

# Office Home Care Workers' Occupational Health: Associations with Workplace Flexibility and Worker Insecurity

Santé au travail chez les employés de bureau dans les organismes de soins à domicile : liens avec la flexibilité en milieu de travail et la précarité d'emploi



by ISIK U. ZEYTIÑOGLU, PHD  
*Professor, Management and Industrial Relations  
DeGroot School of Business  
McMaster University  
Hamilton, ON*

MARGARET DENTON, PHD  
*Director, McMaster Centre for Gerontological Studies  
Professor, Department of Health, Aging and Society & Department of Sociology  
McMaster University  
Hamilton, ON*

SHARON DAVIES, MA  
*Former Research Associate, McMaster Centre for Gerontological Studies  
McMaster University  
Hamilton, ON*

JENNIFER MILLEN PLENDERLEITH, MSC

*Research Coordinator, McMaster Centre for Gerontological Studies  
McMaster University  
Hamilton, ON*

## Abstract

Office home care workers provide support to visiting staff, although their work tends to be invisible in many respects. This paper focuses on managers, supervisors, coordinators, case managers and office administrative staff in home care. We examine the effects of workplace flexibility and worker insecurity on office home care workers' occupational health, particularly their self-reported stress and musculoskeletal disorders. Data come from our survey of 300 home care office staff in a mid-sized city in Ontario. Results show that workers' perceptions of insecurity are positively associated with musculoskeletal disorders but not workplace flexibility measures. We recommend that managers and other decision-makers in the home care field pay attention to the perceptions of workers' insecurity in initiating workplace flexibility measures.

## Résumé

Les employés de bureau des organismes de soins à domicile offrent un soutien au personnel qui effectue les visites. Leur travail, cependant, passe souvent inaperçu. Le présent article porte sur les gestionnaires, les superviseurs, les coordonnateurs, les gestionnaires de cas et les employés de soutien administratif dans les organismes de soins à domicile. Nous avons examiné les effets de la flexibilité en milieu de travail et de la précarité d'emploi sur la santé au travail des employés de bureau, plus particulièrement le stress et les troubles musculosquelettiques signalés par eux-mêmes. Les données proviennent d'un sondage que nous avons effectué auprès de 300 employés de bureau des organismes de soins à domicile dans une ville ontarienne de taille moyenne. Les résultats montrent que les troubles musculosquelettiques sont directement associés à la perception en matière de précarité d'emploi, mais pas aux mesures de flexibilité en milieu de travail. Nous recommandons aux gestionnaires et autres décideurs du milieu des soins à domicile, qui veulent mettre en place des mesures de flexibilité en milieu de travail, de prêter attention aux perceptions des travailleurs.

---

**F**LEXIBLE AND INSECURE EMPLOYMENT ARE CHARACTERISTIC OF THE HOME care sector. The Canadian Home Care Human Resources Study (2003) reports a large percentage of part-time and casual workers among home support workers, home care nurses and therapists. There are, however, no similar figures available for

office home care workers. Although these people provide support to visiting care providers, their work tends to be invisible in many respects. Recent federal-level consultations (Dault et al. 2004), policy reports (KoeHoorn et al. 2002), national-level roundtable discussions (CHSRF 2006) and policy meetings (HCC 2005) all report concerns about unhealthy work environments in healthcare and recommend studies to contribute to knowledge and provide information to policy makers on this important issue.

Musculoskeletal disorders are now a major occupational health problem for most workers, including home care workers (HCHSA 2003). Between 1996 and 2004 in Ontario, the province where this study took place, musculoskeletal disorders accounted for 42% of all lost-time claims and costs and 50% of all lost-time days (OHSCO 2007). Home care workers report high levels of stress (Denton et al. 2002), and their stress has consequences for musculoskeletal disorders (Kuorinka et al. 1995; Messing 1997; Zeytinoglu et al. 2000).

This paper focuses on stress and self-reported musculoskeletal disorders as occupational health problems of managers, supervisors, coordinators, case managers and office administrative staff in the home care sector. It examines the effects of workplace flexibility and worker insecurity on stress and musculoskeletal disorders. Stress is examined as a short-term consequence of workplace flexibility and worker insecurity, and is included as a mediating variable in our analysis of musculoskeletal disorders. We examine musculoskeletal disorders as the longer-term consequence of workplace flexibility and worker insecurity.

The topic of this paper and its focus are important and timely for several reasons. First, studies focusing on office home care workers' occupational health are rare. Second, recent literature reviews show that the association between workplace flexibility and worker insecurity variables and occupational health are not entirely clear (Quinlan et al, 2001; Virtanen et al. 2005). Our study clarifies the relationships among these factors. Third, although there are a variety of workplace flexibility strategies and resultant worker insecurities, most research focuses on a single type of workplace flexibility or worker insecurity (Burchell 2002). This study examines a large number of flexibility and insecurity factors. Fourth, this study took place at a time when home care was being restructured to a competitive, market-based model. There has been little research on the impact of this change on home care workers.

## **Workplace Flexibility, Worker Insecurity and Their Associations with Stress and Musculoskeletal Disorders**

Conceptual models of musculoskeletal disorders (Kuorinka et al. 1995; Sauter and Swanson 1996) and the rich empirical research on the topic (Putz-Anderson et al. 1997; EASHW 2003) show a number of work-related physical, psycho-social and

individual factors such as heavy workload, repetitive work, hazards at work, lack of support at work, work injuries and stress that may lead to musculoskeletal disorders. This study builds upon the existing research and integrates employment contract factors of workplace flexibility and worker insecurity with established models of musculoskeletal disorders.

Flexibility can be achieved through hiring workers into non-permanent contracts, for part-time or casual hours, or hiring on call, in split shifts or in hourly pay with variable hours. While employers use workplace flexibility policies to achieve flexibility, workers experience them as insecure working conditions. Worker insecurity is a multi-dimensional concept, incorporating arbitrary dismissal or layoff; unregulated work environments; unstable or contingency-based pay; fragmented, shortened or irregular hours of work; and perceived labour market insecurities due to labour surpluses (Standing 1997). In addition, workplace flexibility and worker insecurity can be conceptualized as "objective" and "subjective" phenomena (see the discussion on job insecurity by De Witte and Näswall 2003). Objective phenomena refer to such characteristics of employment contracts as hours of employment. The subjective components include workers' perceptions of insecurity, for which there is no clear definition; most workers refer to a wider concept of insecurity (Burchell 2002). We expect workplace flexibility and worker insecurity to be associated with increased symptoms of stress and musculoskeletal disorders. We also expect stress to act as a mediating variable among flexibility, insecurity and musculoskeletal disorders.

## Methodology

### Sample and data collection process

The population of this study comprised all home care workers (N=1,949) in 11 organizations in a mid-sized city in Ontario. Data were collected using a self-administered questionnaire mailed to all workers in 2002. Those who had not returned their questionnaires by a specified date were mailed first a reminder card, and later a second letter and copy of the questionnaire. A total of 1,311 home care workers (67% response rate) responded to the survey, excluding those who could not be reached.

The sample for this paper was 300 office staff. Prior to collecting data, there was no information on the number of workers according to occupation; we learned of their occupation only when they responded to the survey. Thus, the response rate refers to the full sample.

### Instrument and measures

A self-completion questionnaire on health and work life of home care workers was used in this study. The dependent variable was *self-reported musculoskeletal disorders*.

A musculoskeletal disorder scale (Zeytinoglu et al. 2000, as adapted from Kuorinka et al. 1987) was used. A sample question was: "Please indicate how often you had this in the past few months: pain or discomfort in your neck or shoulder." The responses were coded on a five-point Likert scale from 1 ("none of the time") to 5 ("all of the time"). The scale was developed by summing the scores of seven items, with higher scores representing more extensive musculoskeletal disorders. The descriptive statistics of the scale, including Cronbach's alpha ( $\alpha$ ) to determine the reliability of the scale items, appear in Table 1.

Independent variables were the objective measures of *workplace flexibility* and the subjective measures of *worker insecurity*. The objective measures included whether the employment contract was permanent; lost job when employer lost contract; work was full-time, part-time or casual hours; involuntary hours; salaried, paid per visit or hourly pay with variable hours (all coded as 1=yes, 0=no); and work on call, work split shifts (coded as "1=none of the time" to "5=all of the time"). The subjective measures of worker insecurity included perceived employment insecurity and labour market insecurity factors.

The employment insecurity scale was developed from Cameron and colleagues (1994) and was a summative measure consisting of six items: "I am presently safe from dismissal at this agency" (reversed in coding), "I feel I am likely to be laid off at this agency," "I am worried about my future with this agency," "I feel uneasy about the security in my present job," "I am worried about my job security" and "I am concerned about losing my job due to overall changes in the long-term care sector." Responses were coded as "1=strongly disagree" to "5=strongly agree." Confirmatory factor analysis (principal components factor analysis) with "varimax" rotation method was used to identify items composing the scale. Descriptive statistics of the scale are included in Table 1. The perceived labour market insecurity item was worded, "If I lose my job here I will likely find another job in my profession" (coded as "1=strongly disagree" to "5=strongly agree" and reverse coded).

Stress was first examined as a dependent variable and then used as the mediating variable in the musculoskeletal disorders analysis. Stress was measured using the symptoms of the stress scale described by Denton and colleagues (2002). A sample scale item was: "Not able to sleep through the night," coded on a Likert scale from 1 ("none of the time") to 5 ("all of the time"). It was developed by summing the scores of 14 indicators of stress. Confirmatory factor analysis was conducted on scale items.

Control variables were those identified in research as determinants of stress and musculoskeletal disorders including studies on home care workers (Denton et al. 2002; Zeytinoglu et al. 2000). The physical and psycho-social work environment factors were the "heavy workload" scale and "job is repetitious" item, and the psycho-social work environment factors were "organizational support" and "peer support"

## Office Home Care Workers' Occupational Health

**TABLE 1.** Office workers (N=300) – descriptive statistics (means, standard deviations and scale reliabilities [ $\alpha$ ])

Variable	Mean (SD) or %	Min–Max Value (Scale $\alpha$ )
<b>Dependent variable:</b> Musculoskeletal disorders	12.97 (4.50)	7–35 (0.78)
<b>Independent variables:</b>		
<b>Objective flexibility factors:</b>		
Non-permanent contract	17%	N/A
Lost job when employer lost contract	0.7%	N/A
Full-time hours	83%	N/A
Part-time hours	13%	N/A
Casual hours	4%	N/A
Involuntary hours	30%	N/A
Work on call	1.25 (0.56)	1–5
Work split shifts	1.02 (0.18)	1–5
Salaried	68%	N/A
Paid per visit	0.7%	N/A
Hourly pay with variable hours	30%	N/A
<b>Subjective (perceived) insecurity factors:</b>		
Employment insecurity	17.88 (5.76)	6–30 (0.90)
Labour market insecurity	2.20 (0.99)	1–5
<b>Mediating variable: Stress</b>	31.87 (7.66)	14–70 (0.86)
<b>Control variables:</b>		
Heavy workload	25.13 (5.62)	7–35 (0.91)
Job is repetitious	2.71 (1.07)	1–5
Organizational support	30.65 (8.34)	9–45 (0.85)
Peer support	16.18 (2.73)	4–20 (0.84)
Work injuries in past year	7%	N/A
Age	44 (9)	N/A
Job title: Manager, supervisor, coordinator	36%	N/A
Job title: Office staff (other)	36%	N/A
Job title: Case manager	28%	N/A

scales (summative Likert scale with each scale item coded as 1=strongly disagree to 5=strongly agree). Individual factors included work injuries in the past year (coded as 1=yes, 0=no), age (measured by years of age) and job title (manager, supervisor or coordinator group, office staff and case managers; each as 1=yes, 0=no). All of these factors are explained in detail elsewhere (Denton et al. 2002; Zeytinoglu et al. 2000).

## Analysis

Descriptive statistics, bivariate regression and hierarchical ordinary least square (OLS) regression were conducted. The equal interval assumption was used for Likert-scale measurement of the dependent variable. Two methods were used to reduce missing data in the analyses. With respect to each item in the scales, missing values were coded to the mean; for dichotomous variables, missing values were coded to 0. In most cases, missing values comprised less than 5% of the responses.

In the hierarchical regression, first the control variables were entered. These were followed by the flexibility and insecurity measures that were found to be significant in the bivariate analysis. In the full model for musculoskeletal disorders, stress was included as the mediating variable and was tested following Baron and Kenny's (1986) method. We provided adjusted  $R^2$  to show the variance explained by factors included in each model, and change in  $R^2$  to show the additional variance explained by including new variables. We conducted a separate analysis excluding those subjects with diagnosed musculoskeletal disorders. Their results were substantially similar to the full sample.

## Demographic characteristics of the respondents

The majority of home care workers in this study were female (94%), also characteristic of the industry. The average age was 44 years. About one in five (19%) were immigrants. Most respondents were married or living with a partner (77%), and the rest were widowed, divorced, separated or never married. A large proportion had a relatively high level of education: 44% had postgraduate or bachelor's degrees, 43% had some university courses or a college degree or diploma and the rest (10%) had some college courses, a high school diploma or lower. In terms of occupational distribution, 36% were managers, supervisors or coordinators, 36% were support staff and 28% were case managers.

## Results

There was a moderate level of musculoskeletal disorders among office workers (see Table 1). In terms of workplace flexibility factors, 17% held non-permanent contracts; the percentage of workers who previously lost their job when the employer lost the

contract was small; a substantial majority of the workers were full-time, with just a small percentage in part-time or casual hours. Close to one-third of employees worked involuntary hours, and a small percentage worked on call or split shifts. A good majority were salaried, but about one in three earned hourly pay with variable hours. A moderate level of employment insecurity and labour market insecurity was perceived by fewer than one in ten. Stress was high, and symptoms were common everyday experiences for workers.

Bivariate regression coefficients are presented in Tables 2 and 3. None of the workplace flexibility measures were significantly associated with stress, but work on call was significantly and negatively associated with musculoskeletal disorders (although at a low level of significance). The subjective (perceived) employment insecurity was significantly and positively associated with stress, and labour market insecurity was significantly and positively associated with stress and musculoskeletal disorders.

Turning to multivariate regression results, as presented in Table 2, controlling for other factors, only employment insecurity was significantly and positively associated with stress. Magnitudes of standardized coefficients (beta) of these variables show that heavy workload, followed by employment insecurity, were significant contributors to stress. The model explains about 30% of the variance in office home care workers' stress. As for the musculoskeletal disorders results, controlling for other factors, labour market insecurity was significantly and positively associated with musculoskeletal disorders. All other flexibility and insecurity factors were not significant. The model explains 16% of the variance in office home care workers' musculoskeletal disorders.

In the full model, controlling for other factors, stress was significantly and positively associated with office workers' musculoskeletal disorders. The magnitude of the standardized coefficients show that stress was the most important factor, followed by perceived labour market insecurity, in contributing to office home care workers' musculoskeletal disorders. The full model, including stress, explains 28% of the variance in office home care workers' musculoskeletal disorders, with 12% of that attributed to stress. The results in Table 2, taken together with those in Table 3, show that controlling for other factors, employment insecurity was fully mediated through stress in its association with musculoskeletal disorders.

## Discussion and Implications

Based on the literature review, we expected to find a positive association between objective workplace flexibilities, stress and musculoskeletal disorders. However, results did not show such associations for office home care workers. There are several possible reasons for this finding. A majority of office home care workers are not directly affected by workplace flexibilities, and thus results may not show associations. It is also possible that some workers accept workplace flexibility measures as an expected



**TABLE 2.** Stress as a short-term consequence of workplace flexibility and worker insecurity (bivariate regressions and hierarchical OLS regressions)

Variables	Bivariate regression coefficients	Full regression model
	B (SE)	B (SE)
Constant		26.692 (3.678)***
<b>Independent variables:</b>		
<b>Objective flexibility</b>		
Permanent contract	2.056 (1.183)	
Lost job when employer lost contract	2.649 (5.442)	
Full-time hours (ref)	1.601 (1.176)	
Part-time hours	-1.300 (1.315)	
Casual hours	-3.754 (2.347)	
Involuntary hours	1.026 (0.962)	
Work on call	-0.453 (0.428)	
Work split shifts	-0.149 (1.096)	
Salaried	1.415 (0.949)	
Paid per visit	0.132 (5.444)	
Hourly pay with variable hours	-1.678 (0.959)	
<b>Subjective (perceived) insecurity</b>		
Employment insecurity	0.373 (0.074)***	0.307 (0.073) ***
Labour market insecurity	1.014 (0.445)*	0.203 (0.387)
<b>Control variables</b>		
Heavy workload	0.501 (0.073) ***	0.352 (0.072)***
Job is repetitious	0.404 (0.414)	
Organizational support	-0.380 (0.048) ***	-0.149 (0.056)**
Peer support	-0.482 (0.160) **	-0.369 (0.144)*
Work injuries in past year	6.077 (1.663)***	3.596 (1.461)*
Age	0.010 (0.048)	
Job title: Manager, supervisor, coordinator	-1.869 (0.917)*	-0.228 (0.910)
Job title: Office staff (ref)	-1.538 (0.921)	
Job title: Case manager	3.858 (0.957)***	2.607 (1.042)*
Adj. R <sup>2</sup>		0.296
N	300	300

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

## Office Home Care Workers' Occupational Health

**TABLE 3.** Musculoskeletal disorders as a longer-term consequence of workplace flexibility and worker insecurity (bivariate regressions and hierarchical OLS regressions)

Variables	Bivariate regression coefficients	Regression with control & independent variables	Full model with stress included
	B (SE)	B (SE)	
Constant		5.325 (2.244)*	-5.38 (2.228)
<b>Independent variable: Objective flexibility</b>			
Permanent contract	-0.319 (0.698)		
Lost job when employer lost contract	4.053 (3.187)		
Full-time hours (ref)	0.752 (0.691)		
Part-time hours	-0.888 (0.772)		
Casual hours	-1.106 (1.382)		
Involuntary hours	1.040 (0.563)		
Work on call	-0.584 (0.249)*	-0.299 (0.265)	-0.289 (0.245)
Work split shifts	-0.086 (0.643)		
Salaried	-0.251 (0.559)		
Paid per visit	2.542 (3.193)		
Hourly pay with variable hours	0.113 (0.566)		
<b>Subjective (perceived) insecurity</b>			
Employment insecurity	0.093 (0.045)	0.098 (0.047)	0.025 (0.045)
Labour market insecurity	0.798 (0.259)**	0.632 (0.250)*	0.586 (0.231)*
<b>Control variables</b>			
Heavy workload	0.149 (0.046)**	0.100 (0.047)*	0.016 (0.045)
Job is repetitious	0.912 (0.237)***	0.673 (0.230)**	0.769 (0.213)***
Organizational support	-0.085 (0.031)**	0.025 (0.034)	0.073 (0.032)*
Peer support	0.092 (0.095)		
Work injuries in past year	4.24 (0.967)***	3.186 (0.942)**	2.213 (0.881)*
Age	0.037 (0.028)		
Job title: Manager, supervisor, coordinator	-1.917 (0.530)***	-1.301 (0.633)*	-1.239 (0.585)*
Job title: Office staff (ref)	0.474 (0.542)		

TABLE 3. Continued

Job title: Case manager	1.640 (0.569)**	0.389 (0.664)	-0.165 (0.618)
Stress	0.265 (0.030)***		0.247 (0.034)***
Adj. $R^2$		0.155	0.279
$R^2$		0.180	0.303
Change in $R^2$			0.123
N	300	300	300

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

employment condition in this sector, and thus results may not show significant associations with stress and musculoskeletal disorders. Further, some workers may actually choose to work in flexible employment conditions to suit their lifestyle; because this is their choice, it does not contribute to stress or musculoskeletal disorders.

For the subjective insecurity factors, workers' perception of insecurity contributed to stress, and stress, in turn, affects musculoskeletal disorders. The fear that they could easily be replaced by other workers in the field (i.e., perceived labour market insecurity) also contributes to musculoskeletal disorders.

## Limitations

There are several limitations of our study. First, because home care falls under provincial jurisdiction, home care services delivery and organization vary from province to province. Even within provinces, home care services delivery can vary regionally (Wilson et al. 2007). Our research is therefore limited in that it is a cross-sectional study of one city in Ontario, and findings are therefore not generalizable to the larger population of home care workers. Future research would benefit from comparison studies with other areas of Ontario and other Canadian provinces.

Second, it is possible that those with higher levels of work-related health problems were more likely to respond to our survey because they were more interested in the topic. However, biases seem unlikely given the high response rate. Third, some might argue that this study is limited by the self-reported nature of musculoskeletal disorders and stress measures. Given our objective of focusing on working conditions rather than biomechanics in the workplace, self-reported measures should be acceptable.

## Conclusion

We can conclude from this study that objective workplace flexibilities are not the most significant determinant of occupational health; rather, how workers feel about their

employment conditions is significant. While some employees may not be concerned, others are very concerned with their job and labour market security. This finding is important for understanding why workers in similar working conditions report different outcomes in terms of stress and musculoskeletal disorders.

In order to prevent occupational health problems, we recommend that policy makers address the issue of employment and labour market insecurity in the home care field. Future research is recommended to examine the consequences of workplace flexibility and worker insecurity for the individuals, their workplaces and society as a whole.

#### ACKNOWLEDGEMENTS

This study was funded by the Canadian Health Services Research Foundation, the Canadian Institutes of Health Research, the Workplace Safety and Insurance Board of Ontario and the Program for Research on Social and Economic Dimensions of an Aging Population (SEDAP II) grants. The authors wish to thank Linda Boos and Bianca Seaton for their assistance. We also would like to thank the agencies, unions and home healthcare workers who participated in this research and shared their experiences with us.

Correspondence may be directed to: Dr. Isik U. Zeytinoglu, Human Resources and Management Area, DeGroot School of Business, McMaster University, 1280 Main Street West, Hamilton, ON L8S 4M4; e-mail: zeytino@mcmaster.ca.

#### REFERENCES

- Baron, R.M. and D.A. Kenny. 1986. "The Moderator–Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations." *Journal of Personality and Social Psychology* 51: 1173–82.
- Burchell, B. 2002. "The Prevalence and Redistribution of Job Insecurity and Work Intensification." In B. Burchell, D. Lapido and F. Wilkinson, eds., *Job Insecurity and Work Intensification* (pp. 61–76). London, UK: Routledge.
- Cameron, S., M. Horsburgh and M. Armstrong-Stassen. 1994. *Effects of Downsizing on RNs and RNAs in Community Hospitals*. Hamilton, ON: Nursing Effectiveness, Utilization and Outcomes Research Unit.
- Canadian Health Services Research Foundation (CHSRF). 2006 (September). *Looking Forward, Working Together: Priorities for Nursing Leadership in Canada*. Retrieved March 27, 2009. <[http://www.chsrf.ca/research\\_themes/pdf/NLOP\\_e.pdf](http://www.chsrf.ca/research_themes/pdf/NLOP_e.pdf)>.
- Canadian Home Care Human Resources Study. 2003. *Synthesis Report*. Retrieved March 27, 2009. <<http://www.cacc-acssc.com/english/pdf/homecareresources>>.
- Dault, M., J. Lomas and M. Barer (on behalf of the Listening for Direction II partners). 2004. *Listening for Direction II: National Consultation on Health Services Policy Issues for 2004–2007. Final*

Report. Ottawa: Canadian Health Services Research Foundation and Institute for Health Services and Policy Research, in partnership with Canadian Institute for Health Information. Retrieved March 27, 2009. <[http://www.chsrf.ca/other\\_documents/listening/pdf/LfD\\_II\\_Final\\_Report\\_e.pdf](http://www.chsrf.ca/other_documents/listening/pdf/LfD_II_Final_Report_e.pdf)>.

Denton, M., I.U. Zeytinoglu, S. Davies and J. Lian. 2002. "Job Stress and Job Dissatisfaction of Home Care Workers in the Context of Health Care Restructuring." *International Journal of Health Services* 32: 327–57.

De Witte, H. and K. Näswall. 2003. "'Objective' vs 'Subjective' Job Insecurity: Consequences of Temporary Work for Job Satisfaction and Organizational Commitment in Four European Countries." *Economic and Industrial Democracy* 24: 149–88.

European Agency for Safety and Health at Work (EASHW). 2003. *Gender Issues in Safety and Health at Work: A Review*. Luxembourg: Office for Official Publications of the European Communities.

Health Care Health and Safety Association (HCHSA). 2003. "Health and Safety in the Home Care Environment." Retrieved March 31, 2009. <[http://www.wsib.on.ca/wsib/wsibsite.nsf/LookupFiles/DownloadableFileHealthandSafetyintheHomeCareEnvironment/\\$File/HomeCare.pdf](http://www.wsib.on.ca/wsib/wsibsite.nsf/LookupFiles/DownloadableFileHealthandSafetyintheHomeCareEnvironment/$File/HomeCare.pdf)>.

Health Council of Canada (HCC). 2005. *Modernizing the Management of Health Human Resources in Canada: Identifying Areas for Accelerated Change*. Retrieved March 27, 2009. <[http://health-councilcanada.ca/docs/papers/2005/HCC\\_HHRsummit\\_2005\\_eng.pdf](http://health-councilcanada.ca/docs/papers/2005/HCC_HHRsummit_2005_eng.pdf)>.

Koehoorn, M., G. Lowe, K. Rondeau, G. Schellenberg and T. Wagar. 2002. *Creating High-Quality Health Care Workplaces*. Ottawa: Canadian Policy Research Network.

Kuorinka, I., I. Forcier, M. Hagberg, B. Silverstein, R. Wells, M.J. Smith, H.W. Hendrick, P. Carayon and M. Perusse. 1995. *Work-Related Musculoskeletal Disorders (WMSD): A Reference Book for Prevention*. London: Taylor and Francis.

Kuorinka, I., B. Jonsson, A. Kilborn, H. Vintergerg, F. Biering-Sorensen, G. Anderson and K. Jorgensen. 1987. "Standardised Nordic Questionnaires for the Analysis of Musculoskeletal Symptoms." *Applied Ergonomics* 18: 233–37.

Messing, K. 1997. "Women's Occupational Health: A Critical Review and Discussion of Current Issues." *Women and Health* 25: 39–68.

Occupational Health and Safety Council of Ontario (OHSCO). 2007. *Resource Manual for the MSD Prevention Guidelines for Ontario. Musculoskeletal Disorders Prevention Series, Part 2*. Retrieved March 27, 2009. <<http://www.iwh.on.ca/msd-tool-kit>>.

Putz-Anderson, V., B. Bernard, S.E. Burt, L.L. Cole, C. Fairfield-Estill, L.J. Fine, K.A. Grant, C. Gjessing et al. 1997. *Musculoskeletal Disorders and Workplace Factors: A Critical Review of Epidemiologic Evidence for Work-Related Musculoskeletal Disorders of the Neck, Upper Extremity, and Low-Back*. Cincinnati: US Department of Health and Human Services.

Quinlan, M., C. Mayhew and P. Bohle. 2001. "The Global Expansion of Precarious Employment, Work Disorganization, and Consequences for Occupational Health: A Review of Recent Research." *International Journal of Health Services* 31: 335–414.

Sauter, S.L. and N.G. Swanson. 1996. "An Ecological Model of Musculoskeletal Disorders in Office Work." In S.D. Moon and S.L. Sauter, eds., *Beyond Biomechanics: Psychosocial Aspects of Musculoskeletal Disorders in Office Work* (pp. 3–18). London, UK: Taylor and Francis.

Standing, G. 1997. "Globalization, Labour Flexibility and Insecurity: The Era of Market Regulation." *European Journal of Industrial Relations* 3: 7–37.

Virtanen, M., M. Kivimäki, M. Joensuu, P. Virtanen, M. Elovainino and J. Vahtera. 2005. "Temporary Employment and Health: A Review." *International Journal of Epidemiology* 34: 610–22.

Wilson, D., C. Truman, J. Haug, S. Sheps and S. Birch. 2007. "Homecare Evolution in Alberta: How Have Palliative Clients Fared?" *Healthcare Policy* 2(4): 58–69.

Zeytinoglu, I.U., M. Denton, S. Webb and J. Lian. 2000. "Self-Reported Musculoskeletal Disorders among Visiting and Office Home Care Workers." *Women and Health* 31: 1–35.

“I never teach my pupils; I only attempt to provide the conditions in which they can learn.”

- Albert Einstein

Albert Einstein is an honorary member of the  
HealthcareBoard, a Longwoods learning initiative  
[www.longwoods.com](http://www.longwoods.com)