The Effects of Employer-Provided Massage Therapy on Job Satisfaction, Workplace Stress, and Pain and Discomfort

■ *Chris Back, BSc, CCPE* ■ *Helen Tam, BSc (OT)* ■ *Elaine Lee, BSc (Kin)* ■ *Bodhi Haraldsson, RMT*

Long-term care staff have high levels of musculoskeletal concerns. This research provided a pilot program to evaluate the efficacy of employer-funded on-site massage therapy on job satisfaction, workplace stress, pain, and discomfort. Twenty-minute massage therapy sessions were provided. Evaluation demonstrated possible improvements in job satisfaction, with initial benefits in pain severity, and the greatest benefit for individuals with preexisting symptoms. A long-term effect was not demonstrated. **KEY WORDS:** *massage therapy*, *musculoskeletal injury*, *workplace stress* *Holist Nurs Pract* 2009;23(1):19–31

THE HEALTHCARE PROFESSION

Healthcare is the second largest industry in Canada[1] and has a high incidence of occupational injury and illness. Although healthcare workers are "committed to promoting health through treatment and care for the sick and injured, health care workers, ironically, confront perhaps a greater range of significant workplace hazards than workers in any other sector."[2] Healthcare jobs often involve potential exposure to airborne and blood-borne infectious disease, sharps injuries,[3,*] and other dangers; many healthcare jobs can also be physically demanding and mentally stressful.[2] Moreover, healthcare workers with occupational or nonoccupational illness or injury may face unique challenges because of societal misperceptions that qualified healthcare providers must themselves be free from any physical or mental impairment.[4]

The quality of health and healthcare services begins with the frontline healthcare workers—for example, the nurses, physicians, physiotherapists, laboratory technicians, nurse aide, or home health worker and so on.

These professionals are often the first and most frequent point of contact for patients and clients. In fact, for many patients and clients, the frontline healthcare worker is the face of the entire organization for both institutional and community health services.

JOB ACTIVITIES AND WORK DEMANDS

In many respects, the healthcare profession differs from other types of work. The physical workload, and especially handling and lifting of patients, often requires close contact with people in need of medical and emotional help and support.[5,6] In addition, healthcare work can induce high organizational stress because healthcare workers often face conflicting demands from their supervisors and patients. Additional factors that can lead to stress in healthcare workers include close contact with human suffering and death, job role ambiguity, staff shortage, and the requirements of shift work.

HIGH INCIDENTS OF MUSCULOSKELETAL INJURY

Healthcare personnel had the highest rate of back-related worker's compensation claims according to WorkSafeBC. Despite several decades of research, work-related musculoskeletal injuries (MSI) continue

Author Affiliations: Occupational Health and Safety Agency for Healthcare in British Columbia (Messrs Back and Lee); Vancouver Coastal Health (Ms Tam); Massage Therapist Association of British Columbia (Mr Haraldsson), Vancouver, British Columbia, Canada.

Corresponding Author: Chris Back, BSC, CCPE, Occupational Health and Safety Agency for Healthcare in British Columbia, 1195 W Broadway, Vancouver, BC, Canada V6H 3X5 (chrisb@ohsah.bc.ca).

*Injuries from needles and other sharp devices used in healthcare and laboratory settings are associated with the occupational transmission of various pathogens.

to represent an unsolved problem. It is well established in the existing literature that musculoskeletal problems have multifactorial etiology.[7] Also, there is an extensive body of research on the work-related physical risk factors such as working postures and manual lifting and handling, as well as on the role of nonpsychological individual factors (age, gender, physical exercise) in musculoskeletal pain. There is also an increasing body of evidence that the psychosocial factors play an important role in the development of MSI.

Musculoskeletal injury (MSI) prevention programs in healthcare have primarily focused on education, ergonomic training, and engineering controls. However, the rate of MSIs in this industry continues to be of very high incidence. High work demand, small recovery time, fatigue, and escalated pressure can all lead to MSI and low job satisfaction.

MASSAGE THERAPY

The art and science of massage has a time-honored history in western medicine dating back to ancient Greece.[8] Although there are different types of massage, including aromatherapy, reflexology, sports massage, and shiatsu, Swedish (or classic) massage remains the most commonly practiced.[9] Classic types of massage includes effleurage (stroking), pétrissage (compression), tapotement (percussion), vibration, and friction.[9]

More and more, massage therapy is being utilized to relieve health problems.[10] In his meta-analysis of massage therapy effects, Moyer reports that a single applications of massage therapy reduced state anxiety, blood pressure, and heart rate but not negative mood, immediate assessment of pain, and cortisol level. Multiple applications reduced delayed assessment of pain. Reductions of trait anxiety and depression were massage therapy's largest effects, with a course of treatment providing benefits similar in magnitude to those of psychotherapy.

Massage therapy is considered a form of medical treatment in several countries where it is covered by national health insurance, including China, Japan, Russia, and West Germany. On the European continent, massage has been a routine form of therapy for acute and chronic lower back pain for many decades.[11] In Canada, massage therapy still is considered an alternative therapy. Nonetheless, its popularity seems to be growing.

Massage therapy has been described as having 4 principal goals of treatment: (1) to promote relaxation and wellness (relaxation massage); (2) to address clinical concerns (clinical massage); (3) to enhance posture, movement, and body awareness (movement reeducation); and (4) to balance and "move" subtle energy (energy work).[12]

The College of Massage Therapists of British Columbia defines the practice of massage therapy as the assessment of soft tissue and joints of the body and the treatment and prevention of dysfunction, injury, pain, and physical disorders of the soft tissues and joints by manual and physical methods to develop, maintain, rehabilitate, or augment physical function to relieve pain and promote health.

Massage therapy has been recommended by many studies as an effective intervention to combat work-related anxiety, depression, and musculoskeletal pain.[13–15] Tsao in her systematic review of the massage therapy literature notes that "existing research provides fairly robust support for the analgesic effects of massage for nonspecific low back pain, but only moderate support for such effects on shoulder pain and headache pain. There is only modest, preliminary support for massage in the treatment of fibromyalgia, mixed chronic pain conditions, neck pain and carpal tunnel syndrome."[16(p165)]

Massage therapy has also been attributed with increasing serotonin and dopamine levels, 2 important neurotransmitters. Cherkin et al[17] reported in their study that those who received massage therapy had less severe back pain symptoms than the control group or those that received acupuncture. In a study by Brennan and De Bate,[14] nurses in the study group received a 10-minute chair massage while the control group received a 10-minute break.[18] Using the Perceived Stress Scale, the study group reported significantly lower stress perception after the chair massage, whereas the control group reported no significant changes. In addition to reducing pain and tension levels, massage therapy has been found to increase relaxation and improve the overall mood of patients.[19]

With past initiatives focusing primarily on physical factors in the reduction/elimination of musculoskeletal injuries, this research endeavored to explore the effects of a wellness intervention program on psychological well-being, physical health, and safety. The holistic approach of a wellness intervention focuses on the promotion or maintenance of good health rather than correction of poor health.

Thus, this article presents an examination of the impact of massage therapy, used as an experimental intervention, on healthcare workers' health, especially from the work-related injury prevention and control point of view.

MATERIAL AND METHODS

Research design

The evaluation of this project followed a quasi-experimental time-series design. The intervention facility was George Pearson Centre (GPC), a facility with high rates of sick time and MSI. The GPC is a residential care facility with 200 employees providing care for adults with severe disabilities in Vancouver, British Columbia, Canada. The first questionnaire was distributed on February 1, 2005, after ethics approval was received from the University of British Columbia Behavioral Research Ethics Board. Figure 1 presents a graphical representation of the study time frame and methodology.

Questionnaires

Six matched questionnaires were distributed: 3 preintervention (Q1, Q2, and Q3) and 3 postintervention (Q4, Q5, and Q6) during the period February 1, 2005, to August 16, 2005. Each participant was assigned an encrypted identification number for the entire study. In Q1, 107 participants were asked to rank a descriptive list of 4 personal wellness programs (massage therapy, integrative energy healing, nap/sleep room, and no wellness program) according to their first and last preference. Massage therapy was chosen as the most preferred relaxation modality by 94 (88%) of the 107 respondents.

Questionnaires Q1, Q2, Q5, and Q6 were placed in the facility mailbox of each staff member. Completed questionnaires were returned to the unit clerk at each of the 6 wards. The ward that submitted the most questionnaires during each phase of the evaluation received a gift basket. Participants completed Q3 in conjunction with a medical case history form immediately before receiving their first massage therapy session. Q4 was completed by participants immediately following their final massage therapy session, or during the week following the massage program (intervention period) if they did not receive a massage in the final week of the program. Originally, this project was intended to evaluate the effects of a relaxation modality on direct patient care staff only. Q1 and Q2 reflect this intention. However, after further consideration of the evaluation, the sample was expanded to include nondirect patient care staff in Q3, Q4, Q5, and Q6.

The questionnaires contained questions relating to "psychological and social factors at work," as derived from the constructs developed by the General Nordic Questionnaire for Psychological and Social Factors at Work (QPS Nordic),[20–24] which referred to organizational culture, job demands, social interaction, and control at work. Questionnaires Q3 to Q6 also included the Brief Pain Inventory (Appendix).[25]

A total of 107 subjects participated in the Q1 survey and 81 in Q2. Massage therapy services were offered to 145 healthcare workers immediately after Q3. Participants completed questionnaires postintervention at week 4 (Q4), week 10 (Q5), and week16 (Q6).

Relaxation intervention: Massage therapy sessions

Massage therapy sessions took place in a designated room at the GPC with a waiting area and water cooler adjacent. The treatment room, illuminated by natural and fluorescent light, was divided into 3 sections with curtains that could be drawn around each section. Art decorated the room walls and soft music was played at all times.

Massage therapy sessions were offered for 4 weeks at the facility by a Registered Massage Therapist (RMT), Monday to Friday from 1 to 5 PM. Participants were allowed to sign up for one 20-minute massage therapy session each week. The employer allowed

FIGURE 1. Evaluation methodology. Q = Questionnaire.

participants to take a paid break from work (in addition to regular breaks) to attend their session. Sign-up took place in the cafeteria each prior week.

Four RMTs provided massage therapy. For the 4 weeks, 2 RMTs worked Monday to Friday, 1 worked 4 days (Monday to Wednesday and Friday), and 1 worked Thursdays only. Participants were assigned to the next available RMT when they arrived for each session and did not necessarily receive treatment from the same RMT in all their sessions.

At their first session, participants completed a medical case history form to identify contraindications to massage therapy. The massage therapy was performed with participants fully clothed, sitting prone on a massage chair. On the basis of recommendations of the Massage Therapy Association of British Columbia, the RMTs were instructed to use only the following treatment techniques: tapotement (vibration, percussion), effleurage (glide, touch, or stroke lightly), pétrissage (kneading, rolling, wringing), passive stretching, grade 1 or 2 joint mobilization and traction, as well as active and passive range of motion. Treatment was limited to the neck, shoulders, upper back, lower back, and arms. These treatment techniques reflected massage therapy for the purposes of general relaxation rather than specific therapy. Areas treated, treatment techniques used, and home treatment recommendations were recorded for each session.

Statistical methods

Standard descriptive statistics (eg, mean, standard deviation, and percentage) were calculated to demonstrate the demographics of subjects and characterize the distribution of variables. Questionnaires Q1, Q2, and Q3, containing 13 items derived from QPS Nordic, were used to construct the domains of the QPS Nordic instrument. An exploratory factor analysis with rotated component matrix for each questionnaire (107 subjects from Q1, 81 from Q2, and 145 from Q3) was conducted by entering all 13 items. The results were consistent across 3 questionnaires and the confirmed 4 domains in terms of loading factors ($\geq$0.50):

- **Organizational culture** (6 items): [The people I work with encourage each other to work together; considering all by efforts and achievements, I receive the respect I deserve at work; I feel that individual differences (gender, race, education) are respected at work; I feel that different perspectives are encouraged at work; I feel that I get appreciated for the work I do; I am very satisfied with my job],
- **Job demand** (4 items): [I feel that my job is physically demanding; I feel that my job is emotionally exhausting; over the past year, my job has become more demanding; I feel frustrated from my work.], and
- **Social interaction** (2 items): [I feel that there is a lack of recognition for good work; I feel that there is a lack of support from management and control at work (I have the ability to decide how I do my work)].

Internal consistency of the QPS Nordic instrument was tested using Cronbach α coefficient, calculated for each domain of the QPS Nordic instrument. From surveys Q1, Q2, and Q3, Cronbach α coefficients were .787, .790, and .802 for organizational culture; .703, .740 and .707 for job demand; and .731, .893, and .821 for social interaction. Cronbach α coefficients of $\geq$.70 indicated high internal consistency.[8] Test-retest reliability was assessed for the QPS Nordic instrument by establishing the intraclass correlation coefficients (ICCs) for Q1 and Q2 responses. The ICC values were .711, .774, and .789 for organizational culture, job demand, and social interaction, respectively, each meeting the recommended threshold for test-retest reliability (ICCs $\geq$ .70).[8] Total scores were computed for each domain of the QPS Nordic instrument in subjects who answered all of the questions for each domain. Individual questions, such as control at work, feeling exhausted, quality of working life, willingness to recommend the program, and willingness to participate in the program were analyzed separately.

According to the scoring booklet for the Brief Pain Inventory, the mean of pain severity was computed over 4 severity items; the mean of pain interference was computed over 7 interference items; and pain relief was an individual question expressed as a percentage, with 0% indicating no relief and 100% representing complete relief. The Friedman test, a nonparameter method, was used to test differences for each domain of the QPS Nordic instrument, the control at work and the individual questions, as well as the mean pain severity and mean interference across questionnaires 3, 4, 5, and 6. All tests were 2-sided significance levels of $P \leq .05$ estimated from Statistical Package for the Social Sciences version 14 (Chicago, Illinois). Partially missing values were automatically excluded from the analyses.

TABLE 1. Demographic data subjects at baseline survey

	Number of subjects	Mean ± SD	Median	Min	Max
Age (years)	98	46.4 ± 8.9	48	25	62

Demographic	Number of Subjects	Percentage (%) of Total
Age group, (y)		
21–30	5	5.1
31–40	20	20.4
41–50	37	37.8
51–62	36	4.7
Gender		
Male	21	20.2
Female	83	79.8
Job title		
RCA	49	52.1
Registered nurse	16	17.0
LPN/LRN	18	19.2
OT/UC/PT/RA	11	11.7
Affiliation		
HEU	19	19.6
BCNU	25	25.8
HSA	5	5.2
BCGEU	30	30.0
Other	18	18.6
Job status		
Full time	73	68.9
Part time	31	21.2
Casual	2	1.9
Rotating shift		
Yes	79	75.2
No	26	24.8
Shift hours		
<8	17	16.0
8	78	73.6
>8	3	2.8
<8 to 8	5	4.7
8 to >8	3	2.8

RESULTS

Percentages of questionnaires returned were: 69% for Q1; 52% for Q2; 100% for both Q3 and Q4; and 53% for both Q5 and Q6. Table 1 provides demographic information at baseline for 107 subjects. Mean age was 46.4 years, with a standard deviation of 8.9 years. Eighty percent of the participants were women. Most participants (38%) were aged between 41 and 50 years or between 31 and 40 years (20%). See Table 1 for further demographic results.

Number of massage therapy sessions

Participants received up to 4 sessions of massage therapy over a 4-week period. The average number of participants receiving massage therapy sessions increased each week: 17.4% (week 1), 25.7% (week 2), 19.4% (week 3), and 37.5% (week 4). Statistical analysis showed that the number of massages received by a participant did not influence their perception of psychosocial constructs.

Psychological and social constructs

As shown in Figure 2, work culture showed a significant decrease from Q3 to Q6 ($P = .01$) while massage therapy had no significant impact on job demands, social interaction, or control at work. Data showed trends toward improvement of quality of life associated with the massage intervention, but this decreased after the intervention period, as indicated by responses in Q4 (Fig 3). There was no significant change in staff feeling a lack of recognition in the workplace (Fig 4) although lack of recognition scores increased from Q3 to Q6.

Pain severity, pain interference, and pain relief

As seen in Table 2, pain severity showed significantly different means between Q3 to Q6 ($P = .038$). Post hoc analysis showed pain severity decrease significantly between Q3 and Q4 ($P = .013$). However, pain severity showed an increasing trend from Q4 to Q6. Neither pain interference nor pain relief showed any significant change. When only Q3 and Q4 were considered in paired t test (sample size increased to $n = 84$) there was still a statistically significant decrease (4.33 vs 3.96, $P = .026$) in means between Q3 and Q4.

Perception of massage therapy

In Q3 to Q6, respondents were asked to indicate their perception of massage therapy. Positive perception of massage therapy significantly increased from Q4 to Q6 using χ^2 test ($P = .002$), with 80% of respondents perceiving that massage therapy was effective in Q6 in comparison with 79% in Q5 and 59% in Q4.

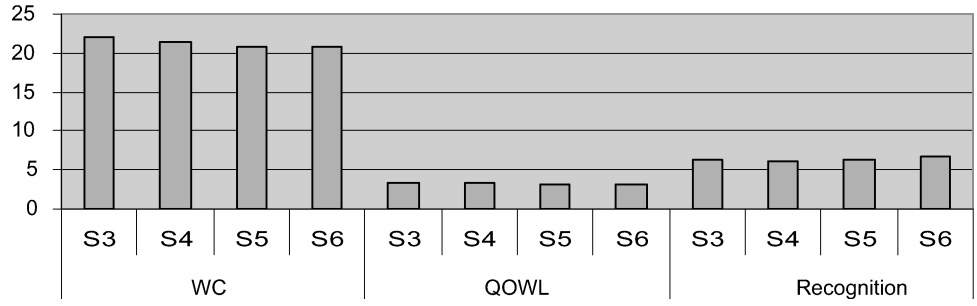

FIGURE 2. Measurement scores of work culture (WC), quality of work life (QOWL), and recognition at George Pearson Centre by survey time.

DISCUSSION

In recent years, profound changes have taken place in the nature of work.[26] The most striking development seems to be its increased psychosocial workload or work stress. Today for many employees, and in healthcare in particular, work poses primarily psychological and emotional demands, instead of physical demands, and the pace of work is more and more dictated by patients, clients, and so on.[26,27]

It is also evident that the consequences of an increased workload may be expressed in employee adverse health, such as burnout, psychosomatic health complaints, absenteeism, and even disability.[28] Although high workload is experienced in healthcare work, there seems to be no adequate compensation in terms of occupational rewards like salary and promotion prospects.[29]

Finally, the main reasons for work disablement are, among other things, high job demands and poor occupational rewards. Research has shown that this is particularly true for work in the healthcare sector.[30]

Research on the Canadian workforce has consistently indicated that healthcare workers have a greater risk of workplace injuries and more mental health problems than any other occupational group. According to Statistics Canada, in 1999 nursing personnel had a longer duration of time loss and were more likely to miss work each week due to an illness or injury than employees in any other sector or in other types of shift-working occupations.[31] Studies with on-site massage therapy programs in healthcare demonstrate that these programs have a positive impact on different aspects of the participants.[19]

This evaluation endeavored to explore the effects of a wellness intervention on psychological well-being and physical health. Results demonstrated initial benefits in terms of pain severity, with a possible improvement in job satisfaction and morale. Massage therapy appears to have a significant effect on pain severity and, therefore, the greatest benefit on individuals with preexisting musculoskeletal symptoms. However, a long-term effect was not demonstrated. In fact, 6 weeks after the intervention ceased, pain symptoms became worse and, in addition, job satisfaction decreased and lower morale was observed. It is possible that massage therapy sessions led participants to greater body awareness and pain

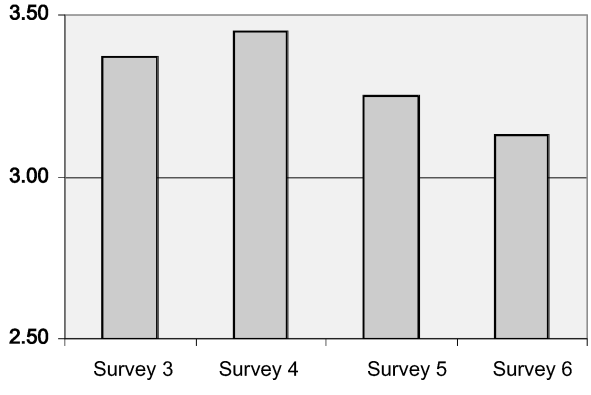

FIGURE 3. Quality of work life scores (out of 5) at George Pearson Centre.

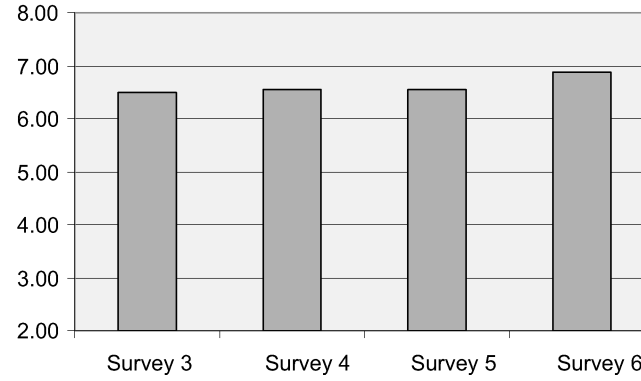

FIGURE 4. Recognition scores (out of 10) by survey time.

TABLE 2. Description and comparison of frontline workers' pain severity, pain interference, and pain relief among Q 3, 4, 5, and 6

	N	Mean (SD)	Min	Max	*P*[a]
Pain severity					.038
Q3	25	4.55 (2.08)	0.25	8.50	
Q4	25	4.46 (2.13)	0.50	8.00	
Q5	25	5.06 (2.21)	0.00	8.25	
Q6	25	5.08 (2.33)	0.75	8.00	
Pain interference					.188
Q3	25	3.53 (2.14)	0.14	7.71	
Q4	25	3.82 (2.60)	0.00	8.86	
Q5	25	4.33 (2.60)	0.00	9.14	
Q6	25	4.41 (2.74)	0.00	9.14	
Pain relief					.504
Q3	12	42.50 (21.37)	0	80	
Q4	12	50.83 (20.65)	20	80	
Q5	12	57.50 (22.21)	20	90	
Q6	12	53.33 (31.43)	0	90	

[a] *P* values were derived from Friedman Test, a nonparametric test, and the significant difference is at .05 level.

awareness. The contrast between days when massage therapy was received with those when it was not may have become more noticeable.

The perception of massage therapy effectiveness increased from Q4 to Q6, possibly due to the decreased number of respondents between Q4 and Q6, with a higher percentage of massage therapy "advocates" responding to the final 2 questionnaires. However, it is also possible that, as time elapsed after the intervention (Q4 to Q6 was 12 weeks), the participants' realization and perception of the benefits of massage therapy increased.

Clinical implications

The results of this project indicate that targeted individuals (ie, those with preexisting musculoskeletal signs and symptoms) are most likely to benefit from a massage therapy workplace wellness program. The program must be sustained, as only short-term pain relief was observed. The short-term effect may be due to using only treatment techniques for general relaxation rather than specific therapy. For further impact, combining a massage therapy program with other health and safety programs is strongly recommended. With an aging workforce who may have chronic conditions, a combination of relaxation techniques with specific therapy techniques may produce longer-lasting effects. A recent study of psychological distress in nurse aides found that work factors explain only a modest part of psychological distress.[32] Exposure to role conflicts and high workloads can overcome the benefits of massage therapy, unless the intervention is continuous.

This study was conducted using a quasi-experimental time-series methodology, in which baseline data is established to confirm validity of data collected before and after the intervention. Although it is advantageous for identifying systematic patterns from data collected in equally spaced periods of time, it lacks the power of a study involving a control group. A control group was not used in this study because of the difficulty in finding similar participants to compliment the staff at this unique facility. Using different wards at the GPC as a control group for each other was considered. This idea was rejected because of the possibility of communication between staff on these wards influencing the results.

Funding limited the length of time of each massage therapy session, as well as the number of weeks of intervention. Longer massage sessions over more weeks may have impacted the results. The massage techniques were intentionally limited but may have influenced the results.

We concluded that healthcare occupations are exposed to working conditions that result in injuries and low job satisfaction. Resulting time lost from work or lowered performance can have detrimental consequences for both the worker and their patients. Employers must evaluate methods of lowering work place injuries, tension, and stress to combat such health and safety hazards. Massage therapy holds much potential in benefiting healthcare workers. Future research that probes the efficacy of this alternative work injury prevention method can provide beneficial results for the industry.

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Appendix

Q1–Q6

For each statement below, **circle the number** that best describes how you feel. ***Please circle only one number.***

Construct		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Job demands	1. I feel that my job is physically demanding	1	2	3	4	5
Job demands	2. I feel that my job is emotionally exhausting	1	2	3	4	5
Control at work	3. I have the ability to decide how I do my work	1	2.	3	4	5
Org. culture	4. The people I work with encourage each other to work together	1	2	3	4	5
Job demands	5. Over the past year, my job has become more demanding	1	2	3	4	5

Construct		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Org. culture	6. Considering all my efforts and achievements, I receive the respect I deserve at work	1	2	3	4	5
Job demands	7. I feel frustrated from my work	1	2	3	4	5
Org. culture	8. I feel that individual differences (gender, race, education) are respected at work	1	2	3	4	5
Org. culture	9. I feel that different perspectives are encouraged at work	1	2	3	4	5
Org. culture	10. I feel that there is a lack of recognition for good work	1	2	3	4	5
Social interactions	11. I feel that there is a lack of support from management	1	2	3	4	5
Org. culture	12. I feel that I get appreciated for the work I do	1	2	3	4	5
Org. culture	13. I am very satisfied with my job	1	2	3	4	5

Q1, Q2, Q4, Q5, Q6

14. In general, I rate my health as. . .

Please circle only one number where 1 is **Poor** and 5 is **Excellent**

Poor				Excellent
1	2	3	4	5

Q1

15. After your last workweek, please rank the level of pain you felt in the following body parts (Please rank each body part from 1 to 5 where **1 = minimal pain and 5 = severe pain**)

	Neck
	Shoulder
	Upper back
	Lower back
	Arms

Q1–Q6

16. I feel exhausted at the end of my typical shift?

Please circle only one number where 1 is **strongly disagree** and 5 is **strongly agree**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

17. Overall, I would rate the quality of working life at George Pearson Centre as excellent?

Please circle only one number where 1 is **strongly disagree** and 5 is **strongly agree**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

18. I would strongly recommend this hospital to a friend looking for a job?

Please circle only one number where 1 is **strongly disagree** and 5 is **strongly agree**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

19. I would be willing to participate in a program designed to improve my personal wellness?

Please circle only one number where 1 is **strongly disagree** and 5 is **strongly agree**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

Q1

20. For the list of personal wellness programs below, rank the list from your most preferred (1st) method to your least preferred (4th) method.

Massage Therapy: The treatment and prevention of injury and pain of muscles and joints by manual and physical methods to develop, maintain, rehabilitate, or increase physical function to relieve pain and promote health.

Integrative Energy Healing (IEH): The goal is to support multidimensional, human energy field repatterning in order to awaken the body's innate healing potential. The practitioner places his or her hands directly above the client's body and moves through the human energy field. Based on this energetic assessment, the practitioner places their hands directly upon, or above, the client's body in order to shift their energy field into a balanced state.

Nap/sleep room: A quiet space will be provided for staff to sleep and rest

Nothing

Q1

21. For the personal wellness program, how often would you like to receive it?

Please check (√) only one box

☐	**Once per week**
☐	**Every other week**
☐	**Once per month**

Q2

20. The most preferred relaxation modality selected by direct-care workers at George Pearson Centre in Staff Survey 1 was massage therapy.

How often would you prefer to receive a 20-minute massage therapy session per week?

Please check (√) only one box.

☐	**Twice per week**
☐	**Once per week**

Q2

21. How likely is it that you would come to George Pearson Centre to receive a 20-minute massage therapy session if it was your day off?

Please circle only one number where 1 is **very unlikely** and 5 is **very likely**

Very unlikely	Unlikely	Neutral	Likely	Very likely
1	2	3	4	5

If you answered "very unlikely" or "unlikely," what would be the main reason for your answer?

Q1

Work History

For each statement below, please indicate the answer that best describes you and your work situation.

Age (in years):	
Gender: Male/Female	
My job title is:	

My affiliation is:	❑ Manager	❑ B.C.N.U.	❑ BCGEU
	❑ H.E.U.	❑ H.S.A	❑ Other

Status:	❑ Full time	❑ Part time	❑ Casual
Shift:	❑ Less than 8 hours	❑ 8 hour shifts	❑ More than 8 hours
Rotating shifts:	❑ Yes		❑ No

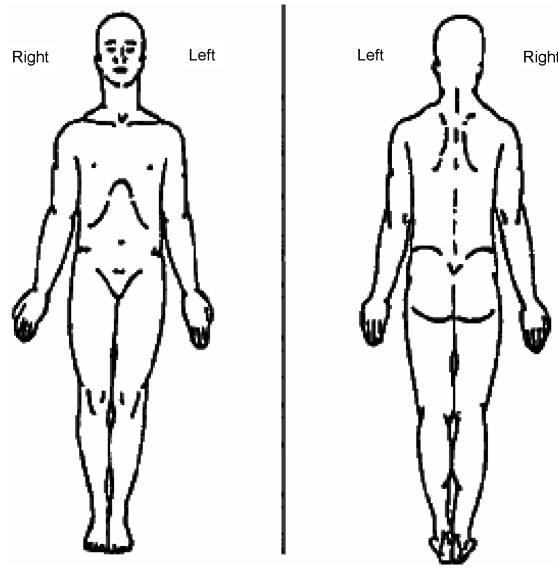
Total years working at George Pearson Centre: _____ years

Q3–Q6 Brief Pain Inventory (Short Form)

1. Throughout our lives, most of us have had pain from time to time (such as minor headaches, sprains, and toothaches). Have you had pain other than these everyday kinds of pain today?

1. Yes	2. No

2. On the diagram, shade in the areas where you feel pain. Put an X on the area that hurts the most.



3. Please rate your pain by circling the one number that best describes your pain at its **worst** in the last 24 hours.

0	1	2	3	4	5	6	7	8	9	10
No Pain										Pain as bad as you can imagine

4. Please rate your pain by circling the one number that best describes your pain at its **least** in the last 24 hours.

0	1	2	3	4	5	6	7	8	9	10
No Pain										Pain as bad as you can imagine

5. Please rate your pain by circling the one number that best describes your pain on the **average.**

0	1	2	3	4	5	6	7	8	9	10
No Pain										Pain as bad as you can imagine

6. Please rate your pain by circling the one number that tells how much pain you have **right now.**

0	1	2	3	4	5	6	7	8	9	10
No Pain										Pain as bad as you can imagine

7. What treatments or medications are you receiving for your pain?

8. In the last 24 hours, how much relief have pain treatments or medications provided? Please circle the one percentage that most shows how much **relief** you have received.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
No relief										Complete relier

9. Circle the one number that best describes how, during the past 24 hours, pain has interfered with your:

A. General activity

0	1	2	3	4	5	6	7	8	9	10
Does not interface										Completely interfaces

B. Mood

0	1	2	3	4	5	6	7	8	9	10
Does not interface										Completely interfaces

C. Walking ability

0	1	2	3	4	5	6	7	8	9	10
Does not interface										Completely interfaces

D. Normal work

0	1	2	3	4	5	6	7	8	9	10
Does not interface										Completely interfaces

E. Relations with other people

0	1	2	3	4	5	6	7	8	9	10
Does not interface										Completely interfaces

F. Sleep

0	1	2	3	4	5	6	7	8	9	10
Does not interface										Completely interfaces

G. Enjoyment of life

0	1	2	3	4	5	6	7	8	9	10
Does not interface										Completely interfaces

Q4

How did massage therapy help or not help you complete day-to-day tasks?

Please give specific examples.

Q5

18. Did you participate in the massage therapy program at George Pearson Centre in May and June 2005?

❑ No

❑ Yes

Q5, Q6

19. I would like to see a massage therapy program continue at George Pearson Centre.

Please circle only one number where 1 is **strongly disagree** and 5 is **strongly agree**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

Please provide comments (for example, how long and how often?).

Intake (Q4), Q5, Q6

20. Are you currently receiving massage therapy?

a. No
b. Yes → If yes, how long and how often are your sessions?

Q6

21. Were you receiving massage therapy before this study?

a. No
b. Yes → If yes, how long and how often were your sessions?

Please comment.

Q5

22. What positive or negative changes did you notice in your life since the completion of the massage therapy sessions at George Pearson Centre? Please give specific examples.

Q6

23. What positive or negative changes did you notice in your life after the massage therapy program at George Pearson Centre was finished in June? Please give specific examples.

Intake (Q4), Q5, Q6

18. What is your perception of massage therapy?

❑ It is effective
❑ It is not effective
❑ Don't know/unsure

Q6

1. Please provide any additional comments about the way this study was run.