

## Precarious work in healthcare: a respondent driven sampling study of 634 personal support workers during the COVID-19 pandemic

Andrew D. Pinto, MD<sup>1,2,3,4\*</sup>, Ayu P. Hapsari, MSc<sup>1</sup>, Julia Ho, PhD<sup>1</sup>, Christopher Meaney, MSc<sup>3</sup>, Lisa Avery, PhD<sup>4,5</sup>, Nadha Hassen, MPH<sup>6</sup>, Arif Jetha, PhD<sup>4,7</sup>, A. Morgan Lay, MPH<sup>8</sup>, Michael Rotondi, PhD<sup>9</sup>, Daniyal Zuberi, PhD<sup>10,11</sup>

1. Upstream Lab, MAP/Centre for Urban Health Solutions, Li Ka Shing Knowledge Institute, Unity Health Toronto
2. Department of Family and Community Medicine, St. Michael's Hospital
3. Department of Family and Community Medicine, Faculty of Medicine, University of Toronto
4. Dalla Lana School of Public Health, University of Toronto
5. Department of Biostatistics, Princess Margaret Hospital, University Health Network
6. Faculty of Environmental and Urban Change, York University
7. Institute for Work and Health, Toronto
8. Institute of Population and Public Health, Canadian Institutes for Health Research
9. School of Kinesiology and Health Science, York University
10. Munk School of Global Affairs & Public Policy, University of Toronto
11. Factor-Inwentash Faculty of Social Work, University of Toronto

\*Correspondence to:

Dr. Andrew D. Pinto  
 Upstream Lab  
 MAP/Centre for Urban Health Solutions  
 Li Ka Shing Knowledge Institute  
 Unity Health Toronto  
 30 Bond Street  
 Toronto, Ontario  
 Canada  
 M5B 1W8  
[andrew.pinto@utoronto.ca](mailto:andrew.pinto@utoronto.ca)

### Acknowledgements

We appreciate the time and advice of the personal support workers who make up our advisory committee, who assisted with our planning, implementation, and knowledge translation processes. This research was made possible through funding from the George Cedric Metcalf Charitable Foundation. Dr. Andrew Pinto is supported as a Clinician-Scientist by the Department of Family and Community Medicine, Faculty of Medicine, University of Toronto, the Department of Family and Community Medicine, St. Michael's Hospital, and the Li Ka Shing Knowledge Institute, St. Michael's Hospital. Dr. Pinto is also supported by a fellowship from the Physicians' Services Incorporated Foundation and as the Associate Director for Clinical Research at the University of Toronto Practice-Based Research Network (UTOPIAN). Funders did not have any involvement in the collection, analysis, and interpretation of data, nor did they have any involvement in the writing of the report and in the decision to submit.

## **Abstract**

**Background:** The COVID-19 pandemic has shone a spotlight on the role of personal support workers in health care, as well as their work conditions. In the largest representative study to date, we investigated the work conditions and health of personal support workers with a focus on areas amenable to policy change.

**Methods:** Our community-based participatory action research study focused on personal support workers in Toronto and surrounding area. A cross-sectional survey was conducted from June-December 2020 using respondent driven sampling. We collected data on sociodemographics, employment precarity, worker empowerment and health status. The association between work precarity level and health was assessed using multivariate logistic regression models.

**Results:** We surveyed 634 personal support workers who were predominantly racialized (96.4%), women (90.1%) and foreign-born (97.4%). Most worked in home care (49.3%) and long-term care (34.5%). Although over 80% had at least some post-secondary education, over half lived below the poverty line. The majority of participants (86.5%) were in precarious employment, and most lacked paid sick days (89.5%) or extended health benefits (74.1%). Only half of the participants described their general health as very good or excellent. Employment precarity was significantly associated with higher risk of depression.

**Interpretation:** Despite being key members of healthcare teams, personal support workers experience poor employment conditions with low wages that keep the majority in poverty. Improving conditions, including providing paid sick days, would improve the health of these workers, improve continuity and quality of care, and reduce the risk of disease transmission in homes and health institutions.

**Keywords:** *social determinants of health, employment, work conditions, health equity, personal support worker, healthcare aide, homecare*

## **Introduction**

Jobs in healthcare have traditionally been secure.(1) Over the past 30 years, disparities in pay and work conditions have grown between professionals (e.g. physicians, nurses) and staff who are not unionized, part-time, temporary and on contract (e.g. housekeeping, clerical, security). One particularly disadvantaged group are personal support workers (PSWs), also called healthcare aides, patient care assistants, home support workers or home care attendants.(2,3) PSWs support older individuals and people with disabilities with their activities of daily living in their own home or in institutions.(4) Aging populations and a move to discharging people quickly from acute care to the community have driven up the demand for PSW services who now represent a large proportion of all health workers.(5–8)

The COVID-19 pandemic has highlighted the crucial role of PSWs in health systems, as they cared for older adults in congregate settings, where the worst outbreaks and highest number of deaths occurred. Although data is limited, among health workers, PSWs were among the most likely to be infected and die from COVID-19.(9,10) Few in-depth and comprehensive studies have been conducted on the work conditions and health of PSWs, who, given the nature of their work, are hard to reach. In this study we used respondent driven sampling (RDS) to examine the work conditions, job security and health of PSWs, to identify key aspects of their employment conditions that could be improved through policy change, and to characterize the association between precarious work and the health outcomes of PSWs.

## **Methods**

### ***Setting and approach***

This study engaged PSWs working in Greater Toronto Area (GTA), the largest metropolitan area in Canada, with a combined population of 5.9 million.(11) No estimates exist of the total number of PSWs in Toronto, but it is estimated that 90,000-100,000 PSWs work in the province of Ontario (population 14.5 million).(4,12) PSWs work for both public and private employers, typically as casual, non-permanent employees with wages ranging from the provincial minimum wage of CA\$14.25/hour to a maximum of CA\$19.00/hour.(13) Those working in home care typically received lower pay than those working in long-term care or in hospitals.(14) PSWs are considered non-professionals who are not formally regulated by statutory bodies.(6)

We followed the principles of community-based participatory action research and engaged PSW partners in all aspects of the project and employed a shared decision-making model throughout planning processes.(15) We formed an advisory committee consisting of eight PSWs who met regularly from March 2020 to May 2021. Advisors shared their experiences to inform the study design, survey development, pilot testing, identification of seeds, estimation of network size, and interpretation of the data. Advisors also presented preliminary results to community organizations. Concurrently, advisors also received training on their employment rights, research methods and advocacy engagement. A modest honorarium was provided to compensate advisors for their time.

### ***Recruitment and data collection***

1  
2  
3 A cross-sectional survey was conducted from June to December 2020 using RDS, a network-  
4 based sampling method that begins with a small convenience sample (known as “seeds”) and  
5 incentivizes respondents to participate in the survey and also to refer their peers.(16) Similar to  
6 snowball sampling, the RDS design allows for data collection from hard-to-reach populations,  
7 such as PSWs who do not have a single workplace, have no regulatory body or central registry,  
8 and have limited availability given work and family obligations. The advantage of RDS is its  
9 ability to produce asymptotically unbiased estimates of population parameters by accounting for  
10 the respondent’s network size and their recruitment pattern.(16)  
11  
12

13 We identified seeds that would reflect the diversity of PSW population in Toronto in terms of  
14 gender, age, race, and work setting (Supplement 1). Seeds were recruited through  
15 recommendations from the Advisory Committee, through emails distributed by partner  
16 organizations, and through online advertisements on social media and job search platforms  
17 (Supplement 2). Initially 10 seeds were selected, and later another 14 seeds were added to  
18 increase recruitment. There was no explicit time limit for recruitment, but participants were  
19 informed that data collection would be completed by December 2020.  
20  
21

22 Participants were 18 years of age or older and had worked as a PSW in the Toronto area within  
23 the past year. We included participants who were unemployed at the time of the survey to reduce  
24 selection bias, as PSWs are frequently between jobs due to employment precarity, job stress or  
25 injuries. Full name, phone number and email address were used to prevent an individual from  
26 participating more than once. Participants received a CA\$20 honorarium for completing the  
27 survey and were asked to recruit up to three peers for an additional honorarium of CA\$10 per  
28 successful referral. To track the recruitment chains, PSWs interested in participating in the  
29 survey must provide the full names of their referees. Unique codes were also assigned to the  
30 eligible participants. Public health restrictions prevented in-person meetings during the COVID-  
31 19 pandemic. All communications occurred through phone or email. Most participants were able  
32 to complete the survey independently online (Qualtrics, Provo, Utah, USA).(17) A small number  
33 of participants without reliable access to the internet had the survey administered over the phone.  
34  
35  
36

37 A target sample size of 600 was estimated based on the ability to estimate a proportion of the  
38 population with a characteristic (i.e., poor quality of life) to within 5%, with 95% confidence and  
39 an RDS design effect of 1.5. Additionally, we asked advisory committee members “How many  
40 friends do you know who work as PSW in the Greater Toronto Area, whom you have  
41 communicated with regularly in the past year (in-person/online/by texts)?” and estimated an  
42 average network size of 15 to 25 PSW peers in the Toronto area. The same question was asked to  
43 the survey participants to obtain their network size. Reporting of our findings was guided by the  
44 STROBE-RDS reporting guideline.(18) This study was approved by the St. Michael’s Hospital  
45 Research Ethics Board (#18-103), Toronto, Canada.  
46  
47  
48

### 49 ***Variables***

50 We collected data on sociodemographics, employment precarity, worker empowerment and  
51 health status using instruments validated previously in the Canadian population (Supplement 3).  
52 Sociodemographics included age, gender identity, racial background, birth location, level of  
53 education, current student status, and housing status. Low-income status was inferred using the  
54 2018 Canadian low-income cut-off (LICO) for urban areas that considers household size.(19)  
55  
56  
57  
58  
59  
60

1  
2  
3 We also collected information about receipt of financial assistance received from government  
4 sources and included five items from the Income Stress Index.(20) This scale asked how their  
5 employment insecurity affects large spending decisions, how they keep up with bills and debts,  
6 their concerns about maintaining their current standard of living and if they recently experienced  
7 income reductions.(20)  
8  
9

10 Precarious employment was evaluated using the Employment Precarity Index, which contains 12  
11 questions around employment types (e.g. casual, part-time, or full-time), income and job  
12 stability, work schedule, paid sick days, benefits, and fear of reprisal for raising labour concerns  
13 with employer.(21) Worker empowerment was assessed with a 5-item subscale from the OHS  
14 Vulnerability Measure.(22) Additional questions on labour experience included current  
15 employment status, membership in a union, workplace discrimination, work-related injuries, and  
16 if they reported the injuries to the Workplace Safety and Insurance Board (WSIB), a publicly  
17 funded organization that provides compensation to workers for work-related injury or illness.  
18  
19

20 Health-related variables included risk of depression, specifically depressed mood and anhedonia,  
21 measured by the PHQ-2 (23), and questions about perception of general health (categorized into  
22 “Poor – Good”) and life satisfaction (categorized into “Satisfied” and “Dissatisfied”) from the  
23 Canadian Community Health Survey.(24) Other health-related questions asked about the amount  
24 of stress in participant’s lives and at work, as well as the perceived impact of their employment  
25 on their mental health.  
26  
27

### 28 ***Data analysis***

29 Item-specific missing data for each variable was less than 8%, and we used available case  
30 analysis. Proportion estimates with a 95% confidence interval (CI) for all variables were  
31 calculated using the RDS package (version 0.9.2) in R statistical software (version 4.0.2) with  
32 RDS-II weights. Number of years as a PSW, number of paid sick days, number of paid hours per  
33 week and number of missed workdays due to work-related sickness or injury were the only  
34 continuous/numerical variables collected in the survey and were categorized to facilitate RDS  
35 point and interval estimations.  
36  
37

38  
39 The association between work precarity level and health outcomes was assessed using  
40 multivariate logistic regression models. Perceived general health and risk of depression as  
41 measured by PHQ-2 served as the main outcome variables in the first and second model,  
42 respectively. Age, gender, education level, low-income status, and work setting were controlled  
43 in both models. A post-hoc decision was made to revert the precarity index back into a numerical  
44 variable (range: 0-100), as most participants were found to be precariously employed. Odds ratio  
45  $>1$  was interpreted as poorer reported general health (model 1) or higher risk of depression  
46 (model 2). Unweighted models were chosen to minimize risk of bias and Type I error that have  
47 been shown in RDS-weighted regression models.(25)  
48  
49  
50

### 51 **Results**

52  
53  
54 A total of 658 participants were enrolled, and 634 participants were included in the RDS analysis  
55 after removing the seeds (n=24). The RDS recruitment network and waves propagating from  
56  
57  
58  
59  
60

1  
2  
3 each seed are presented in [Supplement 4](#). Participant demographics are described in [Table 1](#). The  
4 survey respondents were predominantly racialized (96.4%), women (90.1%) and immigrants  
5 (97.4% foreign-born). Most participants identified as Black (76.5%) and approximately two-  
6 thirds of the participants were between the age of 30 and 49 years old. Over 80% of respondents  
7 had at least some post-secondary education and about 21.1% were enrolled as a student at the  
8 time of the survey. Using the 2018 Canadian LICO, slightly over half (55.1%) of the participants  
9 were considered to belong to a low-income household. Most participants (82.1%) were renting a  
10 home, and close to 7% were staying with family or friends.

11  
12  
13 Different elements of the respondents' labour experience are presented in [Table 2](#). On average,  
14 the participants had worked as a PSW for 4.4 years (SD: 4.9 years). At the time of the survey,  
15 11% were unemployed and 5.3% were not working as a PSW. Within the past year, about two-  
16 thirds (65.3%) were employed in non-permanent contract positions and about half (49.3%) did  
17 not work full-time hours (i.e., at least 30 hours per week). Over half (53.8%) did not belong to a  
18 labour union. Participants worked in various settings, with the most common being home care in  
19 the community (43.9%) and long-term care (34.5%).

20  
21  
22 Most participants did not have paid sick days (89.5%), access to a retirement plan (67.2%) or  
23 receive extended benefits (74.1%) from their employer. Only two-thirds (68.1%) of the  
24 participants were informed of their shifts at least one week in advance. More than half (56.5%)  
25 also reported that their employment would likely be negatively affected (e.g., laid off, given less  
26 hours) if they raised a health and safety concern or a concern about their rights. Using the  
27 Employment Precarity Index, close to 90% of respondents were precariously employed ([Figure 1](#)  
28 and [Supplement 5](#)).

29  
30  
31 A quarter of participants reported sickness or injury in the past year due to their work as a PSW.  
32 Among those, only 18.8% filed a claim to the Workplace Safety Insurance Board (WSIB).  
33 Because of sickness or injury, about half (53.8%) had to miss more than five days of work ([Table](#)  
34 [2](#)). The OHS Work Vulnerability Measure classified close to 90% of the participants as having  
35 inadequate support at work to participate in safety and injury prevention ([Table 2](#) and  
36 [Supplement 6](#)). Approximately 35.4% (95% Confidence Interval (CI): 27.8%-43.0%) of the  
37 participants experienced some form of discrimination, and most attributed it to their race or  
38 ethnicity (21.4%) ([Table 2](#)).

39  
40  
41 The Income Stress Index ([Table 3](#)) demonstrated how participants struggled financially. About  
42 80% reported that concerns about their employment situation negatively affected large spending  
43 decisions, such as being afraid to make large purchases or spend money on children's activities.  
44 Compared to last year, about 40% reported lower personal income and 14% had some trouble  
45 keeping up with their bills and other financial commitments. Thinking about the future, many  
46 described concerns about their ability to meet their debt obligations (73.9%) and maintaining  
47 their current standard of living (67.1%).

48  
49  
50 [Table 4](#) describes health outcomes of the participants. Only about half (53.3%) of the participants  
51 described their general health as very good or excellent, and more than a quarter (28.2%)  
52 expressed dissatisfaction with their lives. Regarding mental health, around 27% of participants  
53 found most days to be quite a bit to extremely stressful. Over 15% found their work often  
54  
55  
56  
57  
58  
59  
60

negatively affected their mental health and 10.1% were often angry because of their work. Using the PHQ-2 scale, 21% were likely to have some form of depressive disorders ([Supplement 7](#)). Work also often impacted the participants' relationships with their family and friends (28.8%) and nearly one third (28.0%) of participants identified a weak sense of belonging to the community.

Using regression models, we found that increasing work precarity was significantly associated with higher risk of depression, but not with perceived general health ([Table 5](#)). Specifically, for every unit increase in the precarity score, the odds of exhibiting risk for depression increases by 2% (Odds Ratio (OR):1.02; 95% CI:1.01-1.03). Older PSWs (i.e., 50 years and older) were also more likely to report poor general health (OR:2.78; 95% CI:1.41-5.60), while being male was mildly associated with better general health compared to being female (OR:0.56; 95% CI:0.31-1.00). Lastly, PSWs working in homecare in the community were less likely to show risk of depression compared to those working in other, non-long-term care settings (OR:0.63; 95% CI:0.35-1.18), although the association was mild (i.e.,  $p < 0.1$ ).

## **Discussion**

In the largest representative study to date, we investigated the work conditions and health of PSWs using RDS to engage this hard-to-reach population. We found substantial evidence of precarious and dangerous work conditions. Compared to the general population in Ontario (28.5%) (20), 86.5% of PSWs in the survey were precariously employed. About 53% of the PSW participants perceived their health to be very good or excellent, which is lower than the overall proportion for Canadians (61.2%).(26) While over 90% of Canadians were satisfied or very satisfied with their lives, only 72% of the PSW participants reported similar levels of satisfaction.(27) Over 20% of the PSWs were likely to be depressed, significantly exceeding the prevalence of major depressive episodes among Canadians (5.4%-11.7%).(28)

Strengths of our study include the use of RDS, the engagement of PSWs in developing and testing our questions, and the collection of data during the COVID-19 pandemic, when work conditions have been a particularly important factor in the spread of infection.(10) Limitations include the focus on PSWs living in and around the GTA, which may reduce generalizability to other jurisdictions.

Our findings fit with existing research (13) that found PSWs typically have the lowest pay and greatest precarity in the health sector.(5,6,14,29–31) Not coincidentally, PSWs tend to be female, racialized and more likely to be immigrants.(32) Similar to Neysmith et al., we found a lack of formal supports to address workplace safety and security concerns, such as protection from labour unions, as well as high level of racial discrimination in the workplace.(33) Poor work conditions have a negative impact on the health of PSWs, including exposure to injury, communicable diseases, violence, time pressure and mental stress.(34–39) Unmanageable workload, burnout, and job stress has also been repeatedly shown to result in poor quality of care among healthcare workers.(38,40,41)

1  
2  
3 This study makes a novel contribution to research on work conditions in the health sector. Given  
4 recent calls for deinstitutionalizing care, or providing more care in the home and community  
5 (42), the shift towards relying on low-wage earners with unstable work is a troubling trend.(43)  
6 Policy solutions include mandating a minimum number of paid sick days, raising wages to  
7 reduce poverty, providing incentives to employers to provide more full-time positions, enforcing  
8 existing labour laws that protect PSWs from reprisals if they raise concerns about health and  
9 safety, and developing an independent system to track and address racial discrimination. With  
10 these changes, not only would the health of PSWs improve, the quality of care that patients  
11 receive would improve and the risk from infectious diseases would be reduced.  
12  
13  
14  
15

## 16 **References**

- 17
- 18 1. Canadian Institute for Health Information (CIHI). Canada's Health Care Providers. Health  
19 Care (Don Mills) [Internet]. 2001;1–112. Available from:  
20 [https://secure.cihi.ca/free\\_products/hctenglish.pdf](https://secure.cihi.ca/free_products/hctenglish.pdf)
- 21 2. Sims-Gould J, Byrne K, Craven C, Martin-Matthews A, Keefe J. Why I became a home  
22 support worker: Recruitment in the home health sector. *Home Health Care Serv Q*.  
23 2010;29(4):171–94.
- 24 3. Zeytinoglu IU, Denton M, Brookman C, Davies S, Sayin FK. Health and safety matters!  
25 Associations between organizational practices and personal support workers' life and  
26 work stress in Ontario, Canada. 2017;
- 27 4. Kelly C, Bourgeault IL. The Personal Support Worker Program Standard in Ontario: An  
28 Alternative to Self-Regulation? *Healthc Policy*. 2015 Nov;11(2):20–6.
- 29 5. Colombo F, Llana-Nozal A, Mercier J, Tjadens F. Help Wanted? [Internet]. OECD; 2011  
30 [cited 2021 Feb 2]. (OECD Health Policy Studies). Available from: [https://www.oecd-](https://www.oecd-ilibrary.org/social-issues-migration-health/help-wanted_9789264097759-en)  
31 [ilibrary.org/social-issues-migration-health/help-wanted\\_9789264097759-en](https://www.oecd-ilibrary.org/social-issues-migration-health/help-wanted_9789264097759-en)
- 32 6. Zagrodney K, Saks M. Personal support workers in Canada: The new precariat? *Healthc*  
33 *Policy*. 2017;13(2):31–9.
- 34 7. Health Professions Regulatory Advisory Council (HPRAC). Report to the Minister of  
35 Health and Long-Term Care on Regulatory Issues and Matters Respecting Personal  
36 Support Workers [Internet]. 2006 [cited 2020 Feb 28]. Available from:  
37 <https://www.hprac.org/en/reports/PSWreportSept06.asp>
- 38 8. Saks M, Allsop J. Social Policy, Professional Regulation and Health Support Work in the  
39 United Kingdom. *Soc Policy Soc* [Internet]. 2007/03/12. 2007;6(2):165–77. Available  
40 from: [https://www.cambridge.org/core/article/social-policy-professional-regulation-and-](https://www.cambridge.org/core/article/social-policy-professional-regulation-and-health-support-work-in-the-united-kingdom/D0CC7727B727EB04095C2A1CCA3E3E48)  
41 [health-support-work-in-the-united-kingdom/D0CC7727B727EB04095C2A1CCA3E3E48](https://www.cambridge.org/core/article/social-policy-professional-regulation-and-health-support-work-in-the-united-kingdom/D0CC7727B727EB04095C2A1CCA3E3E48)
- 42 9. Maness SB, Merrell L, Thompson EL, Griner SB, Kline N, Wheldon C. Social  
43 Determinants of Health and Health Disparities: COVID-19 Exposures and Mortality  
44 Among African American People in the United States [Internet]. Vol. 136, *Public Health*  
45 *Reports*. SAGE Publications Ltd; 2021 [cited 2021 Jan 20]. p. 18–22. Available from:  
46 <http://journals.sagepub.com/doi/10.1177/0033354920969169>
- 47 10. Upshaw TL, Brown C, Smith R, Perri M, Ziegler C, Pinto AD. Social determinants of  
48 COVID-19 incidence and outcomes: A rapid review. Camacho-Rivera M, editor. *PLoS*  
49 *One* [Internet]. 2021 Mar 31;16(3):e0248336. Available from:  
50 <https://dx.plos.org/10.1371/journal.pone.0248336>  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60



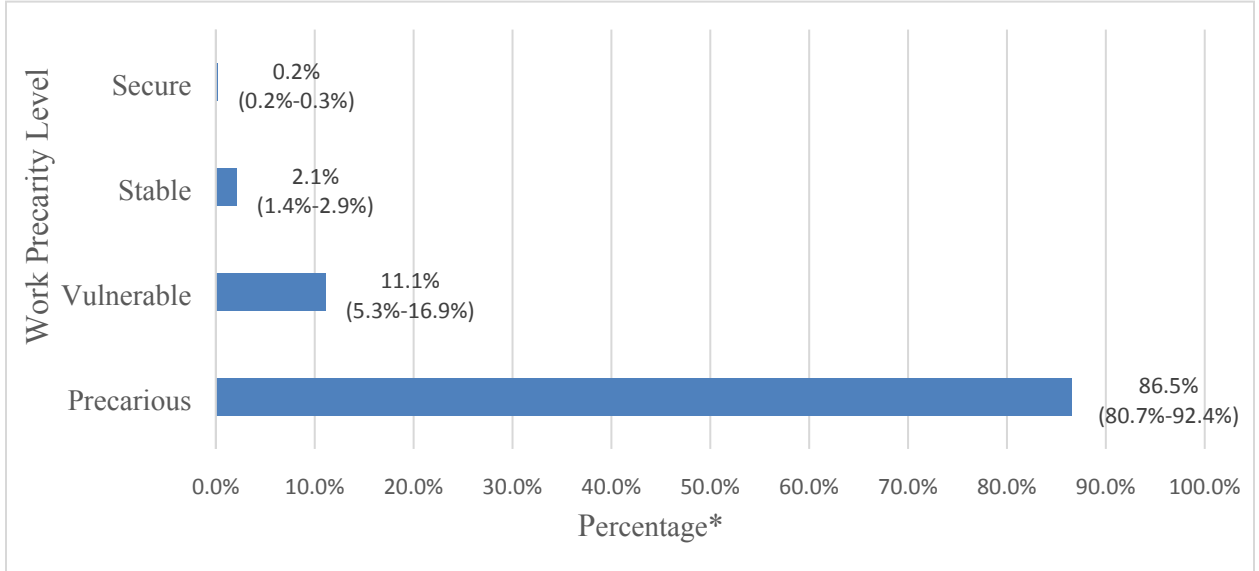
11. Statistics Canada. Focus on Geography Series, 2016 Census - Census metropolitan area of Toronto [Internet]. Statistics Canada Catalogue no. 98-404-X2016001. 2016 [cited 2021 May 25]. Available from: <https://www12.statcan.gc.ca/census-recensement/2016/as-sa/fogs-spg/Facts-cma-eng.cfm?LANG=eng&GK=CMA&GC=535&TOPIC=1>
12. Saari M, Patterson E, Kelly S, Tourangeau AE. The evolving role of the personal support worker in home care in Ontario, Canada. *Health Soc Care Community* [Internet]. 2018;26(2):240–9. Available from: <http://doi.wiley.com/10.1111/hsc.12514>
13. Zeytinoglu IU, Denton M, Davies S, Plenderleith JM. Casualized employment and turnover intention: Home care workers in Ontario, Canada. *Health Policy (New York)* [Internet]. 2009 [cited 2018 Jul 19];91:258–68. Available from: <http://www.business.mcmaster.ca/hrlr/profs/zeytino/>
14. Lilly MB. Medical versus social work-places: constructing and compensating the personal support worker across health care settings in Ontario, Canada. *Gender, Place Cult* [Internet]. 2008 [cited 2018 Jul 18];15(3):285–99. Available from: <http://www.informaworld.com>
15. Israel BA, Schulz AJ, Parker EA, Becker AB. Review of community-based research: Assessing partnership approaches to improve public health [Internet]. Vol. 19, Annual Review of Public Health. Annual Reviews 4139 El Camino Way, P.O. Box 10139, Palo Alto, CA 94303-0139, USA ; 1998 [cited 2021 May 25]. p. 173–202. Available from: [www.annualreviews.org](http://www.annualreviews.org)
16. Heckathorn DD. Respondent-driven sampling II: Deriving valid population estimates from chain-referral samples of hidden populations. *Soc Probl* [Internet]. 2002 Feb 1 [cited 2021 May 25];49(1):11–34. Available from: <https://academic.oup.com/socpro/article/49/1/11/1664491>
17. Qualtrics. Qualtrics [Internet]. Provo, Utah, USA; 2020 [cited 2021 May 25]. Available from: <https://www.qualtrics.com>
18. White RG, Hakim AJ, Salganik MJ, Spiller MW, Johnston LG, Kerr L, et al. Strengthening the Reporting of Observational Studies in Epidemiology for respondent-driven sampling studies: “sTROBE-RDS” statement [Internet]. Vol. 68, *Journal of Clinical Epidemiology*. Elsevier USA; 2015 [cited 2021 May 11]. p. 1463–71. Available from: <http://creativecommons.org/licenses/by/4.0/>
19. Statistics Canada. Table 11-10-0241-01 Low income cut-offs (LICOs) before and after tax by community size and family size, in current dollars [Internet]. [cited 2021 May 11]. Available from: <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1110024101>
20. Lewchuck W, Lafleche M, Procyk S, Cook C, Dyson D, Goldring L, et al. The precarity penalty [Internet]. *Poverty and Employment Precarity in Southern Ontario*. 2015. Available from: [https://pepsouwt.files.wordpress.com/2012/12/precarity-penalty-report\\_final-hires\\_trimmed.pdf](https://pepsouwt.files.wordpress.com/2012/12/precarity-penalty-report_final-hires_trimmed.pdf)
21. United Way Toronto & York Region; McMaster University SSHRC CURA project on Poverty and Employment Precarity in Southern Ontario (PEPSO). Manual for constructing the PEPSO Employment Precarity Index [Internet]. [cited 2021 May 11]. Available from: <https://pepsouwt.ca/documents/manual-for-precarity-index-2016-06-21-final.pdf>
22. Institute for Work and Health. OHS Vulnerability Measure [Internet]. 2016 [cited 2021 Jan 20]. Available from: <http://www.iwh.on.ca/ohs-vulnerability-measure>
23. Kroenke K, Spitzer RL, Williams JBW. The Patient Health Questionnaire-2: Validity of a

- 1  
2  
3 Two-Item Depression Screener. 2003;41(11):1284–92.
- 4 24. Statistics Canada. Canadian Community Health Survey (CCHS) - 2019 [Internet]. 2019  
5 [cited 2020 May 8]. Available from:  
6 [https://www23.statcan.gc.ca/imdb/p3Instr.pl?Function=assembleInstr&a=1&&lang=en&Item\\_Id=1207185](https://www23.statcan.gc.ca/imdb/p3Instr.pl?Function=assembleInstr&a=1&&lang=en&Item_Id=1207185)  
7
- 8 25. Avery L, Rotondi N, McKnight C, Firestone M, Smylie J, Rotondi M. Unweighted  
9 regression models perform better than weighted regression techniques for respondent-  
10 driven sampling data: results from a simulation study. *BMC Med Res Methodol* 2019 191  
11 [Internet]. 2019 Oct 29 [cited 2021 Aug 4];19(1):1–13. Available from:  
12 <https://bmcmmedresmethodol.biomedcentral.com/articles/10.1186/s12874-019-0842-5>  
13
- 14 26. Statistics Canada. Perceived health, by age group [Internet]. 2021 [cited 2021 Jan 20].  
15 Available from: <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310009602>
- 16 27. Statistics Canada. Life satisfaction, satisfied or very satisfied, by age group [Internet].  
17 2021 [cited 2021 Jan 20]. Available from:  
18 <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310009605>  
19
- 20 28. Dobson KG, Vigod SN, Mustard C, Smith PM. Health Reports Trends in the prevalence  
21 of depression and anxiety disorders among working-age Canadian adults between 2000  
22 and 2016. [cited 2021 Jan 20]; Available from: [https://www.doi.org/10.25318/82-003-](https://www.doi.org/10.25318/82-003-x202001200002-eng)  
23 [x202001200002-eng](https://www.doi.org/10.25318/82-003-x202001200002-eng)  
24
- 25 29. Van Den Tooren M, De Jonge J. Managing job stress in nursing: what kind of resources  
26 do we need? *J Adv Nurs*. 2008;63(1):75–84.
- 27 30. Willemse BM, de Jonge J, Smit D, Depla MFIA, Pot AM. The moderating role of decision  
28 authority and coworker-and supervisor support on the impact of job demands in nursing  
29 homes: A cross-sectional study. *Int J Nurs Stud*. 2012;49(7):822–33.
- 30 31. Wilkinson S. How nurses can cope with stress and avoid burnout. *Emerg Nurse*.  
31 2014;22(7).
- 32 32. Canadian Research Network for Care in the Community. Personal Support Workers in  
33 Home and Community Care: CRNCC/PSNO Survey Results [Internet]. Toronto, Ontario;  
34 2009 [cited 2020 Feb 28]. Available from:  
35 <https://www.ryerson.ca/content/dam/crncc/knowledge/infocus/factsheets/InFocus-Ontario>  
36 [PSWs in Home and Community Care.pdf](https://www.ryerson.ca/content/dam/crncc/knowledge/infocus/factsheets/InFocus-Ontario)  
37
- 38 33. Neysmith SM, Aronson J. Working Conditions in Home Care: Negotiating Race and Class  
39 Boundaries in Gendered Work. *Int J Heal Serv* [Internet]. 1997 [cited 2018 Jul  
40 19];27(3):479. Available from: <http://baywood.com>
- 41 34. Armstrong P, Armstrong H, Banerjee A, Daly T, Szebehely M. Structural Violence in  
42 Long-Term Residential Care. *Women’s Heal urban life* [Internet]. 2011 [cited 2018 Jun  
43 15];10(1):111–29. Available from: [http://www.diva-](http://www.diva-portal.org/smash/get/diva2:433372/FULLTEXT01.pdf)  
44 [portal.org/smash/get/diva2:433372/FULLTEXT01.pdf](http://www.diva-portal.org/smash/get/diva2:433372/FULLTEXT01.pdf)  
45
- 46 35. Daly T, Banerjee A, Armstrong P, Armstrong H, Szebehely M. Lifting the “violence veil”:  
47 examining working conditions in long-term care facilities using iterative mixed methods.  
48 *Can J Aging*. 2011 Jun;30(2):271–84.
- 49 36. Aström S, Bucht G, Eisemann M, Norberg A, Saveman B-I. Incidence of violence towards  
50 staff caring for the elderly. *Scand J Caring Sci*. 2002 Mar;16(1):66–72.
- 51 37. Delp L, Wallace SP, Geiger-Brown J, Muntaner C. Job stress and job satisfaction: Home  
52 care workers in a consumer-directed model of care. *Health Serv Res*. 2010  
53 Aug;45(4):922–40.  
54  
55  
56  
57  
58  
59  
60

- 1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60
38. Ruotsalainen S, Jantunen S, Sinervo T. Which factors are related to Finnish home care workers' job satisfaction, stress, psychological distress and perceived quality of care? - a mixed method study. 2020 [cited 2021 Jan 24]; Available from: <https://doi.org/10.1186/s12913-020-05733-1>
  39. Hignett S, Otter ME, Keen C. Safety risks associated with physical interactions between patients and caregivers during treatment and care delivery in Home Care settings: A systematic review. 2016 [cited 2020 Feb 10]; Available from: <http://dx.doi.org/10.1016/j.ijnurstu.2016.02.011>
  40. Van Den Hombergh P, Künzi B, Elwyn G, Van Doremalen J, Akkermans R, Grol R, et al. High workload and job stress are associated with lower practice performance in general practice: an observational study in 239 general practices in the Netherlands. *BMC Health Serv Res* [Internet]. 2009 Dec 15 [cited 2021 Jan 20];9(1):118. Available from: <https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-9-118>
  41. Klein J, Frie KG, Blum K, Von Dem Knesebeck O. Psychosocial stress at work and perceived quality of care among clinicians in surgery. *BMC Health Serv Res* [Internet]. 2011 Dec 20 [cited 2021 Jan 24];11(1):109. Available from: <https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-11-109>
  42. Government of Canada. A Common Statement of Principles on Shared Health Priorities. 2017;1–3. Available from: [https://www.canada.ca/content/dam/hc-sc/documents/corporate/transparency\\_229055456/health-agreements/principles-shared-health-priorities.pdf](https://www.canada.ca/content/dam/hc-sc/documents/corporate/transparency_229055456/health-agreements/principles-shared-health-priorities.pdf)
  43. Denton M, Brookman C, Zeytinoglu I, Plenderleith J, Barken R. Task shifting in the provision of home and social care in Ontario, Canada: implications for quality of care. *Heal & Soc Care Community* [Internet]. 2015;23(5):485–92. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1111/hsc.12168>

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

**Figure 1. Work precarity level based on the Employment Precarity Index**



\*95% Confidence Interval is included in the bracket for each percentage

Confidential

Table 1. Characteristics of survey participants

Variables	Unweighted Counts	Unadjusted Estimates, %	RDS-II Adjusted Estimates <sup>a</sup> %	RDS-II Adjusted 95% CI <sup>b</sup>
<b>Age category</b>				
<i>18-29</i>	52	8.2	10.4	4.7 - 16.1
<i>30-39</i>	174	27.4	32.1	23.8 - 40.3
<i>40-49</i>	247	39.0	38.3	30.6 - 46.1
<i>50+</i>	115	18.1	19.2	10.6 - 27.7
Missing	46	7.3		
<b>Gender identity</b>				
<i>Female</i>	528	83.3	90.1	85.1 - 95.1
<i>Male</i>	57	9.0	9.6	4.6 - 14.5
<i>Other</i>	3	0.5	0.3	0.0 - 0.8
Missing	46	7.3		
<b>Racial background</b>				
<i>Black</i>	425	67.0	76.5	68.2 - 84.9
<i>East Asian</i>	32	5.0	3.7	1.4 - 5.9
<i>South Asian</i>	19	3.0	1.9	0.1 - 3.0
<i>Southeast Asian</i>	70	11.0	10.5	5.6 - 15.4
<i>White</i>	16	2.5	3.7	0.0 - 9.0
<i>Mixed or other racial categories</i>	26	4.1	3.7	0.0 - 9.3
Missing	46	7.3		
<b>Born in Canada</b>				
<i>No</i>	576	90.9	97.4	94.9 - 99.9
<i>Yes</i>	11	1.7	2.6	0.1 - 5.1
Missing	47	7.4		
<b>Educational attainment</b>				
<i>Some grade school</i>	7	1.1	1.6	0.0 - 7.2
<i>Some high school</i>	6	0.9	1.0	0.0 - 2.7
<i>High school degree</i>	45	7.1	8.7	4.4 - 13.1
<i>Some college/university</i>	241	38.0	41.2	32.3 - 50.0
<i>College degree, university degree, or post graduate degree</i>	288	45.4	47.4	39.0 - 55.9
Missing	47	7.4		
<b>Current student status</b>				
<i>Not a student</i>	512	80.8	78.9	72.4 - 85.5
<i>Student</i>	113	17.8	21.1	14.5 - 27.6
Missing	9	1.4		

Variables	Unweighted Counts	Unadjusted Estimates, %	RDS-II Adjusted Estimates <sup>a</sup> %	RDS-II Adjusted 95% CI <sup>b</sup>
<b>Income level</b>				
<i>Income above LICO</i>	259	40.9	44.9	36.1 - 53.7
<i>Income below LICO</i>	328	51.7	55.1	46.3 - 63.9
Missing	47	7.4		
<b>Housing Status</b>				
<i>Living in a temporary shelter run by an agency</i>	3	0.5	0.4	0.0 - 1.3
<i>Living in an institution (e.g., group home, long term care, correctional facility)</i>	1	0.2	0.1	0.0 - 0.2
<i>Living in own home</i>	70	11.0	10.7	4.8 - 16.5
<i>Renting a home</i>	487	76.8	82.1	73.8 - 90.4
<i>Staying with friends and/or family</i>	27	4.3	6.7	0.0 - 13.5
Missing	46	7.3		

<sup>a</sup>Missing data was not included in the distribution of percent estimates

<sup>b</sup>Negative values were truncated at 0.0.

Table 2. Work experience profile

Variables	Unweighted Counts	Unadjusted Estimates, %	RDS-II Adjusted Estimates <sup>a</sup> , %	RDS-II Adjusted 95% CI <sup>b</sup>
<b>Current employment status</b>				
<i>Employed</i>	569	89.8	89.0	82.7 - 95.3
<i>Unemployed</i>	57	9.0	11.0	4.7 - 17.3
<i>Missing</i>	8	1.3		
<b>Currently working as PSW</b>				
<i>Not working as PSW</i>	25	3.9	5.3	0.0 - 10.9
<i>Working as PSW</i>	599	94.5	94.7	89.1 - 100.0
<i>Missing</i>	10	1.6		
<b>Main employment type in the past year<sup>†</sup></b>				
<i>Casual or on contract (Part-Time/Full-Time) or self-employed</i>	399	62.9	65.3	57.4 - 73.1
<i>Permanent Part-time or Full-time</i>	225	35.5	34.7	26.9 - 42.6
<i>Missing</i>	10	1.6		
<b>Average number of paid work hours per week in the past year</b>				
<i>30 hours or more</i>	318	50.2	50.7	42.2 - 59.1
<i>Less than 30 hours</i>	282	44.5	49.3	40.9 - 57.8
<i>Missing</i>	34	5.4		
<b>Main setting worked as PSW in the past year</b>				
<i>Home care in the community</i>	258	40.7	43.9	35.2 - 52.5
<i>Long-term care</i>	211	33.3	34.5	27.0 - 42.0
<i>Other (e.g., hospitals, shelters, group homes, rehabilitation centres)</i>	126	19.9	21.6	12.2 - 31.1
<i>Missing</i>	39	6.2		
<b>Union membership</b>				
<i>No</i>	314	49.5	53.8	45.7 - 61.9
<i>Yes</i>	310	48.9	46.2	38.1 - 54.3
<i>Missing</i>	10	1.6		
<b>Paid sick days<sup>†</sup></b>				
<i>No</i>	547	86.3	89.5	85.8 - 93.3
<i>Yes</i>	76	12.0	10.5	6.7 - 14.2

Variables	Unweighted Counts	Unadjusted Estimates, %	RDS-II Adjusted Estimates <sup>a</sup> , %	RDS-II Adjusted 95% CI <sup>b</sup>
Missing	11	1.7		
<b>Number of paid sick days received (if selected “yes” above) (N:76)</b>				
<i>0-5 days</i>	14	18.4	18.9	0.0 - 40.2
<i>6-10 days</i>	31	40.8	35.2	14.5 - 56.0
<i>10+ days</i>	28	36.8	45.8	23.2 - 68.5
Missing	3	4.0		
<b>Retirement income plan from employer<sup>†</sup></b>				
<i>No</i>	386	60.9	67.2	59.5 - 74.8
<i>Yes</i>	226	35.7	32.8	25.2 - 40.5
Missing	22	3.5		
<b>Other employment benefits from employer (e.g., dental, medications)<sup>†</sup></b>				
<i>No</i>	438	69.1	74.1	66.8 - 81.4
<i>Yes</i>	176	27.8	25.9	18.6 - 33.2
Missing	20	3.2		
<b>Financial assistance received from government:<sup>‡</sup></b>				
<i>Housing</i>	73	11.5	13.5	6.6 - 20.5
<i>Childcare</i>	155	24.5	26.2	18.7 - 33.7
<i>Recreation</i>	27	4.3	4.7	1.5 - 8
<i>Food allowances</i>	54	8.5	7.9	5.1 - 10.7
<i>Dental</i>	71	11.2	10.7	5.1 - 16.2
<i>Vision</i>	39	6.2	5.2	3.0 - 7.4
<i>Prescription drugs</i>	77	12.2	11.4	7.6 - 15.2
<i>Assistive living devices</i>	5	0.8	0.9	0.0 - 2
<i>Transit passes</i>	28	4.4	4.8	2.0 - 7.6
<i>Student grants</i>	26	4.1	5.6	2.4 - 8.8
<i>Electricity grants</i>	69	10.9	11.5	7.2 - 15.7
<i>Disability supports</i>	10	1.6	2.8	0.6 - 5.1
<i>Other</i>	23	3.6	2.8	1.4 - 4.2
<b>Frequency of knowing work schedule one week advance<sup>†</sup></b>				
<i>Half the time/Some of the time/Never</i>	194	30.6	31.9	24.1 - 39.8
<i>All the time/Most of the time</i>	413	65.1	68.1	60.2 - 75.9
Missing	27	4.3		



Variables	Unweighted Counts	Unadjusted Estimates, %	RDS-II Adjusted Estimates <sup>a</sup> , %	RDS-II Adjusted 95% CI <sup>b</sup>
<b>Work related injuries or sickness in the past year</b>				
<i>No</i>	430	67.8	74.5	68.3 - 80.7
<i>Yes</i>	177	27.9	25.5	19.3 - 31.7
Missing	27	4.3		
<b>If injured/sick, file to WSIB? (N: 177)</b>				
<i>No</i>	136	76.8	81.2	73.6 - 88.8
<i>Yes</i>	41	23.2	18.8	11.2 - 26.4
<b>If injured/sick, how many working days missed? (N:177)</b>				
<i>0-5 days</i>	79	44.6	46.2	31.0 - 61.4
<i>6-10 days</i>	28	15.8	16.3	7.8 - 24.8
<i>10+ days</i>	50	28.3	37.5	22.7 - 52.3
Missing	20	11.3		
<b>Perceived likelihood of reprisal for raising health and safety or employment rights (e.g., harassment) concern to employer<sup>†</sup></b>				
<i>Not Likely/Not likely at all</i>	353	55.7	43.5	47.9 - 65.2
<i>Somewhat likely/Likely/Very likely</i>	261	41.2	56.5	34.8 - 52.1
Missing	20	3.2		
<b>Worker's empowerment to participate in injury and illness prevention</b>				
<i>Empowered</i>	89	14.0	12.1	6.0 - 18.2
<i>Not empowered</i>	545	86.0	87.9	81.8 - 94.0
<b>Experience with discrimination due to: ‡</b>				
<i>Ethnicity</i>	137	21.6	21.4	16.3 - 26.5
<i>Gender</i>	11	1.7	1.8	0 - 3.6
<i>Age</i>	24	3.8	4	2 - 6.1
<i>Sexual orientation</i>	2	0.3	0.6	0 - 1.5
<i>Disability</i>	5	0.8	0.7	0 - 1.6
<i>Immigration status</i>	63	9.9	9.9	4.0 - 15.7
<i>Other</i>	50	7.9	8.2	3.8 - 12.5

<sup>a</sup>Missing data was not included in the distribution of percent estimates.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

<sup>b</sup>Negative values were truncated at 0.0.  
<sup>†</sup>Part of the Employment Precarity Index.  
<sup>‡</sup>Participants were able to select all options. Therefore, each category of assistance or discrimination elicited a binary response (i.e., received a particular assistance or not; discriminated against due to a particular reason or not) and the sum of positive responses across the different categories exceeded the total number of participants (n=634).

Confidential

Table 3. Results from Income Stress Scale

Questions	Unweighted Counts	Unadjusted Estimates, %	RDS-II Adjusted Estimates <sup>a</sup> , %	RDS-II Adjusted 95% CI
<b>Has concern over your employment situation negatively influenced large spending decisions?</b>				
<i>Yes</i>	490	77.3	80.8	74.3 - 87.2
<i>No</i>	109	17.2	19.2	12.8 - 25.7
Missing	35	5.5		
<b>Which of the following statements best describes how well you and your household had been keeping up with your bills and other financial commitments?</b>				
<i>"Keeping up without any problems"</i>	515	81.2	85.9	78.1 - 93.8
<i>"Keeping up, but it is sometimes a struggle" or "Having real financial problems and falling behind"</i>	85	13.4	14.1	6.2 - 21.9
Missing	34	5.4		
<b>Does your employment situation make you concerned about your ability to meet your debt obligations in the following year?</b>				
<i>Yes</i>	425	67.0	73.9	67.7 - 80.0
<i>No</i>	171	27.0	26.1	20.0 - 32.3
Missing	38	6.0		
<b>Are you concerned that you would not be able to maintain your current standard of living in the following year due to your employment situation?</b>				
<i>Yes</i>	398	62.8	67.10	60.0 - 74.2
<i>No</i>	199	31.4	32.9	25.8 - 40.0
Missing	37	5.8		
<b>Compared to a year ago, is your personal income this year noticeably:</b>				

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

Questions	Unweighted Counts	Unadjusted Estimates, %	RDS-II Adjusted Estimates <sup>a</sup> , %	RDS-II Adjusted 95% CI
<i>Lower</i>	231	36.4	40.7	31.8 - 49.50
<i>The same</i>	237	37.4	37.5	28.8 - 46.2
<i>Higher</i>	128	20.2	21.8	15.7 - 27.9
Missing	38	6.0		

<sup>a</sup>Missing data was not included in the distribution of percent estimates.

Confidential

Table 4. Health outcomes

Variables	Unweighted Counts	RDS Unadjusted Estimates, %	RDS-II Adjusted Estimates <sup>a</sup> , %	RDS-II Adjusted 95% CI
<b>Perceived general health</b>				
<i>Poor/Fair/Good</i>	278	43.9	46.7	37.9 - 55.5
<i>Very good/Excellent</i>	323	51.0	53.3	44.5 - 62.1
Missing	33	5.2		
<b>Life satisfaction</b>				
<i>Dissatisfied</i>	168	26.5	28.2	20.7 - 35.8
<i>Satisfied</i>	433	68.3	71.8	64.2 - 79.3
Missing	33	5.2		
<b>Amount of stress in most days</b>				
<i>Not at all stressful/Not very stressful/A bit stressful</i>	434	68.5	73.2	65.4 - 80.9
<i>Quite a bit stressful/Extremely stressful</i>	166	26.2	26.8	19.1 - 34.6
Missing	34	5.4		
<b>Frequency of work negatively affecting mental health</b>				
<i>Always/Usually</i>	98	15.5	16.8	8.9 - 24.8
<i>Occasionally/Rarely/Never</i>	503	79.3	83.2	75.2 - 91.1
Missing	33	5.2		
<b>Frequency of getting angry due to work</b>				
<i>Always/Usually</i>	59	9.3	10.1	4.0 - 16.3
<i>Occasionally/Rarely/Never</i>	543	85.7	89.9	83.7 - 96.0
Missing	32	5.1		
<b>Amount of stress at work</b>				
<i>Not at all stressful/Not very stressful/A bit stressful</i>	402	63.4	67.3	58.7 - 75.9
<i>Quite a bit stressful/Extremely stressful</i>	200	31.6	32.7	24.1 - 41.3
Missing	32	5.1		
<b>Risk for depression (PHQ-2 scale)</b>				
<i>Likely</i>	136	21.5	21.0	14.0 - 28.0
<i>Unlikely</i>	456	71.9	79.0	72.0 - 86.0
Missing	42	6.6		

Variables	Unweighted Counts	RDS Unadjusted Estimates, %	RDS-II Adjusted Estimates <sup>a</sup> , %	RDS-II Adjusted 95% CI
<b>Perceived impact of work on significant relationships</b>				
<i>Always/Usually</i>	193	30.4	28.8	20.7 - 36.8
<i>Occasionally/Rarely/Never</i>	406	64.0	71.2	63.2 - 79.3
Missing	35	5.5		
<b>Sense of belonging in the community</b>				
<i>Somewhat strong/Strong</i>	452	71.3	72.0	63.0 - 81.0
<i>Somewhat weak/Very weak</i>	146	23.0	28.0	19.0 - 37.0
Missing	36	5.7		

<sup>a</sup>Missing data was not included in the distribution of percent estimates

Table 5. Regression results comparing work precarity scores across demographics

Explanatory Variables	Model 1	Model 2
	(Perceived General Health)	(Risk for Depression)
	Adjusted Odds Ratio (95% CI)	Adjusted Odds Ratio (95% CI)
<b>PEPSO score</b>	1.00 (0.99-1.02)	1.02 (1.01-1.03)**
<b>Age category</b>		
18-29 years old	Reference	Reference
30-39 years old	0.77 (0.40-1.49)	0.84 (0.40-1.85)
40-49 years old	1.58 (0.85-2.98)	1.31 (0.65-2.80)
50 years and older	2.78 (1.41-5.60)**	1.02 (0.46-2.33)
<b>Gender identity<sup>a</sup></b>		
Female	Reference	Reference
Male	0.56 (0.31-1.00) <sup>†</sup>	0.91 (0.44-1.76)
<b>Educational attainment<sup>b</sup></b>		
High school degree or lower	Reference	Reference
At least some college	1.01 (0.57-1.79)	0.63 (0.35-1.18)
<b>Main setting worked as PSW in the past year</b>		
Other (e.g., hospitals, shelters, group homes, rehabilitation centres)	Reference	Reference
Homecare in the community	1.02 (0.62-1.67)	0.63 (0.37-1.08) <sup>†</sup>
Long-term care	1.52 (0.92-2.55)	0.68 (0.39-1.19)
<b>Low Income Status</b>		
Below Low-Income Status Threshold	Reference	Reference
Above Low-Income Status Threshold	0.97 (0.68-1.38)	0.97 (0.64-1.46)

<sup>a</sup>The 3 responses that indicated “Other” on the Gender identity variable were excluded in the regression analysis due to small cell value.

<sup>b</sup>Because of small cell values, the five response options (“Some grade school”, “Some high school”, “High school degree”, “Some college/university”, “College degree, university degree, or post graduate degree”) were dichotomized.

<sup>†</sup>p<0.10, \*p<0.05, \*\*p<0.01

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46

STROBE Statement—checklist of items that should be included in reports of observational studies

	Item No.	Recommendation	Page No.
<b>Title and abstract</b>	1	(a) Indicate the study’s design with a commonly used term in the title or the abstract	1
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	2
<b>Introduction</b>			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	3
Objectives	3	State specific objectives, including any prespecified hypotheses	3
<b>Methods</b>			
Study design	4	Present key elements of study design early in the paper	3
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	3
Participants	6	(a) <i>Cohort study</i> —Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up	4
		<i>Case-control study</i> —Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls	
		<i>Cross-sectional study</i> —Give the eligibility criteria, and the sources and methods of selection of participants	
		(b) <i>Cohort study</i> —For matched studies, give matching criteria and number of exposed and unexposed	n/a
		<i>Case-control study</i> —For matched studies, give matching criteria and the number of controls per case	
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	4
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	5
Bias	9	Describe any efforts to address potential sources of bias	5
Study size	10	Explain how the study size was arrived at	4

Continued on next page



Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	5
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding	5
		(b) Describe any methods used to examine subgroups and interactions	5
		(c) Explain how missing data were addressed	5
		(d) <i>Cohort study</i> —If applicable, explain how loss to follow-up was addressed	5
		<i>Case-control study</i> —If applicable, explain how matching of cases and controls was addressed	
		<i>Cross-sectional study</i> —If applicable, describe analytical methods taking account of sampling strategy	
		(e) Describe any sensitivity analyses	n/a
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	5
		(b) Give reasons for non-participation at each stage	5
		(c) Consider use of a flow diagram	n/a
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	6
		(b) Indicate number of participants with missing data for each variable of interest	6
		(c) <i>Cohort study</i> —Summarise follow-up time (eg, average and total amount)	n/a
Outcome data	15*	<i>Cohort study</i> —Report numbers of outcome events or summary measures over time	n/a
		<i>Case-control study</i> —Report numbers in each exposure category, or summary measures of exposure	n/a
		<i>Cross-sectional study</i> —Report numbers of outcome events or summary measures	6-7
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	6-7
		(b) Report category boundaries when continuous variables were categorized	6-7
		(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	n/a

Continued on next page

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46

Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	7
Key results	18	Summarise key results with reference to study objectives	7
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	7
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	7
Generalisability	21	Discuss the generalisability (external validity) of the study results	7
<b>Other information</b>			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	8

\*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

**Note:** An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at <http://www.plosmedicine.org/>, Annals of Internal Medicine at <http://www.annals.org/>, and Epidemiology at <http://www.epidem.com/>). Information on the STROBE Initiative is available at [www.strobe-statement.org](http://www.strobe-statement.org).

1  
2  
3 **SUPPLEMENT MATERIALS**  
4

5 **Supplement 1. Sociodemographic Information of Seeds (N=24)**  
6

7

Categorical Variable	Count	Percent (%)
<b>Main work setting</b>		
<i>Home care in the community</i>	10	41.7
<i>Long-term care facilities</i>	9	37.5
<i>Other</i>	5	20.8
<b>City of work location</b>		
<i>Ajax</i>	1	4.2
<i>Mississauga</i>	1	4.2
<i>North York</i>	2	8.3
<i>Oshawa</i>	1	4.2
<i>Scarborough</i>	2	8.3
<i>Toronto</i>	16	66.7
<i>Whitby</i>	1	4.2
<b>Age category</b>		
<i>18-29 years old</i>	6	25.0
<i>65 years and older</i>	1	4.2
<i>30-39 years old</i>	8	33.3
<i>50-64 years old</i>	3	12.5
<i>40-49 years old</i>	6	25.0
<b>Gender</b>		
<i>Female</i>	20	83.3
<i>Male</i>	4	16.7
<b>Racial Background</b>		
<i>Black</i>	13	54.2
<i>Middle Eastern</i>	2	8.3
<i>Latino</i>	1	4.2
<i>Southeast Asian</i>	3	12.5
<i>South Asian</i>	1	4.2
<i>White</i>	2	8.3
<i>Other/Mixed</i>	2	8.3
<b>Main Employment Type</b>		
<i>Casual or on contract (Part-Time/Full-Time) or self-employed</i>	14	58.3
<i>Permanent Part-time or Full-time</i>	10	41.7

8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

<b>Continuous Variable</b>	<b>Range</b>	<b>Average (Standard Deviation)</b>
<b>Number of years working as PSW</b>	1 - 22	4.8 (5.8)
<b>Number of PSW known</b>	1 - 100	11.5 (19.9)

Confidential



## C. Posters to recruit seed participants in the survey



### CALLING FOR PERSONAL SUPPORT WORKERS FOR A RESEARCH STUDY

A research team for the EMPOWER Project is studying how Personal Support Workers (PSWs) respond to job insecurity, seek resources, and navigate systems to file complaints and organize. The research team also wants to learn more about the work condition and safety of PSWs during the COVID-19 pandemic

#### WE ARE LOOKING FOR

- **Personal support workers (PSWs)** who have worked in **Greater Toronto Area** in the **past year**
- Must be **18 years old or older**

#### CONFIDENTIAL

- Your workplace will **NOT** know that you are a participant. All information will be confidential and stored securely with our research team.

#### WHAT TO EXPECT

If you are eligible for the research, the research staff will invite you to complete a survey about your health and your work issues. This will take about 20 minutes either online or over the phone. Disability accommodation will be provided. If you are willing, you will also be asked to promote the study to your colleagues and help recruit up to 3 new participants to the study.



**Step 1**  
Complete the survey  
(20 mins/\$20)



**Step 2**  
Using coupons given by the research staff, recruit up to 3 new participants in the study  
(\$10 for each successful recruitment)

#### VOLUNTARY

Participation is your choice!

#### COMPENSATION

To honour time and energy, survey participants and successful recruiters will be provided with \$20 and \$10, respectively (either gift card to a grocery store, cheque, or money transfer)

#### MORE INFORMATION

Please contact research staff at [empowerprojectTO@smh.ca](mailto:empowerprojectTO@smh.ca) for more information or visit our website <https://upstreamlab.org/EMPOWER/>

#### RESEARCH ETHICS

The Unity Health Toronto Research Ethics Board (REB) has approved the study [#18-103]. Version date: 05/06/2020

### Supplement 3. Full EMPOWER Survey

#### A. Description:

The survey is divided into six sections, *Overall Employment Experience, Work Impacts on Mental Health and Relationship, General Health, Income Stress, COVID-19 Impacts*, and *Demographics*. This article reported on all sections except for the *COVID-19 Impacts*, which will be presented in a future article alongside the results from the interview component of the EMPOWER (EMployment and PrecariOUS Work in Toronto's Health Sector: Evaluation and Research) project.

#### B. List of validated tools in the survey:

Validated Tools	Corresponding Question Numbers in the Survey Below	Link to original tool and guide
OHS Vulnerability Measure	14 (matrix table)	<a href="https://www.iwh.on.ca/tools-and-guides/ohs-vulnerability-measure">https://www.iwh.on.ca/tools-and-guides/ohs-vulnerability-measure</a>
PEPSO Employment Precarity Index	3, 6, 7, 8, 10, 11, 12, 13, 15, 16, 17, 20	<a href="https://pepso.ca/tools">https://pepso.ca/tools</a>
PEPSO Income Stress	35, 36, 38, 39, 40	<a href="https://pepso.ca/tools">https://pepso.ca/tools</a>
CCHS Life Satisfaction Question	32	<a href="https://www150.statcan.gc.ca/n1/pub/82-625-x/2017001/article/54862-eng.htm">https://www150.statcan.gc.ca/n1/pub/82-625-x/2017001/article/54862-eng.htm</a>
PHQ-2 Depression Scale	31 (matrix table)	<a href="https://www.hiv.uw.edu/page/mental-health-screening/phq-2">https://www.hiv.uw.edu/page/mental-health-screening/phq-2</a>

### C. The full survey:

## COVER PAGE

### EMPOWER

**EM**ployment and **PrecariOus W**ork in Toronto's Health Sector: **E**valuation and **R**esearch (EMPOWER) is a research study on the work conditions and health of Personal Support Workers (PSWs) funded by the Metcalf Foundation. The purpose of EMPOWER is to better understand how the current work conditions of PSWs working in home care and long-term care facilities may impact their well-being. This project will also evaluate the safety and work experience of PSWs during the COVID-19 pandemic.

Your direct insight as a PSW is important to highlight the current workplace reality and concerns faced by PSWs in Greater Toronto Area. Information gained from this survey will be relevant to policy makers, health planners, other PSWs, and the general public. It is anticipated that the findings will help inform policy changes that will lead to better work conditions and health of PSWs. **Your participation is voluntary, and all responses are confidential.**

The survey only takes about 20 minutes to complete and is divided into 6 sections: *Overall Employment Experience, Work Impacts on Mental Health and Relationship, General Health, Income Stress, COVID-19 Impacts, Demographics*. If you are unable to complete this survey in one session, you can return to it at a later time and continue where you left off by following the same survey link. You will have **one week** to complete the survey, at which point the research staff will follow up with you for honorarium. Please note that a consent form detailing the study and its potential risk and benefits to participants was sent in a previous email to you. **Your informed consent is implied upon submission of the survey.**

Please send any questions about the survey to Pinky Hapsari (empowerprojectTO@smh.ca)

**Thank you for contributing to this important health study.**





## SECTION A: OVERALL EMPLOYMENT EXPERIENCE

In the following set of questions, we would like you to think about your overall employment situation, which may involve more than one job/contract.

1. **In the past 12 months, where do you mostly work as a PSW?** (Select one answer)
  - Home care in the community
  - Long-term care facilities
  - Hospitals
  - Institutions for people with disabilities
  - Shelters
  - Prisons
  - Other - please specify:
  
2. **What is your current employment status?**  
 (Please select all that currently apply to you, for example, if you are a student and are also working for pay, please choose both "Student" and "Employed")
  - Employed (part-time or full-time)
  - Student
  - On short term leave from work (leave of absence, sick leave, or short-term work disability)
  - Furloughed or temporarily laid off
  - On long term leave from work (leave of absence, sick leave, or long-term work disability)
  - Unemployed, but looking for work
  - Not working and not looking for work due to a health condition
  - Not working and not looking for work due to another reason(s) - please specify:  
 \_\_\_\_\_
  
3. **Which of the following best describes the job/contract that paid you the most in the last 12 months?** (Select one answer only)
  - Casual (on-call, day labour)
  - Full-time on a temporary/short term contract (**less than a year**)
  - Part-time on a temporary/short term contract (**less than a year**)
  - Full-time on a fixed term contract, **one year or more**
  - Part-time on a fixed term contract, **one year or more**
  - Self-employed - no employees
  - Self-employed - others work for me
  - Permanent part-time - **less than 30 hour per week**
  - Permanent full-time - hours **vary** from week to week and could sometimes be less than 30
  - Permanent full time - **30 hours or more a per week**
  
4. **Was this a unionized position?** (Select one answer)
  - Yes
  - No

- 1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60
5. **Did you usually have more than one client?** (Select one answer)
- Yes
  - No
6. **In the last 12 months, what portion of your paid hours came from temporary employment agencies?** (Select one answer only):
- All
  - Most
  - Half
  - Some
  - None
7. **Does the following describe most of your employment relationship in the past 12 months?** *“I have one employer, who I expect to be working for a year from now, who provides at least 30 hours of work a week, and who pays benefits (e.g. drug plans, visions, dental).”* (Select one answer)
- Yes
  - No
8. **Do you usually get paid if you miss a day's work?** (Select one answer)
- Yes
  - No
9. *(If answers ‘Yes’ on the above question)* **How many paid sick days do you get in a year?** (Enter the number of days)  
*(Please provide your answer as a number, for example, 23 instead of twenty-three)*
- 
10. **In the last 12 months, how much did your income vary from week to week?** (Select one answer)
- A great deal
  - A lot
  - Some
  - A little
  - Not at all
11. **In the last 12 months, how often did you work on an on-call basis?** *(That is, you had no set schedule, and your employer called you in only when there was work)* (Select one answer)
- All the time
  - Most of the time
  - Half the time
  - Some of the time
  - Never

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27

12. **In the last 12 months**, what portion of your employment income was received in cash? (Select one answer)

- Most
- About half
- Less than half
- None

13. **How likely would most of your employment be negatively affected (e.g. laid off, given less hours) if you raised a health and safety concern or raised an employment rights concern (e.g. harassment by clients or colleagues) with your employer(s)?** (Select one answer)

- Very likely
- Likely
- Somewhat likely
- Not likely
- Not likely at all

14. **This section explores your ability to ask questions about, and participate in, health and safety at work. For each item below, please select under the heading that best describes how much you agree or disagree with the statement.**

At my workplace....	Strongly Agree	Agree	Disagree	Strongly Disagree
I feel free to voice concerns or make suggestions about workplace health and safety at my job				
If I notice a workplace hazard, I would point it out to management				
I know that I can stop work if I think something is unsafe and management will not give me a hard time				
If my work environment was unsafe, I would not say anything, and hope that the situation eventually improves				
I have enough time to complete my work tasks safely				

15. **How likely will your total hours of paid employment be reduced in the next 6 months?** (Select one answer)

- Very likely
- Likely
- Somewhat likely
- Not likely
- Not likely at all

16. **Did most of your employer(s) in the last 12 months provide a private retirement income plan such as a pension plan or a contribution to an RRSP (CPP does not count)?** (Select one answer)

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

- Yes
- No
- Does not apply

17. **Did you receive any other employment benefits from your employer(s) such as a drug plan, vision, dental, life insurance etc.?** (Select one answer)

- Yes
- No
- Does not apply

18. **During the last month, did you not fill or collect a prescription for medicine, or skip doses of your medicine because of the cost?**

- Yes
- No
- Not applicable, I had no medication prescription to fill
- Do not know

19. **Do you have insurance that covers all or part of the cost of your prescription medications?** Please include any private, government or employer-paid plans.

- Yes
- No
- Do not know

20. **In the last 12 months, how often do you know your work schedule at least one week in advance?** (Select one answer)

- All the time
- Most of the time
- Half the time
- Some of the time
- Never

21. **In the last 12 months, on average how many paid hours did you work *per week*?** (Enter number of hours)

*(Please provide your answer as a number, for example, 23 instead of twenty-three)*

\_\_\_\_\_

22. **In the last 12 months, did you get sick or injured because of your work?** (Select one answer)

- Yes
- No

23. *(If Yes on above)* **How many days did you miss from work due to an injury in the last 12 months?** \_\_\_\_\_

24. *(If Yes on above)* **Did you file a claim with Workplace Safety Insurance Board (WSIB)?**

- Yes
- No

25. **At work, do you feel like you are being treated unfairly or differently from other people because of the following?** (Check all that apply)

- Your race/ethnicity
- Your gender
- Your age
- Your sexual orientation
- Your disability
- Your immigration status
- Other; specify: \_\_\_\_\_
- Not applicable (did not feel discriminated against)

## SECTION B: WORK IMPACTS ON MENTAL HEALTH AND RELATIONSHIPS

The following section asks how your employment situations may affect your mental health and relationships.

26. **Over the last 12 months, how often did your employment situation negatively affect your mental health?** (Select one answer)

- Always
- Usually
- Occasionally
- Rarely
- Never

27. **Over the last 12 months, how often were you angry as a result of your work?** (Select one answer)

- Always
- Usually
- Occasionally
- Rarely
- Never

28. **Thinking about your main job or business in the past 12 months, would you say that most days at work were...?** (Select one answer)

- Not at all stressful
- Not very stressful
- A bit stressful
- Quite a bit stressful
- Extremely stressful

1  
2  
3 29. **Over the last 12 months, how often did you feel your employment situation negatively affect your significant relationships (e.g. lack of quality time with family or friends, conflict with spouse)?** (Select one answer)

- 4  
5  
6  
7  Always  
8  Usually  
9  Occasionally  
10  Rarely  
11  Never  
12  
13

## 14 SECTION C: GENERAL HEALTH

15  
16  
17 The next questions ask about your health. By health, we mean not only the absence of disease or injury  
18 but also physical, mental and social well-being.  
19

20 30. **In general, would you say your health is... ?** (Select one answer)

- 21  Excellent  
22  Very good  
23  Good  
24  Fair  
25  Poor  
26  
27

28 31. **Over the last 2 weeks, how often have you been bothered by the following problems?** (Select  
29 one answer for each statement)  
30

	Not at all	Several days	More than half the days	Nearly every day
Little interest or pleasure in doing things				
Feeling down, depressed or hopeless				

31  
32  
33  
34  
35  
36  
37  
38  
39 32. **Using a scale of 0 to 10, where 0 means "Very dissatisfied" and 10 means "Very satisfied",**  
40 **how do you feel about your life as a whole right now?** (Select one answer)

- 41  0 Very dissatisfied  
42  1  
43  2  
44  3  
45  4  
46  5  
47  6  
48  7  
49  8  
50  9  
51  10 Very satisfied  
52  
53  
54  
55  
56  
57  
58  
59  
60

1  
2  
3 33. **Thinking about the amount of stress in your life, would you say that most of your days are...?**

4 (Select one answer)

- 5  Not at all stressful  
6  Not very stressful  
7  A bit stressful  
8  Quite a bit stressful  
9  Extremely stressful

10  
11  
12  
13 34. **How would you describe your sense of belonging to your local community? Would you say it**  
14 **is...?** (Select one answer)

- 15  Very strong  
16  Somewhat strong  
17  Somewhat weak  
18  Very weak

## 21 22 SECTION D: INCOME STRESS

23 This section asks about your ability to make ends meet.

24  
25  
26 35. **Thinking about the last 12 months, has concern over your employment situation negatively**  
27 **influenced large spending decisions (e.g. afraid to make large purchases, afraid to spend**  
28 **money on children's activities, vacations, etc.)** (Select one answer)

- 29  Yes  
30  No

31  
32  
33 36. **Thinking about the last 12 months, which of the following statements best describes how well**  
34 **you and your household had been keeping up with your bills and other financial**  
35 **commitments?** (Select one answer)

- 36  Keeping up without any problems (skip next 2 questions)  
37  Keeping up, but it is sometimes a struggle  
38  Having real financial problems and falling behind

39  
40  
41 37. *(If "Yes" on above)* **How did you get around this difficulty?** (check all that apply)

- 42  Worked more  
43  Cut back/prioritized expenses  
44  Savings  
45  Credit card  
46  Bank loan  
47  Pay-day loan  
48  Money from a relative or a friend  
49  Other, specify: \_\_\_\_\_

50  
51  
52  
53 38. **Thinking about the next 12 months, does your employment situation make you concerned**  
54 **about your ability to meet your debt obligations (i.e. mortgages, credit cards and bank loans)**  
55 **in the following year?** (Select one answer)

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

- Yes
- No

39. **Thinking about the next 12 months**, were you concerned that you would not be able to maintain your current standard of living in the following year due to your employment situation? (Select one answer)

- Yes
- No

40. **Compared to a year ago, is your personal income this year noticeably:** (Select one answer)

- Lower
- The same
- Higher

41. **In the last 12 months**, did you receive any of the following subsidies/benefits from public sources? (Select all that apply)

- Housing
- Childcare
- Recreation
- Food allowances
- Dental
- Vision
- Prescription drugs
- Assistive living devices for you or a family member
- Transit passes
- Student grants
- Electricity grant
- Disability supports
- Other (specify)\_\_\_\_\_
- None

## SECTION E: COVID-19 IMPACTS

The following questions ask how you feel about your work conditions **DURING THE COVID-19 PANDEMIC**.

42. **Where do you mostly work as a PSW since March 2020?** (Select one answer)

- Home care in the community
- Long-term care facilities
- Hospitals
- Institutions for people with disabilities
- Shelters
- Prisons
- Not applicable - mostly unemployed
- Other - please specify:



1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22

43. (If selecting LTC) **What type of organization is your employer at the long-term care facilities?**  
(Select one answer)

*Some examples: Bayview in Toronto is owned by a private for-profit organization, Kipling Acres in Toronto is run by municipality, extendicare is owned by private for-profit organization. For a full list of LTCs in GTA and their types, click here.*

- Private for-profit
- Private not-for-profit
- Municipality
- Do not know

23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

44. **Since March 2020, what is the average number of hours per week that you work at** (text will follow the selected option or the specified text if "Other" is selected on Q1)? (Enter number of hours)

*(Please provide your answer as a number, for example, 23 instead of twenty-three)*

---

45. **Did you receive any training at the beginning of the pandemic (late March to early April) for protecting yourself from contracting COVID-19?** (Select one answer)

- Yes
- No

46. (If yes on above) **How helpful do you feel the training was for protecting yourself from contracting COVID-19?** (Select one answer)

- Extremely helpful
- Very helpful
- Moderately Helpful
- Slightly helpful
- Not at all helpful

47. **Did you receive any training at the beginning of the pandemic (late March to early April) for protecting your patients from contracting COVID-19?** (Select one answer)

- Yes
- No

48. (If yes on above) **How helpful do you feel the training was for protecting your patients from contracting COVID-19?** (Select one answer)

- Extremely helpful
- Very helpful
- Moderately Helpful
- Slightly helpful
- Not at all helpful

49. **Did you receive any training at the beginning of the pandemic for putting on and taking off the following personal protective equipment (PPE)?** (Select one answer)

Protective Equipment	Yes	No

Gloves		
Masks		
Gowns		
Face shields		

50. (If selected 'Yes' for 'Gloves' on Q.44) **How helpful do you feel the training was for putting on and taking off gloves?** (Select one answer)

- Extremely helpful
- Very helpful
- Moderately helpful
- Slightly helpful
- Not at all helpful

51. (If selected 'Yes' for 'Masks' on Q.44) **How helpful do you feel the training was for putting on and taking off masks?** (Select one answer)

- Extremely helpful
- Very helpful
- Moderately helpful
- Slightly helpful
- Not at all helpful

52. (If selected 'Yes' for 'Gowns' on Q.44) **How helpful do you feel the training was for putting on and taking off gowns?** (Select one answer)

- Extremely helpful
- Very helpful
- Moderately helpful
- Slightly helpful
- Not at all helpful

53. (If selected 'Yes' for 'Face shields' on Q.44) **How helpful do you feel the training was for putting on and taking off face shields?** (Select one answer)

- Extremely helpful
- Very helpful
- Moderately helpful
- Slightly helpful
- Not at all helpful

54. **How often did you have the following protective equipment available to use between each patient?** (Select one answer for each item)

Protective Equipment	Never	Rarely	Sometimes	Often	Always
Gloves					
Masks					
Gowns					
Face shields					
Hand sanitizer					

Access to running water and soap					
Other equipment you feel important - please specify: _____					

55. **Were you tested for COVID-19?** (Select one answer)

- Yes
- No

56. *(If yes on above)* **What was the result for your COVID-19 test?**

- Positive
- Negative
- Still waiting for result

57. **Did you have any common symptoms\* of COVID-19?**

*\*Common symptoms include:*

- *fever (feeling hot to touch, a temperature of 37.8 degrees Celsius or higher)*
  - *chills*
  - *cough that's new or worsening (continuous, more than usual)*
  - *barking cough, making a whistling noise when breathing (croup)*
  - *shortness of breath (out of breath, unable to breathe deeply)*
  - *sore throat*
  - *difficulty swallowing*
  - *runny, stuffy or congested nose (not related to seasonal allergies or other known causes or conditions)*
  - *lost sense of taste or smell*
  - *pink eye (conjunctivitis)*
  - *headache that's unusual or long lasting*
  - *digestive issues (nausea/vomiting, diarrhea, stomach pain)*
  - *muscle aches*
  - *extreme tiredness that is unusual (fatigue, lack of energy)*
  - *falling down often*
- Yes
  - No

58. **How worried are you about contracting COVID-19 while on the job?** (Select one answer)

- Extremely worried
- Moderately worried
- Somewhat worried
- Slightly worried
- Not at all worried

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

59. **How worried are you that people who live with you will get COVID-19 because of your work as PSW?** (Select one answer)

- Extremely worried
- Moderately worried
- Somewhat worried
- Slightly worried
- Not at all worried

60. **During the COVID-19 pandemic, did the following happen to you?** (Select all that apply)

- You were fired
- You were laid off
- Your hours were reduced significantly (e.g. more than 25%)?
- Your hours became uncertain
- Your pay was delayed
- You took a leave of absence - please specify reason: \_\_\_\_\_
- Other – please specify: \_\_\_\_\_
- Nothing impacted your work

61. **How much more or less concerned are you about your job security during the COVID-19 pandemic compared to before the pandemic?** (Select one answer)

- Much more concerned
- Slightly more concerned
- The same
- Slightly less concerned
- Much less concerned

62. **How much more difficult or easy is it to arrange for childcare during the pandemic compared to before the COVID-19 pandemic?** (Select one answer)

- Much more difficult
- Slightly more difficult
- The same
- Slightly more easy
- Much more easy
- Not applicable (do not have any child who requires childcare)

## SECTION F: DEMOGRAPHICS

This last section asks for your demographic information.

63. **How many years have you worked as PSW?** (Enter number of years)  
(Please provide your answer as a number, for example, 23 instead of twenty-three)

\_\_\_\_\_

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

64. **How many friends do you know who work as PSW in Greater Toronto Area, whom you have communicated with regularly in the past year (in-person/online/by texts)?** (Enter number of friends)

*(Please provide your answer as a number, for example, 23 instead of twenty-three)*

\_\_\_\_\_

65. **What is your age?** (Select one answer)

- 18-29 years old
- 30-39 years old
- 40-49 years old
- 50-64 years old
- 65 years and older

66. **How would you identify your gender identity?** (Select one answer)

- Female
- Male
- Gender non-binary
- Gender fluid
- Transgender
- Other, please specify: \_\_\_\_\_

67. **Were you born in Canada?** (Select one response)

- Yes
- No

68. **In our society, people are often described by their race or racial background. For example, some people are considered “White” or “Black” or “East/Southeast Asian,” etc. Which race category best describes you?** (Select all that apply)

- Black
- East Asian
- Indigenous (First Nations, Metis, Inuit)
- Latino
- Middle Eastern
- South Asian
- Southeast Asian
- White
- Another race category, please specify:

69. **What is your highest completed level of education?** (Select one answer)

- Some grade school
- Some high school
- High school
- Some College/University
- College degree, university degree, or post graduate degree

1  
2  
3 70. What city do you live in? \_\_\_\_\_  
4

5  
6 71. What is your current living situation? (Select one answer)

- 7  
8  
9  
10  
11  
12  
13  
14
- Renting a home
  - Living in own home
  - Living in an institution (group home, long term care, correctional facility, etc.)
  - Staying with friends and/or family
  - Living in a temporary shelter run by an agency
  - Homeless

15  
16 72. What is the size of your household? (Select one answer)

17 **“Household” includes yourself, spouse, children, and any other dependents who rely on your**  
18 **income. Roommate does not count.**

- 19  
20  
21  
22  
23  
24  
25  
26  
27
- 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7 or more

28  
29 73. In 2019 did your household income fall below \$Amount? (Select one response)

30  
31 *Note for reviewers: The specific amount will show on the online survey, depending on the number of*  
32 *people in the household. We are using Canadian LICO 2018 cutoff for population size >500,000 ( the most*  
33 *recent year available on Stats Canada website:*

34 <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1110024101>:  
35

Family Size	Low Income Cut-offs
1 person	21, 481
2 persons	26, 143
3 persons	32, 554
4 persons	40, 614
5 persons	46, 247
6 persons	51, 289
7 persons or more	56, 331

36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48 **FINAL COMMENTS**

49 74. Would you like to be contacted in the future to see if you would be interested in participating  
50 in another research study?

- 51  
52  
53  
54
- Yes
  - No

1  
2  
3 75. If there is anything else that you want to comment on, please feel free to write in the space  
4 below: \_\_\_\_\_  
5  
6  
7

8 **End of Survey**  
9

10 **Note:** You will be logged off and your responses will be recorded after you click "Submit".  
11  
12

13 **Thank you for spending the time to complete this survey. If you have any questions, please contact**  
14 **our research staff at [empowerprojectTO@smh.ca](mailto:empowerprojectTO@smh.ca)**  
15  
16  
17

18  
19  
20 **RETURN TO SURVEY**  
21

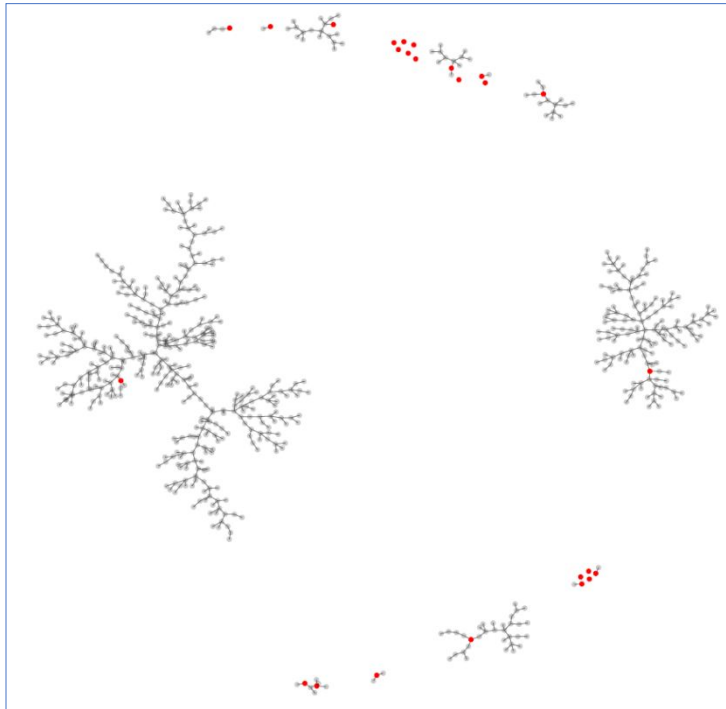
22 **SUBMIT**  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

Confidential

## Supplement 4. Overview of Recruitment Network

### A. EMPOWER study Respondent-Driven Sampling recruitment diagram

Red dots represent seeds and grey circles represent recruited participants. Some seeds were not able to recruit any new participants while a few deep well-connected networks proceeded through multiple waves of recruitment.



### B. Number of RDS recruits and waves per seed in the EMPOWER study

Seed ID*	Number of recruits (Including the seed in count)**	Number of Waves
A	1	1
B	1	1
C	5	3
D	1	1
E	1	1
F	1	1
G	12	5
H	1	1
I	2	2
J	15	5
K	1	1
M	1	1
N	1	1
O	2	2



Seed ID*	Number of recruits (Including the seed in count)**	Number of Waves
P	4	4
Q	1	1
R	3	2
S	3	2
T	33	9
U	402	34
V	2	2
X	2	2
Y	19	7
Z	144	17

\*Note that seeds “L” and “W” were lost to follow up and did not complete the survey. Both seeds were excluded from the study.

\*\* A total of 658 PSWs completed the survey; however, all seeds (n=24) were excluded in the aggregated RDS analysis, which yielded a total of 634 respondents included in the RDS analysis.

## Supplement 5. Results from the PEPSO Employment Precarity Index

Questions	Unweighted Counts	Unadjusted Estimates, %	RDS-II Adjusted Estimates <sup>a</sup> , %	RDS-II Adjusted 95% CI
<b>Which of the following best describes the job/contract that paid you the most in the last 12 months?"</b>				
<i>Non-permanent (casual, temporary, full-time) and self-employed</i>	399	62.9	65.3	57.4 - 73.1
<i>Permanent (full-time/part-time)</i>	225	35.5	34.7	26.9 - 42.6
Missing	10	1.6		
<b>In the last 12 months, what portion of your paid hours came from temporary employment agencies?"</b>				
<i>Half/Some/None</i>	330	52.1	51.1	42.7 - 59.5
<i>All/Most</i>	290	45.7	48.9	40.5 - 57.3
Missing	14	2.2		
<b>Does the following describe most of your employment relationship in the last 12 months?"</b>				
<b><i>"I had one employer, who I expected to be working for a year from now, who provided at least 30 hours of work a week, and who paid benefits (e.g., drug plans, visions, dental)"</i></b>				
<i>Yes</i>	252	39.8	36.9	29.3 - 44.6
<i>No</i>	369	58.2	63.1	55.4 - 70.7
Missing	13	2.1		
<b>Did you receive any other employment benefits from your employer(s) such as a drug plan, vision, dental, life insurance etc.?"</b>				
<i>Yes</i>	176	27.8	25.9	18.6 - 33.2
<i>No</i>	438	69.1	74.1	66.8 - 81.4
Missing	20	3.2		

Questions	Unweighted Counts	Unadjusted Estimates, %	RDS-II Adjusted Estimates <sup>a</sup> , %	RDS-II Adjusted 95% CI
<b>Did most of your employer(s) in the last 12 months provide a private retirement income plan such as a pension plan or a contribution to an RRSP (CPP does not count)?</b>				
<i>Yes</i>	226	35.7	32.8	25.2 - 40.5
<i>No</i>	386	60.9	67.2	59.5 - 74.8
Missing	22	3.5		
<b>Do you usually get paid if you miss a day's work</b>				
<i>Yes</i>	76	12.0	10.5	6.7 - 14.2
<i>No</i>	547	86.3	89.5	85.8 - 93.3
Missing	11	1.7		
<b>In the last 12 months, how much did your income vary from week to week?</b>				
<i>Some/Little/None</i>	457	72.1	71.2	62.3 - 80.2
<i>A lot/A great deal</i>	164	25.9	28.8	19.8 - 37.7
Missing	13	2.1		
<b>How likely did you think your total hours of paid employment be reduced in the next 6 months?</b>				
<i>Not likely at all</i>	74	11.7	12.9	7.8 - 18.1
<i>Not likely</i>	168	26.5	29.4	21.3 - 37.4
<i>Somewhat likely</i>	138	21.8	21.4	14.6 - 28.3
<i>Likely</i>	135	21.3	19.3	11.6 - 27.0
<i>Very likely</i>	98	15.5	17.0	11.2 - 22.7
Missing	21	3.3		
<b>In the last 12 months, how often did you work on an on-call basis?</b>				
<i>Half the time/Some of the time/</i> <i>Never</i>	417	65.8	65.1	56.9 - 73.3
<i>Most of the time/All the time</i>	205	32.3	34.9	26.7 - 43.1
Missing	12	1.9		

Questions	Unweighted Counts	Unadjusted Estimates, %	RDS-II Adjusted Estimates <sup>a</sup> , %	RDS-II Adjusted 95% CI
<b>In the last 12 months, how often did you know your work schedule at least one week in advance?</b>				
<i>Half the time/Some of the time/Never</i>	194	30.6	31.9	24.1 - 39.8
<i>Most of the time/All the time</i>	413	65.1	68.1	60.2 - 75.9
Missing	27	4.3		
<b>In the last 12 months, what portion of your employment income was received in cash?</b>				
<i>Less than half/None</i>	585	92.3	92.6	85.5 - 99.7
<i>About half/Most</i>	37	5.8	7.4	0.3 - 14.5
Missing	12	1.9		
<b>How likely would most of your employment be negatively affected (e.g., laid off, given less hours) if you raised a health and safety concern or raised an employment rights concern (e.g., harassment by clients or colleagues) with your employer(s)?</b>				
<i>Not likely/Not likely at all</i>	353	55.7	56.5	47.9 - 65.2
<i>Somewhat likely/Likely</i>	261	41.2	43.5	34.8 - 52.1
Missing	20	3.2		

<sup>a</sup>Missing data was not included in the distribution of percent estimates.

## Supplement 6. Results from the OHS Vulnerability Measure

Statements	Unweighted Counts	Unadjusted Estimates, %	RDS-II Adjusted Estimates <sup>a</sup> , %	RDS-II Adjusted 95% CI <sup>b</sup>
<b>“At my workplace...</b>				
<b>I feel free to voice concerns or make suggestions about workplace health and safety at my job.”</b>				
<i>Strongly Agree</i>	245	38.6	41.4	33.2 - 49.5
<i>Agree</i>	295	46.5	44.0	35.9 - 52.1
<i>Disagree</i>	55	8.7	9.9	5.2 - 14.7
<i>Strongly Disagree</i>	19	3	4.7	0.0 - 11.9
<b>If I notice a workplace hazard, I would point it out to management.”</b>				
<i>Strongly Agree</i>	333	52.5	58.6	50.1 - 67.1
<i>Agree</i>	254	40.1	37.7	29.8 - 45.7
<i>Disagree</i>	15	2.4	3.4	0.0 - 9.2
<i>Strongly Disagree</i>	3	0.5	0.3	0.1 - 0.4
<b>I know that I can stop work if I think something is unsafe and management will not give me a hard time.”</b>				
<i>Strongly Agree</i>	249	39.3	40.0	31.6 - 48.3
<i>Agree</i>	256	40.4	41.3	32.4 - 50.2
<i>Disagree</i>	78	12.3	15.7	8.7 - 22.7
<i>Strongly Disagree</i>	18	2.8	3.1	1.4 - 4.7
<b>If my work environment was unsafe, I would not say anything, and hope that the situation eventually improves.”</b>				
<i>Strongly Agree</i>	32	5.1	4.8	0.0 - 10.5
<i>Agree</i>	62	9.8	11.3	2.9 - 19.8
<i>Disagree</i>	227	35.8	36.5	29.2 - 43.8
<i>Strongly Disagree</i>	276	43.5	47.4	38.7 - 56.1
<b>I have enough time to complete my work tasks safely.”</b>				
<i>Strongly Agree</i>	180	28.4	30.20	22.2 - 38.2
<i>Agree</i>	314	49.5	53.50	44.7 - 62.2
<i>Disagree</i>	73	11.5	13.10	7.8 - 18.3
<i>Strongly Disagree</i>	27	4.3	3.20	2.1 - 4.4

<sup>a</sup>Missing data was not included in the distribution of percent estimates.

<sup>b</sup>Negative values were truncated at 0.0.

## Supplement 7. Results from the PHQ-2

Questions	Unweighted Counts	Unadjusted Estimates, %	RDS-II Adjusted Estimates <sup>a</sup> , %	RDS-II Adjusted 95% CI
<b>Over the last 2 weeks, how often have you been bothered by the following problems?</b>				
<b>"Little interest or pleasure in doing things"</b>				
<i>Not at all</i>	279	44.0	45.0	36.6 - 53.4
<i>Several days</i>	193	30.4	34.1	25.1 - 43.2
<i>More than half the days</i>	84	13.3	14.3	7.7 - 20.8
<i>Nearly every day</i>	43	6.8	6.6	2.5 - 10.7
Missing	35	5.5		
<b>"Feeling down, depressed or hopeless"</b>				
<i>Not at all</i>	319	50.3	53.3	44.5 - 62.2
<i>Several days</i>	177	27.9	32.4	23.5 - 41.2
<i>More than half the days</i>	65	10.3	10.4	6.5 - 14.4
<i>Nearly every day</i>	32	5.1	3.8	1.4 - 6.2
Missing	41	6.5		

<sup>a</sup>Missing data was not included in the distribution of percent estimates.