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Prevalence of Musculoskeletal Pain in Office Going Population of Gangtok

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ABSTRACT: Background and purpose: Musculoskeletal system disorders are common among office workers worldwide. They are common causes of severe long-term pain and physical disability. Musculoskeletal disorders (MSDs) are defined as "regional impairments of the muscles, tendons, nerves and joints. The aim of this study was to investigate musculoskeletal disorders (MSDs) and work absenteeism in working adults with acute and chronic musculoskeletal pain following soft tissue insult.

Materials and Methodology: It was a cross sectional study conducted among the office goingpopulation
of Gangtok. A total of 30 office employees were selected which included 15 males and 15 females. Data were collected using a orebro musculoskeletal pain questionnaire.

Results: The results showed that the highest prevalence rates of MSDs were in the lower back (50%), neck (23.3%), upper back Pain(13.3%) and shoulder painFrom the workstation analysis, the majority of the office workers were at a medium (60%) and high-risk level (20%). Results also revealed a significant association between some of MSDs in the lower back, neck pain and low back pain.

Conclusion: Based on the results of the study, most the office employees of Gangtok had low back pain and neck pain. Moderate and severe neck pain as well as low back pain was found to be more in female than in male.

Key words: Musculoskeletal system disorders,

I. CHAPTER 1

INTRODUCTION

Musculoskeletal disorders (MSDs) are a widespread and increasing occupational health problems in the workplace worldwide. The causes of work-related MSDs are usually multifactorial including physical, ergonomic, and psychosocial factor.

MSDs usually occur in workers who have excessive repetition, awkward postures, and heavy lifting.[7]

MSDs have been common complaints among workers involved in static work or tasks requiring the repetitive motion of the upper limbs and prolonged computer work. Office workers are the one group which may impact on chronic musculoskeletal healthproblems. Office work represents a complex physical work environment, with interactions among the various dimensions of the workstation, equipment and job content. Recent research reviews have confirmed the dose-response association between the number of hours working at a computer workstation and the risk of MSDs which include pain and other symptoms in the shoulder-neck, back and upper limbparticularly.[1-4]

Exposure to occupational computer use can be defined in different ways. Most studies have operationalized exposure to computer use as the average (or cumulative) duration of computer use (or its constituents: mouse and keyboard use) over a certain time period. Other operationalizations include the cumulative number of keystrokes or mouse clicks, variation in computers use between days or weeks, and distribution of usage periods (i.e. number of breaks taken within a certain time period). In this study, exposure to computer use will be measured objectively with a software program, which is installed on the individual workstation. In addition, self-reports will be collected.[6]

Musculoskeletal complaints in the neck and upper extremity and computer work are common in modern society and both show an increasing trend. Several previous reviews have indicated a possible causal relationship between computer work and musculoskeletal complaints in the neck and arm. The epidemiological studies concerning computer use and musculoskeletal

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health are mainly based on subjective measures of upper extremity musculoskeletal symptoms. This may give important knowledge with regard to preventing these ailments. However, when evaluating a possible causal relationship between computer work and musculoskeletal disorders, such as when handling insurance claims, it is necessary with a more objective measure of a sustained effect on the musculoskeletal system and this is the basis for the present review.

A complex of various environmental work factors characterizes computer work, but we evaluate all psychosocial and organizational factors as well as individual factors to be common for all kinds of working environment and not specific for computer work.[10]

Work-related musculoskeletal injuries (WRMI), also known as work-related musculoskeletal disorders (WMSD), are any range of inflammatory disorders resulting from injury sustained while completing work duties.[23]

WMSDs are: 1) the result of regular exposure to work activities that contribute significantly to the development or exacerbation of painful symptoms;[24]conditions that are worsened or that persist due to work conditions[2]. Such can be the result of repetitive and frequent work activities resulting in overuse and strain to nerves, ligaments, muscles, tendons, joints, and spinal discs.[25]

These disorders are also commonly referred to as repetitive strain injuries, cumulative trauma disorders, and overuse syndrome, among others. Due to the emphasis on upper extremity use in occupational tasks, the vast majority of WRMIs impact the hands, wrists, elbows, shoulders and neck; however, conditions involving the lower extremities and feet, as well as spine and back are common.[25]

II. CHAPTER 2

LITERATURE REVIEW

In **2018 Oct-Dec Fariborz Mohammadipour, Mohammad Pourranjbar,**Although the effect of etiological mechanisms on causing MSDs is still poorly understood, studies have provided evidence that environmental and personal factors influence the occurrence of MSDs. The results of the current study confirmed some of these relationships. The office workers participating in this research were found to have a high level of both MSDs and ergonomic risks. These findings can be used to guide MSD prevention efforts for office workers in Iran.[5]

In 2006Stefan ijmker, Birgitte M Blatter, Allard J Van der Beek,The advantages of the PROMO study in comparison with studies published so far include the long follow-up duration (two years), the repeated measurements of both exposure and outcome, and the objective measurement of the duration of computer use. These features of our study will enhance the accuracy of risk estimates. In addition, the frequent exposure and outcome assessment will provide more insight in the time window(s) of relevant exposure effects. This issue has been identified as an important topic, but has up to now not received appropriate attention.[6]

In 2018 Hoang Duc Luan, Nguyen Thanh Hai, [...], and Pham Minh Khue Musculoskeletal Disorders: Prevalence and Associated Factors among District Hospital Nurses in Haiphong, Vietnam.A high prevalence of MSDs (74.7%) in nurses was found in this study, with the two most common sites being the lower back (44.4%) and the neck (44.1%). Some related factors were included: female gender, history of musculoskeletal diseases, absenteeism, and anxiety. More research will be needed in the future with more accurate data to provide the basis for future prevention measures to reduce the prevalence, incidence, and consequences of MSDs.[7]

In 2015 Seyedtaghi Mirmohammadia, Jamshid Yazdanib, Syavash Etemadinejadc, Hanyeh Asgarinejad, There were three major findings to consider from these data. The first major finding was that about the problem in neck and low back in the body regions of nurses and health care staffs. The second major finding was a clear association between neck pain and low back pain and sex of subjects and the third one is the QEC ergonomic assessment tool is suitable to evaluate for hospital working duties/tasks for health care staffs and nurses. These results illustrated that female nurses and health care staffs are more tendency to involve and occurrence of WMSDs compare to male staffs. This study demonstrated that encouraging and providing of ergonomics lifting devices for transfers and repositioning are more effective to control or prevention of WMSDs among nurses and health care staffs. A periodic educational program as well as back school practice can play a main role in prevention and reducing the musculoskeletal disorders resulted.[8]

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2000 W E Hoogendoorn et al. Evidence was found for an effect of low workplace social support and low job satisfaction. However, the result for workplace social support was sensitive to slight changes in the rating system, and the effect found for low job satisfaction may be a result of insufficient adjustment for psychosocial work characteristics and physical load at work. In addition, the combined evaluation of job content and job control, both aspects of decision latitude, led to strong evidence of a role for low job decision latitude. Thus, based on this review, there is evidence for an effect of work-related psychosocial factors, but the evidence for the role of specific factors has not been established yet.[9]

2010 Morten wearsted, Therese N Hanvold and Kaj Boveiersted, limited evidence for an association between computer work and some of the studied musculoskeletal disorders. We emphasize that these conclusions are based on few included studies of computer work and diagnostic entities. None of the evidence was considered moderate or strong and there is a need for more and better documentation. The report does not assess the possibility of a causal relationship between this kind of exposure and pain symptoms.[10]

In 2008 Nathalie Perrault,Chantal Brisson,the results of this study show that the agreement between a questionnaire on musculoskeletal disorders for the neck-shoulder region and a physical examination is fair to good. Inclusion of items related to functional limitations in questionnaires appears to be of limited value to improve the agreement. It is the physical examination definition that included pain manifestations that offered the best agreement with the questionnaire. A shorter time interval between the administrations of the two tests also yields a better agreement. Investigators should consider these results before choosing a method to measure the presence of musculoskeletal disorders of the neck-shoulder region.[11]

2005, 107.7 million adults, one in every two aged 18 and above, reported suffering from a musculoskeletal condition mainly lasting three months or longer during the past year. This is almost twice of any other medical condition reported. Neck and Low back pain are most common physical conditions requiring medical care. Workplace acquired musculoskeletal injuries, collectively known as musculoskeletal disorders (MSDs), occur each year due to cumulative and repetitive motion or accidents.The estimated incidence of MSD in low back in 2011/12 was 51000 cases. Health professionals are one among the various occupations with the highest estimated prevalence rates of back disorders. This prevalence of MSD is high among students.

Armstrong et al (1993) have developed a model of musculoskeletal disorders that emphasizes dose, exposure, capacity and response. Exposure refers to work demands such as posture, force and repetition rate that have an effect (dose) on internal body parts. Metabolic changes in the muscle, stretching of the tendon or ligaments, compression of the articular surfaces of joints are examples of what is meant by a doser. The dose may produce a response such as change in the shape of a tissue, the death of cells or accumulation of waste products in the tissues. The primary response can be accompanied by secondary responses such as pain can be a doser that causers another response i.e increased muscle contraction.

Capacity refers to the individual worker's ability to cope with the various dose to which his musculoskeletal system is exposed. An individual's capacity is not fixed. It may change over time as the person ages. Armstrong also pointed out that muscles can adapt to work demands faster than tendons and this may lead to reduced tendon capacity.

NIOSH [1999] conducted a study on sonographers in hospital were most of them had reported neck, shoulder, and arm pain while performing ultrasound. Following risk factors were found- awkward and Static postures while using transducer, awkward positioning of both patients and equipment. Poor workplace ergonomics in terms of equipment design, furniture,lighting, continual pressure for sustained periods of time during examination, Sonographer age, height and gender (NIOSH 2006).

Evan George (2010) on cytotechnologist reported 55-60% prevalence of neck pain followed by upper back, hand & wrist and lower back. The study involved mainly microscope users.43The prevalence was similar to study by kalavar and hunting44-46 in 1996 and Alireza et al in 2010. However, prevalence were lower than reported by Evan George. Literature reported that, microscope users had to bend the neck and upper back to view

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through the eyepiece. These awkward postures are also maintained while viewing computer screen, cutting frozen sections, writing etc. which in long term leads to development of forward rounded posture due extensor muscle dysfunction causing muscle fatigue, pain and stiffness

In 2004 Evangelos C Alexopoulos, Ioanna-Christina Stathi, and Fotini Charizani, The study results suggest that effective intervention strategies most likely have to take into account both ergonomic improvements and cognitive-behavioral aspects. Hand/wrist complaints are of most importance in terms of occupational related musculoskeletal disorder and ergonomic and educational interventions could hold a prominent role in its prevention.Chronic complaints hold a central role in absenteeism and medical care seeking. Especially, comorbidity of chronic complaints is highly related to increase cost of disorders. Taking into account interrelations of perceived health as expressed by various complaints, psychosocial characteristics like lower job control and family situation hold also significant roles.

1987 Kuorinka et al. Appl Ergon Standardised questionnaires for the analysis of musculoskeletal symptoms in an ergonomic or occupational health context are presented. The questions are forced choice variants and may be either self-administered or used in interviews. They concentrate on symptoms most often encountered in an occupational setting. The reliability of the questionnaires has been shown to be acceptable. Specific characteristics of work strain are reflected in the frequency of responses to the questionnaires.[13]

2003 Steven J Linton et al. Clin J Pain. The results underscore that psychological variables are related to outcome 6 months later, and they replicate and extend earlier findings indicating that the Orebro Screening Questionnaire is a clinically reliable and valid instrument. The total score was a relatively good predictor of future absenteeism due to sickness as well as function, but not of pain. The results suggest that the instrument could be of value in isolating patients in need of early interventions and may promote the use of appropriate interventions for patients with psychological risk factors.[15]

Objective of the study: To know the prevalence of Musculoskeletal pain in office going people of Gangtok and BAC Kabi.

III. CHAPTER 3

METHODOLOGY

Study sampling= cross sectional study
Sampling method = Random sampling
Sample size = 30 subjects of MSDs

- Institutional ethics committee approval was taken before the commencement of the study.
- Patient's consent was taken prior to the study.

Age Group= 28 to 55 years
Source of data = Patient having Musculoskeletal pain from Offices of Gangtok and Kabi Block Administrative Centre.

Inclusion criteria:

- Subjects with musculoskeletal pain
- Working more than 3-5 years.
- Age limit 28 to 55 years
- Both male and female
- Willing to participate in the study

Exclusion criteria:

- Work experience less than 3 years
- Non-cooperative subjects.

Questionnaire:

- Örebro Musculoskeletal Pain Questionnaire (ÖMPQ)

PROCEDURE

- All the office staffs were asked for their consent to participate in the study, which would involve completingÖrebro Musculoskeletal Pain Questionnaire (ÖMPQ). Description about the study was explained to the subjects. Informed consent forms were given on the basis of inclusion and exclusion criteria.
- Örebro Musculoskeletal Pain Questionnaire (ÖMPQ) was used to quantify disability for musculoskeletal pain.The Örebro Musculoskeletal Pain Questionnaire (ÖMPQ) is a 'yellow flag' screening tool that predicts long-term disability and failure to return to work when completed four to 12 weeks following a soft tissue injury2. A cut-off score of 105 has been found to predict those who will recover (with 95 per cent accuracy), those who will have no further sick leave in the next six months (with 81 per cent accuracy), and

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those who will have long-term sick leave (with 67 per cent accuracy).[16]

- The questionnaire consists of 25 questions of which 21 are scored on a 10-point scale. The total minimum score is 4 and the maximum is 210. Lower scores are desirable, as greater scores indicate increased disability. The first four questions inquire about demographic information and are unscored. The OMPQ measures domains such as pain site, duration, and frequency as well as coping, stress, depression and sick leave.
- The disability percentage was then calculated using Örebro Musculoskeletal Pain Questionnaire scoring

Scoring instructions

· For question 5, count the number of pain sites and multiply by two – this is the score (maximum score allowable is 10).

· For questions 6 and 7 the score is the number bracketed after the ticked box.

· For questions 8, 9, 10, 11, 13, 14, 15, 18, 19 and 20 the score is the number that has been ticked or circled.

· For questions 12, 16, 17, 21, 22, 23, 24 and 25 the score is 10 minus the number that has been circled.

· Write the score in the shaded area beside each item.

· Add up the scores for questions 5 to 25 – this is the total ÖMPQ score .

- Prevalence of prevalence of Musculoskeletal pain in office going people was then calculated for each category and graphical representation was done for the same.

IV. CHAPTER 4

RESULT

Statistical analysis

Descriptive statistics of the general characteristics, work, and workplace characteristics and ergonomic risks of the study population were presented as numbers, percentages, and mean ± standard deviation. In order to understand which ergonomic risk factorsrelate to MSDs, chi-square test and Pearson correlation coefficients were used.

- Örebro Musculoskeletal Pain Questionnaire (ÖMPQ)questionnaire results (n=30)

Area of body affected Occurrence in last 12 weeks

Neck (7) (23.3)

Shoulder. (4) (13.3%)

Upper back (4) (13.3%)

Lower back (4) (50%)

Prevalence

The highest prevalence rate of MSDs was in the lower back (50%), neck (23.3%) and shoulders area (13.3%) and the lowest prevalence rate of MSDs was in upper back (13.3%).

V. CHAPTER 5

DISCUSSION

This study was conducted to identify the prevalence of MSDs of the office workers of Gangtok offices.30 subjects of MSDs was selected with Patient having Musculoskeletal pain from Offices of Gangtok and Kabi Block Administrative Centre.

The questionnaire consists of 25 questions of which 21 are scored on a 10-point scale. The total minimum score is 4 and the maximum is 210. Lower scores are desirable, as greater scores indicate increased disability. The first four questions inquire about demographic information and are unscored. The OMPQ measures domains such as pain site, duration, and frequency as well as coping, stress, depression and sick leave.

The disability percentage was then calculated using Örebro Musculoskeletal Pain Questionnaire scoring.

The results showed that the highest prevalence rates of MSDs were in the lower back (50%), neck (23.3%) and upper back Pain(13.3%). From the workstation analysis, the majority of the office workers were at a medium (60%) and high-risk level (20%). Results also revealed a significant association between some of MSDs in the lower back, neck pain and low back pain.

18 patients has the cut off score of has been found to predict those who will recover (with 95 per cent accuracy), those who will have no further sick leave in the next six months (with 81 per cent accuracy), and those who will have long-term sick leave (with 67 per cent accuracy).

12 patients has the cut off score of 130 and The ÖMPQ predicted failure to return to work six months after compensable musculoskeletal

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injury in a NSW population of workers . The injuries in the study group were mixed , and the ÖMPQ was found to be more specific and sensitive for back injuries. In workers with back injuries screened at four to 12 weeks, a cut-off score of 130 correctly predicted 86 per cent of those who failed to return to work.

VI. CHAPTER 6

CONCLUSION

Based on the results of the study, most of the office staff of Gangtok office and kabi Block Administration Center hadlow back pain, neck pain and upper back pain.. Moderate and severe neck pain as well as low back pain was found to be more in female than in male. Hence, it is important that prevention programs are taken into account to reduce frequency of low back and neck pain and prevent the decline in the productivity of the works.. It is worthwhile to follow this study in future, to know about the prevalence of Musculoskeletal pain in office going populationof Gangtok and kabi BAC.

VII. .CHAPTER 7

LIMITATIONS OF THE STUDY

1. Limited sample was collected
2. No intervention was recorded
3. The study was not done in larger populations.
4. Photographic assessment can be attributed to better understanding ofcomputer related postural conditions.

DECLARATION

I hereby declare that the dissertation "PREVALENCE OF MUSCULOSKELETAL PAIN IN OFFICE GOING POPULATION OF GANGTOK " is the original work done by me at Department of Physiotherapy, Dolphin (PG) Institute of Biomedical & Natural Sciences, Dehradun, Uttarakhand. This work part or full has not been submitted to any other University.

DEDICATION

To accomplish great things we must not only act,But also dream; not only plan,But also believe
Teachers ,Family& Friends can set us rightAnd help guide us back to the light.
This dissertation isDedicated to almighty GodMy parents, my loved onesAnd none other than my inspiration
Mentors

ACKNOWLEDGMENT

It has been a privilege and a great experience working under an esteemed guide Dr.Vivek Chauhan Associate Prof. Department of Physiotherapy, Dolphin (PG) Institute of Bio-Medical and Natural Sciences, Dehradun. I whole heartedly thank him for his constant help & guidance in every step of my work.
I would like to express my gratitude to all my respected teachers of DIBNS Dehradun , seniors, friends and other staff members for helping me whenever I needed.
I also wish to express my deep sense of gratitude to my loving parents and siblings as without their constant unconditional support & encouragement in every step of my life; it would have not been possible for me to reach here.
Finally, I thank God for giving me such a valuable place on this world and blessing me with knowledge and wonderful life with which I am able to mark myself by completing this study successfully.

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APPENDIX

INFORMED CONSENT FORM

Project Title: PREVALENCE OF MUSCULOSKELETAL PAIN IN OFFICE GOING PEOPLE OF GANGTOK

I confirm I have read the Participant Information Sheet for the above study and its contents were explained and I have had the opportunity to ask questions and received satisfactory answers.

I understand that my participation in the study is voluntary and that I have the right to withdraw at any time without giving any reason, without my medical care or legal rights being affected.

I agree to take part in the above study. I confirm that I have received a copy of the Participant Information Sheet along with this signed and dated informed consent form.

Name of the Research Participant:

Age of the Research Participant:

Designation of the Research Participant in Gangtok office:

_____ _____

Signature of the Research Subject Date

_____ _____

Name & Signature of the witness. Date

_____ _____

Name & Signature of the person explaining the consent. Date

To, Date :

Subject: Application requesting cooperation and approval for carrying out a study at your office.

Dear Sir/Madam,

I the undersigned would like to request your approval and cooperation to Ms. Tashi Ongmit Lepcha (regd. no. Dibns1711062),Mpt student of DIBNS to carry out an observational study entitled 'Prevalence of musculoskeletal pain in the office going population of Sikkim' at your office.

I sincerely request you that you kindly cooperate and allow Ms. Lepcha to carry out her study.

Thanking You.

Yours Faithfully,

_____

Dr Deepti Warikoo

HEAD OF DEPARTMENT _____

Dr Vivek Chauhan

Associate professor, DIBNS

Örebro Musculoskeletal Pain Questionnaire

(ÖMPQ) Linton and Boersma 2003[1]

1. Name_____

2. Date of Injury_____

3. Male ☐ **Female** ☐

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4. Were you born in India Yes

Phone Date _____ _____

Date of birth _____

☐ ☐

No

These questions and statements apply if you have aches or pains, such as back, shoulder or neck pain. Please read and answer questions carefully. Do not take long to answer the questions, however it is important that you answer every question. There is **always** a response for your particular situation.

5. Where do you have pain? Place a tick (3) for all appropriate sites. 2x (max 10)

☐ Neck ☐ Shoulder ☐ Arm ☐ Upper Back

☐ Lower Back ☐ Leg ☐ Other (state)

6. How many days of work have you missed because of pain during the past 18 months? Tick (3) one.

☐ 0 days (1) ☐ 1-2 days (2) ☐ 3-7 days (3) ☐ 8-14 days (4)

☐ 15-30 days (5) ☐ 1 month (6) ☐ 2 months (7) ☐ 3-6 months (8)

☐ 6-12 months (9) ☐ over 1 year (10)

7. How long have you had your current pain problem? Tick (3) one.

☐ 0-1 week (1) ☐ 1-2 weeks (2) ☐ 3-4 weeks (3) ☐ 4-5 weeks (4)

☐ 6-8 weeks (5) ☐ 9-11 weeks (6) ☐ 3-6 months (7) ☐ 6-9 months (8)

☐ 9-12 months (9) ☐ over 1 year (10)

8. Is your work heavy or monotonous? Circle the best alternative.

0 1 2 3 4 5 6 7 8 9 10

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Not at all Extremely

9. How would you rate the pain that you have had during the past week? Circle one.

0 1 2 3 4 5 6 7 8 9 10

No pain Pain as bad as it could be

* Modified for use by WorkCover NSW (with permission)

1 Linton SJ, Boersma K. Early identification of patients at risk of developing a persistent back problem: the predictive validity of the Örebro

Muscuoloskeletal Pain Questionnaire. Clin J Pain 2003;19: 80-86.

making a difference

10. In the past three months, on average, how bad was your pain on a 0-10 scale? Circle one.

0 1 2 3 4 5 6 7 8 9 10

No pain Pain as bad as it could be

11. How often would you say that you have experience pain episodes, on average, during the past three months? Circle one.

0 1 2 3 4 5 6 7 8 9 10

Never Always

12. Based on all things you do to cope, or deal with your pain, on an average day, how much are you able to decrease it? Circle the appropriate number. 10 - x

0 1 2 3 4 5 6 7 8 9 10

Can't decrease it at all Can decrease it completely

13. How tense or anxious have you felt in the past week? Circle one.

0 1 2 3 4 5 6 7 8 9 10

Absolutely clam and relaxed As tense and anxious as I've ever felt

14. How much have you been bothered by feeling depressed in the past week? Circle one.

0 1 2 3 4 5 6 7 8 9 10

Not at all Extremely

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15. In your view, how large is the risk that your current pain may become persistent? Circle one.

0 1 2 3 4 5 6 7 8 9 10

No risk Very large risk

16. In your estimation, what are the chances that you will be able to work in six months? Circle one. 10 - x

0 1 2 3 4 5 6 7 8 9 10

No chance Very large chance

17. If you take into consideration your work routines, management, salary, promotion possibilities and work mates, how satisfied are you with your job? Circle one. 10 - x

0 1 2 3 4 5 6 7 8 9 10

Not satisfied at all Completely satisfied

Here are some of the things that other people have told us about their pain. For each statement, circle one number from 0 to 10 to say how much physical activities, such as bending, lifting, walking or driving, would affect your pain.

18. Physical activity makes my pain worse.

0 1 2 3 4 5 6 7 8 9 10

Completely disagree Completely agree

19. An increase in pain is an indication that I should stop what I'm doing until the pain decreases.

0 1 2 3 4 5 6 7 8 9 10

Completely disagree Completely agree

20. I should not do my normal work with my present pain.

0 1 2 3 4 5 6 7 8 9 10

Completely disagree Completely agree

Here is a list of five activities. Circle the one number that best describes your current ability to participate in each of these activities.

21. I can do light work for an hour. 10 - x

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0	1	2	3	4	5	6	7	8	9	10	
Can't do it because of pain problem						Can do it without pain being a problem					

22. I can walk for an hour.										10 x	-
0	1	2	3	4	5	6	7	8	9	10	
Can't do it because of pain problem						Can do it without pain being a problem					

23. I can do ordinary household chores.										10 x	-
0	1	2	3	4	5	6	7	8	9	10	
Can't do it because of pain problem						Can do it without pain being a problem					

24. I can do the weekly shopping.										10 x	-
0	1	2	3	4	5	6	7	8	9	10	
Can't do it because of pain problem						Can do it without pain being a problem					

25. I can sleep at night.										10 x	-
0	1	2	3	4	5	6	7	8	9	10	
Can't do it because of pain problem						Can do it without pain being a problem					

xplanatory Notes

The Örebro Musculoskeletal Pain Questionnaire (ÖMPQ) is a 'yellow flag' screening tool that predicts long-term disability and failure to return to work when completed four to 12 weeks following a soft tissue injury[2]. A cut-off score of 105 has been found to predict those who will recover (with 95 per cent accuracy), those who will have no further sick leave in the next six months (with 81 per cent accuracy), and those who will have long-term sick leave (with 67 per cent accuracy)[1].

The ÖMPQ predicted failure to return to work six months after compensable musculoskeletal injury in a NSW population of workers. The injuries in the study group were mixed, and the ÖMPQ was found to be more specific and sensitive for back injuries. In workers with back injuries screened at four to 12 weeks, a cut-off score of 130 correctly predicted 86 per cent of those who failed to return to work[3].

Identification, through the ÖMPQ, of workers at risk of failing to return to work due to personal and environmental factors provides the opportunity for treating practitioners to apply appropriate interventions (including the use of activity programs based on cognitive behavioural strategies) to reduce the risk of long-term disability in injured workers. Evidence indicates that these factors can be changed if they are addressed[4].

Administering the questionnaire

The ÖMPQ is designed to be a self administered tool completed by the worker in a quiet environment without assistance from any other person. A detailed explanation is provided by the person administering the questionnaire:

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"Information from this questionnaire helps us understand your problem better, and it especially helps us evaluate the possible long-term consequences your pain may have. It is important that you read each question carefully and answer it as best you can. There are no right or wrong answers. Please answer every question. If you have difficulty, select the answer that best describes your situation".

Where uncertainty or a request for more information is expressed, encouragement is provided to "answer as best you can". The questionnaire item may be read aloud to assist, however the question should not be rephrased. All questions should be answered, as missing values will reduce validity[5].

Scoring instructions

· For question 5, count the number of pain sites and multiply by two – this is the score (maximum score allowable is 10).

· For questions 6 and 7 the score is the number bracketed after the ticked box.

· For questions 8, 9, 10, 11, 13, 14, 15, 18, 19 and 20 the score is the number that has been ticked or circled.

· For questions 12, 16, 17, 21, 22, 23, 24 and 25 the score is 10 minus the number that has been circled.

· Write the score in the shaded area beside each item.

· Add up the scores for questions 5 to 25 – this is the total ÖMPQ score.

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Clin J Pain 1998; 3: 209-215.

3 Dunstan DA, Covic T, Tyson GA, Lennie, IG (2005) Does the OMPQ predict outcomes following a work related compensable injury? International Journal of Rehabilitation Research 28(4), 369-370.

4 Linton SJ, Ryberg M. A cognitive-behavioral group intervention as prevention for persistent neck and back pain in a non-patient population: a randomized controlled trial. Pain 2001; 83-90.

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5 Linton SJ. Understanding pain for better clinical practice – a psychological perspective. Edinburgh: Elsevier, 2005.

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