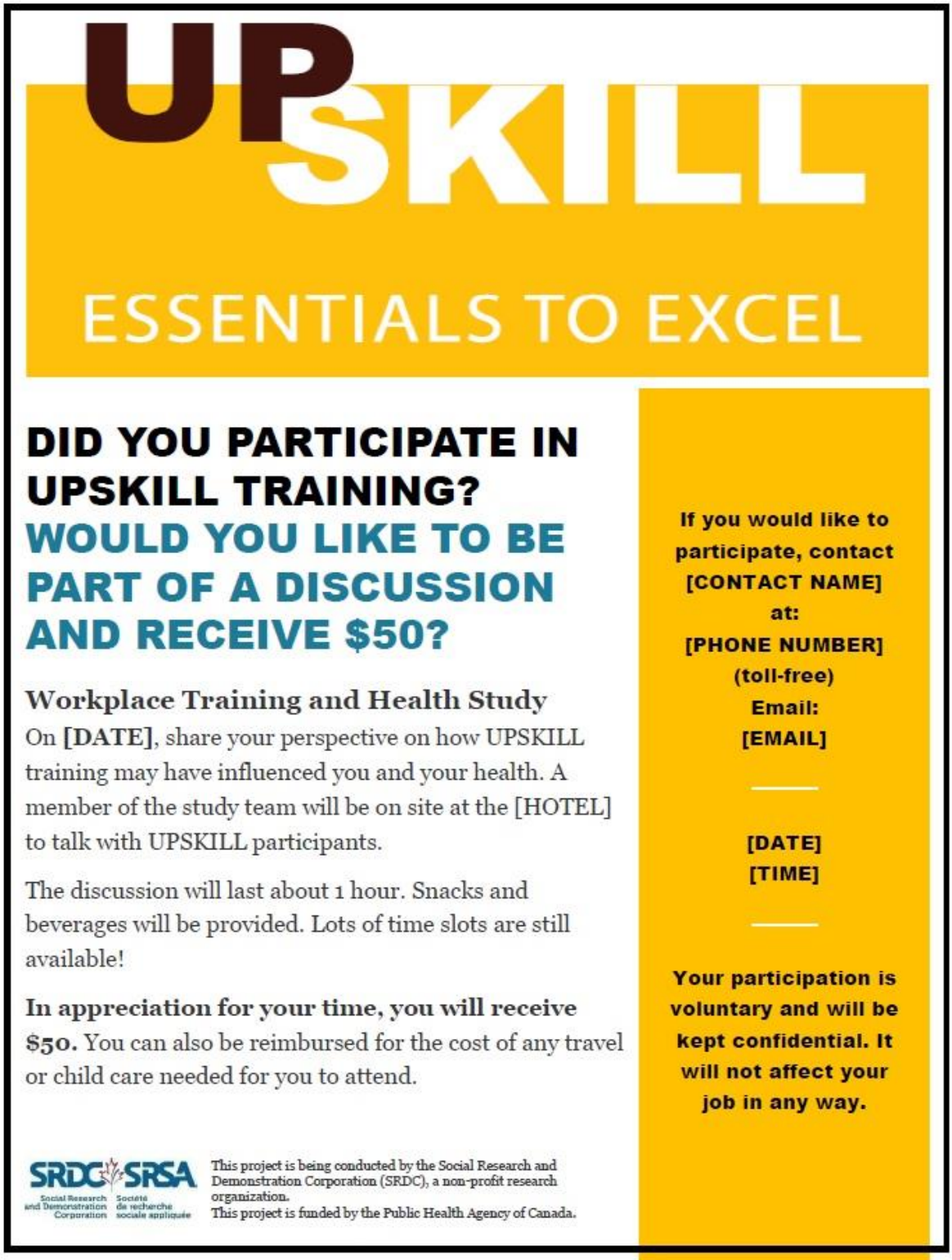
I have the names and contact info for the individuals who participated in UPSKILL as employees from your hotel but, as I'm sure you know, word-of-mouth is sometimes the best way to let people know about an opportunity. In order to increase our chances of having former UPSKILL participants join the interview and/or focus group discussions, I am asking our hotel partners whether they would be willing to display an information poster in their employee lounge in advance. I would also greatly value any suggestions you have about finding a suitable location to hold these discussions, whether at the hotel or elsewhere.

I've attached a document with more information about the project, and would like to follow up with a phone call early next week.

In the meantime, if you have any questions or if you would like to schedule a specific time to speak together, please don't hesitate to contact me by phone [Insert Phone Number] or email.

Thank you for your time,

b. PROMOTIONAL POSTER (next page)


UPSKILL
ESSENTIALS TO EXCEL
DID YOU PARTICIPATE IN UPSKILL TRAINING?
WOULD YOU LIKE TO BE PART OF A DISCUSSION AND RECEIVE $50?
Workplace Training and Health Study
On [DATE], share your perspective on how UPSKILL training may have influenced you and your health. A member of the study team will be on site at the [HOTEL] to talk with UPSKILL participants.
The discussion will last about 1 hour. Snacks and beverages will be provided. Lots of time slots are still available!
In appreciation for your time, you will receive $50. You can also be reimbursed for the cost of any travel or child care needed for you to attend.
If you would like to participate, contact [CONTACT NAME] at:
[PHONE NUMBER]
(toll-free)
Email:
[EMAIL]
[DATE]
[TIME]
Your participation is voluntary and will be kept confidential. It will not affect your job in any way.
SRDC SRSA
Social Research and Demonstration Corporation
Société de recherche sociale appliquée
This project is being conducted by the Social Research and Demonstration Corporation (SRDC), a non-profit research organization.
This project is funded by the Public Health Agency of Canada.

Appendix E: UPSKILL Employee follow-up survey (Excerpt)

Thank you for participating in the UPSKILL project. This research project will contribute to the improvement of workplace training. Your answers will help in designing better training programs in Canada so please try to be as accurate as you can when answering the following questions. Always remember that you can refuse to answer a particular question if you wish. **Your answers will remain confidential and be used only for research purposes. Your employer and the government will not have access to any information that you provide.**

In order to provide you *emerit* performance assessment results and your UPSKILL participation certificate, we need your full name as well as your complete contact information.

Family name **Given name**

Street number **No.Suffix** **Unit/Suite/Apt.** **OR** **PO box or Rural Route**

Street name **Street type** **Street Direction**

City **Prov** **Postal Code**

Home phone number **Cell phone**

( ) - ( ) -

Email address

We may contact you in the future for further research related to your participation in UPKSILL. We estimate it will take you about 40 minutes to do this survey but that will depend on your answers. There is space at the end for you to provide any comments that you have about the questions.

Appendix F: Focus group protocol

HAVE CONSENT FORMS ON TABLE WHEN THEY ENTER SO THEY CAN REVIEW AND SIGN BEFORE THE GROUP.

Session Introduction (10 minutes)

Good afternoon/evening. Thank you for taking the time to join this discussion.

My name is [MODERATOR], and this is [NOTE TAKER]. We're from the Social Research and Demonstration Corporation and we're conducting research on how job training can affect the ways that people deal with challenges, both at work and in other situations.

You've all been invited to take part in this group because you participated in the UPSKILL Program. We want to learn more about how you experienced the training, and any results you might have seen in your work, or elsewhere. For the next couple of hours, we're going to talk about the way you handle tasks and challenges when you're at work, as well as when you're at home, or doing other things in your day-to-day life.

(Point out the location of bathrooms, refreshments, etc.)

Before we begin, let me suggest some things that will help our discussion run smoothly. Because we'll be recording for an accurate record, it is important that you speak up and that you only speak one at a time. We don't want to miss any of your comments. NOTE TAKER will also be taking notes during the discussion, to help us remember what we talked about, and when in the conversation it came up.

We'll only use first names here. No reports will link what you say to your name or your workplace. In this way, we will maintain your confidentiality. In addition, we ask that you also respect the confidentiality of everyone here. Please don't repeat who said what when you leave this room.

During the two hours we'll be here, I will ask you questions, and I will listen to what you have to say. I will not participate in the discussion. So please, feel free to respond to each other and to speak directly to others in the group.

We want to hear from all of you. There are no right and wrong answers to the questions – just ideas, experiences and opinions, all of which are important. It's also important to hear all sides of an issue, and both positive and negative answers are welcome.

We're interested in both majority and minority viewpoints, common and uncommon experiences. So I may sometimes act as a traffic cop by encouraging someone who has been quiet to talk, or by asking someone to hold off for a few minutes. And, let me apologize beforehand, there are several questions we need to get through and limited time, so there may be times I'll have to hurry you along.

If it is OK with you, we will turn on the recorder and start now.

Group Introductions (5 minutes)

Let's start off by just introducing ourselves to the other people in the group. Just give your first name, what you do, and how long you've been at your current job.

Topic 1: Do participants feel that the intervention affected how they manage/cope at work?

Now we're going to talk about the ways in which the UPSKILL training might have changed your work. We're interested not only in the way in which you do your jobs, but also how you feel or think about doing certain parts of your job or dealing with certain situations.

1. What is the first thing that comes to your mind when you think about how the training helped you in your activities at work, if anything? If you can't think of anything specifically, that's ok.
2. Let's think back to before you participated in the UPSKILL training *(GIVE SPECIFIC TIME REFERENCE BASED ON FOCUS GROUP LOCATION – E.G., "2 YEARS AGO, IN 2012")*. Suppose that you didn't know how to do something at work related to reading or counting tasks…what did you do?

   Some examples might be: you weren't sure what time your shift started based on the schedule, a customer asked you a question you didn't know the answer to, or a manager asked you to do something you'd never done before.

   a. What tips or tricks would you use to figure out what to do? Who would you turn to for help in those situations?

   b. Was dealing with situations where you needed help stressful? How stressful would you say it was? A bit stressful? Very stressful? Not at all stressful?
3. Since the UPSKILL training, what's changed, if anything? Has the way you deal with these kinds of situations changed?

   a. Are there still some things you do at work that you prefer to ask for help with? What are they? Do you find you rely on other people any more or less now?

   b. Do you do your work any differently now that you've taken the training?

      For example, have you noticed any changes in how you solve problems, or express yourself to others? Do you feel more confident in your ability to express yourself to others if something goes wrong or you are not agree with them? Or how you deal with forms, and numbers?

   c. Do you find you are any more or less stressed at work now?
4. How have your tasks at work changed, if at all, in the last year or so?

   a. If it has changed, what are you doing now that you didn't do before?

   b. And what are you no longer doing?
5. Has your satisfaction with your job changed at all since the training? How?

6. Topic 2: Do participants feel that the intervention affected how they manage/cope at home, and with their health?

UPSKILL provided training for you at work. I'd like to switch focus a bit and talk about the way you do things outside of work, particularly in terms of life at home, and about your health.

7. What is the first thing that comes to your mind when you think about how the training helped you in your activities at home, if anything? For example, did the program help you in your day-to-day tasks and activities at home? If yes, how?
    a. Since you took that training, have you noticed any changes in the things you do at home with your family – your kids, your spouse, your parents?
    b. Have you noticed any differences in how you feel when you're at home? Do you find you are any more or less stressed at home now?
8. Have there been any negative consequences for you at home or with your health related to UPSKILL?
9. Since the UPSKILL training, has anything changed in how you handle information about your health or your family's health? Has the way you deal with health information changed in any way?
    a. Are there some things that you still prefer to ask for help with to understand information about your health or your family's health? What are they?
    b. Do you do anything differently? For example, have you noticed any changes in how you solve problems, or express yourself to doctors? Or how you deal with forms, and numbers?
    c. Do you find you're better able to find and use the information you need to keep healthy?
10. Has the way you feel about dealing with these kinds of situations changed at all? If so, can you describe the change?
    a. How confident do you feel about figuring out things like how much medicine you should take, or where to go to get more information about a certain disease or condition?

---*Question for the women-only group*:

11. Now, think of a women who have several difficulties in reading or counting and feel not so confident about it. In what aspects of her life do you think a training like UPSKILL would have the greatest impact?
    a. What about at-home decisions? What about work organisation?

Topic 3: Program improvements

12. A) Suppose that I'm a new employee and I have never heard of this program before. I am going to see you to ask what are the pros and cons to participate. What would you say?

    --- *Alternative question for the immigrants group*:

    B) Suppose that I'm a new employee and I arrived in Canada two years ago. English is not my first language. I have never heard of this program before. I am going to see you to ask what are the pros and cons to participate. What would you say?

13. Suppose now that you can change any aspects of the program (hours, help received, and length of the training), what would you change?

14. Forget about the hotel where you have received the training for a moment. If you could pick the ideal workplace to receive the program, what would that be?

    a. What about the management or general employee support? Schedules?

Close (15 minutes)

Now we're just wrapping things up. But, before we finish, I want to make sure that everyone has had a chance to share their thoughts and experiences.

- Is there anything we missed about the training experience and its impacts that you would like to talk about?
- Of all the things we talked about today, what to you is the most important?

If that's everything, I'd like to thank you for taking the time to participate in this focus group. Your comments and insights will be very helpful to us in understanding how to design other interventions to help workers in the hotel industry.

Appendix G: Consent form for focus group participants

Today, I will participate in a group discussion as part of a small research study related to the UPSKILL program. The goal of the study is to understand the experiences of people who participated in workplace training; how it changed their work life, and their life in general. The study is being funded by Public Health Agency of Canada (PHAC). The Social Research and Demonstration Corporation (SRDC), is carrying out the research.

Two (2) members of the research team are present today. One will act as the facilitator/interviewer and the other will take detailed notes of the discussions. Benefits to participating in this discussion include having the chance to share my experiences and to hear about other people's views with the program. I will also be contributing to research that may help better inform policies and programs.

By signing this form, I agree to participate in **one** discussion. This discussion will last about 1.5 hours. I will be paid an honorarium of **$50** for my participation. I will be asked questions about how my experience participating in UPSKILL has changed how I react to particular situations or helped me deal with situations at work or in day-to-day situations.

I understand the following:

- When tape-recording and note-taking occurs in the course of the research, I can ask that certain pieces of information not be recorded. I can also choose not to answer any of the discussion questions.
- All information collected about me will be used for research purposes only and will be kept strictly confidential. My name or any other identifying information **will not be** included in reports published by SRDC or made available to the Government of Canada.
- It's impossible for SRDC to promise strict confidentiality of the information I share during the discussion group, so I consider this discussion "on the record." I will also refrain from sharing what is said during the group discussions with others outside of the group.
    - The tapes, notes, consent forms and any other information will be archived without identifying names. All information obtained in this discussion will be destroyed within one year following the end of the study period.
    - The discussion will be conducted with sensitivity and with regard to my time and other needs.
    - By signing this form I authorize SRDC to link information that I provide during the focus group to my UPSKILL administrative record. SRDC will maintain this confidential linking file. SRDC will then create the research file, which will combine information about me with other participants in the discussions.
    - I can contact the person who recruited me for this focus group with any concerns.
    - My participation is completely voluntary and I may withdraw from the study at any time without penalty.

SIGNATURE: _____

NAME (Please print): _____

PHONE NUMBER: _____

DATE: _____

Researcher's signature: _____

Date: _____

Location: _____

I can contact a member of the project team if I have any questions or concerns after participation or if I want a copy of the final report:

Heather Smith Fowler

Project Leader and Research Director
Social Research and Demonstration Corporation
Tel: 613-237-7444 or toll-free 1-866-896-7732, ext. 2231
E-mail/Courriel: hsmithfowler@srdc.org
www.srdc.org

SRDC SRSA

Ottawa • Toronto • Vancouver

Ottawa

55 Murray Street, Suite 400
Ottawa, Ontario
K1N 5M3

55, rue Murray, bureau 400
Ottawa (Ontario)
K1N 5M3

Toronto

481 University Avenue, Suite 705
Toronto, Ontario
M5G 2E9

481, avenue University, bureau 705
Toronto (Ontario)
M5G 2E9

Vancouver

789 West Pender Street, Suite 440
Vancouver, British Columbia
V6C 1H2

789, rue Pender Ouest, bureau 440
Vancouver (Colombie-Britannique)
V6C 1H2

www.srdc.org 1 866 896 7732 info@srdc.org