

# Prevalence of Neck Pain in Sedentary Workers

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## ABSTRACT

The aim of this dissertation was to study the prevalence of neck pain in people working in sedentary jobs. The Neck Pain and Disability Scale was used as an assessment tool, and it was presented both personally on paper and online as well as a google form. The results of the study indicated a positive trend towards the proposed hypothesis that neck pain was significantly present among sedentary workers, and it was seen to interfere in their occupational performance and daily life.

**KEYWORD:** Neck pain, sedentary workers, daily living

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## INTRODUCTION

**Neck pain:** Neck pain is the sensation of discomfort in the neck area. Neck pain can result from disorders of any of the structures in the neck, including the cervical vertebrae and intervertebral discs, nerves, muscles, blood vessels, esophagus, larynx, trachea, lymphatic organs, thyroid gland, or parathyroid glands. Epidemiological studies have shown that adopting awkward working postures for prolonged time combined with having sedentary lifestyle have been found to be associated with neck pain. When we sit for long periods of time, our muscles get stiff and weak. This causes poor posture, which leads to back and neck pain. In addition, our spines get compressed and herniated discs, which are painful conditions. Approximately 14–71% from sitting, and this can eventually lead to serious issues like bulging of adults experience neck pain at some points in their lifetime and the 1-year prevalence rate for neck pain in adults ranges from 16 to 75%. If the symptoms last longer than three months, it's considered to be chronic neck pain. Psychological stress is frequently a factor if the pain becomes chronic. There are two basic types of neck pain:

- **Axial pain** is mostly felt in the part of the spine that belongs to the neck (cervical spine), and sometimes spreads to the shoulders.
- **Radicular pain** radiates along the nerves i.e up the back or down into one of the arms. This type of pain is usually caused by irritated nerves – for instance, because one of the spinal disks in the neck area has changed and is pushing against a nerve. That may also affect the arm reflexes and muscle strength or result in a pins and needle type of tingling sensation.

## Causes

1. Neck pain can be caused by many different things. These include:
2. **Weak and overused neck muscles:** For instance, sitting at a desk for a long time – particularly in awkward positions with slightly tensed muscles – can cause pain and stiffness in the neck or shoulder areas, and sometimes headaches too. Activities that involve tilting your head back against your neck can also cause muscles problems in the neck area. These include things like painting a ceiling, or certain types of sports such as riding a racing bike or swimming breaststroke with your head in a fixed position.
3. **Wear and tear on the cervical spine:** Over the course of a lifetime, various normal signs of wear and tear arise in the spine. The spinal disks become flatter, and small bone growths (spurs) may form along the edges of the vertebral bodies (the front part of the bones in the spine). This is called osteochondrosis. Osteoarthritis of the joints between the neck vertebrae is called cervical spondylosis. These changes can make it harder to move your neck, but they rarely cause neck pain on their own.
4. **Whiplash:** This is an injury that can occur if someone drives into the back of your car in a road accident. The impact of the collision causes the head to rapidly jerk forwards and then back again. This usually causes small injuries in the muscle and connective tissue, painfully tense muscles, and difficulty moving your head for several days. The symptoms typically go away completely after a short time.
5. **Narrowing of the vertebral canal, or a slipped disk:** If the vertebral canal is too narrow, or if spinal disk tissue bulges or leaks out and puts pressure on a nerve root, it

can cause neck pain that radiates (shoots) into your shoulder or arm. A slipped disk may – but doesn't always – cause symptoms.

Neck pain also sometimes comes from inflammatory conditions of the spine, jaw joint problems or severe headaches.

Often it's not possible to find a clear cause of neck pain: The bones, tendons, and nerves in the cervical spine are usually too close together to be able to determine exactly what caused the symptoms in the first place.

If no specific cause can be found, doctors refer to the pain as "non-specific neck pain." It's often particularly hard to determine the cause of the neck pain if it's chronic.

### Sedentary Work:

**Definition :** Sedentary work is work that involves very limited amounts of physical activity. As defined by the U.S. Department of Labor's Dictionary of Occupational Titles, sedentary jobs are those in which an employee lifts no more than 10 pounds. In a sedentary job, it is likely that an employee will only carry small items.

Additionally, the primary tasks of a sedentary job can be performed while sitting. In particular, a job that requires sitting for 6 of the 8 hours in a workday is usually considered sedentary. Jobs that require light even levels of physical activity such as walking or standing are not considered sedentary work.

Some examples of sedentary jobs include long-haul driving and desk work. Call center operators, accountants, and receptionists may all hold sedentary jobs.

### AIMS AND OBJECTIVES:

**AIM-** This study was conducted to evaluate the prevalence of neck pain in sedentary workers

#### Objective-

- Short term – To find out whether neck pain occurs in sedentary workers or not
- Long term- To find out how neck pain affects quality of life

Formulating Null Hypothesis and Alternative Hypothesis :

**NULLHYPOTHESIS (Ho) :** Neck pain doesn't significantly occur in sedentary workers and doesn't affect quality of life.

**ALTERNATIVE HYPOTHESIS (H1) :** Neck pain significantly occurs in sedentary workers and affects quality of life.

### REVIEW OF LITERATURE :

1. literature review of neck pain associated with computer use: public health implications  
Bart N Green, DC, MSEd, DACBSP\*  
Prolonged use of computers during daily work activities and recreation is often cited as a cause of neck pain. This review of the literature identifies public health aspects of neck pain as associated with computer use. While some retrospective studies support the hypothesis that frequent computer operation is associated with neck pain, few prospective studies reveal causal relationships. Many risk factors are

identified in the literature. Primary prevention strategies have largely been confined to addressing environmental exposure to ergonomic risk factors, since to date, no clear cause for this work-related neck pain has been acknowledged. Future research should include identifying causes of work related neck pain so that appropriate primary prevention strategies may be developed and to make policy recommendations pertaining to prevention.

#### 2. Neck pain related to computer use –

This article was published by ZHIYONG MING, MATTI NARHI, JOUKO SIIVOLA

The neck and shoulder pain (NSP) symptoms are very common among intensive computer users. This paper reviews recent 20 years' research publications, which have focused on pathophysiology and other aspects of the neck and shoulder pain related to computer use (NSPRCU). The disorder is usually multidimensional, occupational, personal and social factors are among these evolved. Suggestions concerning the diagnostics, procedures of prevention, and treatment options have been discussed. As the details of pathophysiology of these disorders are not yet clear, further studies NSPRCU are necessary.

#### 3. The prevalence of neck pain in the world population: a systematic critical review of the literature.

The objective of this study was to determine the prevalence of neck pain (NP) in the world population and to identify areas of methodological variation between studies. A systematic search was conducted in five databases (MEDLINE, EMBASE, CINAHL, OSH-ROM, and PsycINFO), followed by a screening of reference lists of relevant papers. Included papers were extracted for information and each paper was given a quality score. Mean prevalence estimates were calculated for six prevalence periods (point, week, month, 6 months, year, and lifetime), and considered separately for age, gender, quality score, response rate, sample size, anatomical definition, geography, and publication year. Fifty-six papers were included. The six most commonly reported types of prevalence were point, week, month, 6 months, year, and lifetime. Except for lifetime prevalence, women reported more NP than men. For 1-year prevalence, Scandinavian countries reported more NP than the rest of Europe and Asia. Prevalence estimates were not affected by age, quality score, sample size, response rate, and different anatomical definitions of NP. NP is a common symptom in the population. As expected, the prevalence increases with longer prevalence periods and generally women have more NP than men. At least for 1-year prevalence Scandinavian countries report higher mean estimates than the rest of Europe and Asia. The quality of studies varies greatly but is not correlated with the prevalence estimates. Design varies considerably and standardisation is needed in future studies.

#### 4. Middle East Journal Of Rehabilitation And Health Studies The Official Journal of Semnan University of Medical Sciences

This study was proposed by FatemehEhsani, Zahra Mosallanezhad, Ghazaleh Vahedi

The purpose of this study was to identify the prevalence, risk factors, and consequences of NP in office employees, and its effect on their quality of life and work. The findings provide evidence that the prevalence of NP in office employees was high. The modifiable individual and work-related factors

were as follows, improving health status, job satisfaction, reduction of working hours on the computer, avoiding prolonged sitting and static postures, having a rest time during working hours, and performing regular daily exercises.

#### 5. The prevalence of neck pain in the world population: a systematic critical review of the literature

René Fejer, Kirsten Ohm Kyvik, and Jan Hartvigsen

The objective of this study was to determine the prevalence of neck pain (NP) in the world population and to identify areas of methodological variation between studies.

The six most commonly reported types of prevalence were point, week, month, 6 months, year, and lifetime. Except for lifetime prevalence, women reported more NP than men.

Mean prevalence estimates were calculated for six prevalence periods (point, week, month, 6 months, year, and lifetime), and considered separately for age, gender, quality score, response rate, sample size, anatomical definition, geography, and publication year.

#### 6. Effects of treatments for people with non-specific neck pain without severe neurological deficit

Allan I Binder, MD, BSc (Med), MBChB, FRCP, Consultant Rheumatologist

They conducted a systematic review and aimed to answer the following clinical questions: What are the effects of treatments for people with non-specific neck pain without severe neurological deficit? What are the effects of treatments for acute whiplash injury? What are the effects of treatments for chronic whiplash injury? What are the effects of treatments for neck pain with radiculopathy?

In this systematic review they presented information relating to the effectiveness and safety of the following interventions: acupuncture, biofeedback, drug treatments (analgesics, antidepressants, epidural steroid injections, muscle relaxants, non-steroidal anti-inflammatory drugs [NSAIDs]), early mobilisation, early return to normal activity, exercise, heat or cold, manipulation (alone or plus exercise), mobilisation, multimodal treatment, patient education, percutaneous radiofrequency neurotomy, physical treatments, postural techniques (yoga, pilates, Alexander technique), pulsed electromagnetic field (PEMF) treatment, soft collars and special pillows, spray and stretch, surgery, traction, and transcutaneous electrical nerve stimulation (TENS).

#### 8. NON-SPECIFIC NECK PAIN AND EVIDENCE-BASED PRACTICE

Giannoula Tsakitzidis, Roy Remmen, Wim Dankaerts, Paul Van Royen

The first aim of this paper was to review (identify, critically appraise, and synthesize) the literature published on interventions for NS-NP. The second aim was to further provide advice for health care providers to make evidence-based treatment decisions and to optimize their delivery of care for diagnosing, treating and managing adults with NS-NP.

Strong evidence of benefit was only found for multimodal care (manipulation/mobilization and supervised exercises) for chronic NS-NP.

#### 9. The Burden and Determinants of Neck Pain in Workers Pierre Co te, Gabrielle van der Velde, Scott Haldeman Study Design- Systematic review and best evidence synthesis.

Objectives.- To describe the prevalence and incidence of neck pain and disability in workers; to identify risk factors for neck pain in workers; to propose an etiological diagram

They found preliminary evidence that gender, occupation, headaches, emotional problems, smoking, poor job satisfaction, awkward work postures, poor physical work environment, and workers' ethnicity may be associated with neck pain. There is evidence that interventions aimed at modifying workstations and worker posture are not effective in reducing the incidence of neck pain in workers.

#### MATERIALS AND METHODOLOGY:

##### MATERIAL:

##### Neck pain and disability scale

The **Neck Pain and Disability Scale** (NPAD) was developed in the USA as a comprehensive measure of neck pain and related disability. It was originally developed by Wheeler and colleagues, but there are various other translations of the scale. Validated French, Turkish, German, Portuguese, Italian, Dutch, English ... translations are available showing adequate validity and reliability.

The 20-item **scale** measures problems with neck movements, neck pain intensity, effect of neck pain on emotion and cognition, and the level of interference with daily life activities.

The NPAD is a validated measure to evaluate outcomes in patients with neck pain. It is easy to complete for the patients themselves, and easy to score for the evaluators.

**Objectives of scale:** Composite index including 20 items which measure the intensity of pain; its interference with vocational, recreational, social, and functional aspects of living; and the presence and extent of associated emotional factors.

#### METHODOLOGY:

##### Inclusion Criteria:

1. Age: between 20 years to 50 years.
2. Both the sexes will be included.
3. People using laptop, desktop or both.
4. Individuals using computer for more than 5hrs per day.
5. Individual working, less than 2 hours per day.

##### Exclusion criteria:

1. People with neck pain radiating down the arm.
2. People with any neurological disorder.
3. People with any previous pathology of neck.
4. People with fracture in the neck region.
5. People with inflammatory joint disease. i.e. Rheumatoid arthritis.

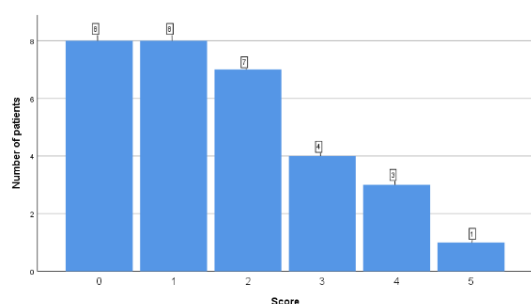
#### METHOD OF APPLICATION:

Patients were selected on the basis of convenient sampling. Patients respond to each item by marking along the items score range from 0 to 5, and the total score is a total of the item scores. Completion of the NPAD usually requires less than 5 minutes. Hard copies as well as Soft copies were provided to the patients and they were instructed to score

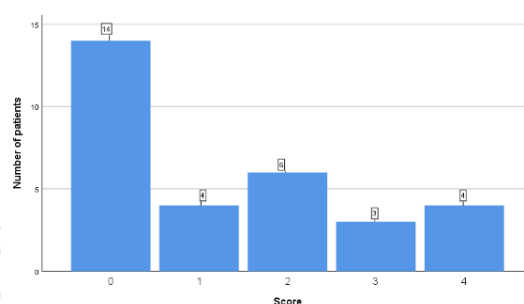
**FORMULA USED:**

<b>The test used here is Non-parametric One sample Sign Test</b>	
$H_0$ : The pain is 2.4	
$H_1$ : The pain is > 2.4	
Since the sample size is greater than 12 we use large sample approximation for one sample sign test	
n	31
p	0.5
k (number of negative signs)	27
Critical value at $\alpha=0.05$	1.64
Z	3.951317
Since Z value (3.951317) > Critical value (1.64) we reject the Null hypothesis and conclude that the pain is > 2.4	

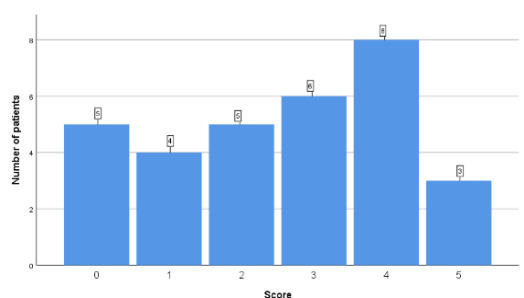
**Graph 1: Comparing question “How bad is your pain today” among 31 patients**



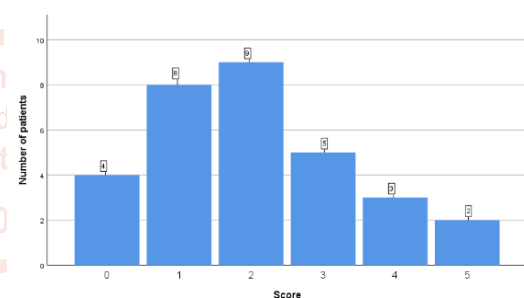
**Graph 5: Comparing “How bad is your pain with standing” among 31 patients**



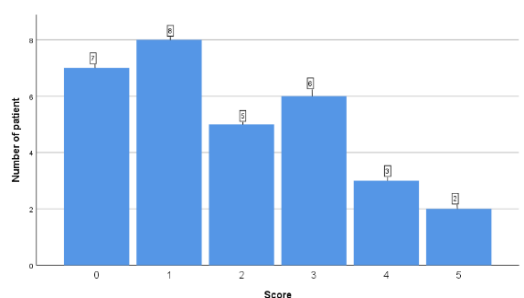
**Graph 2: Comparing “How bad is your pain on average” among 31 patients**



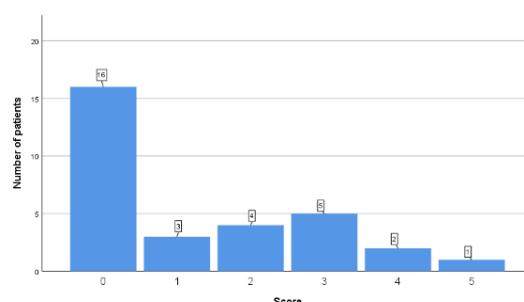
**Graph 6: Comparing “How bad is your pain with walking” among 31 patients**



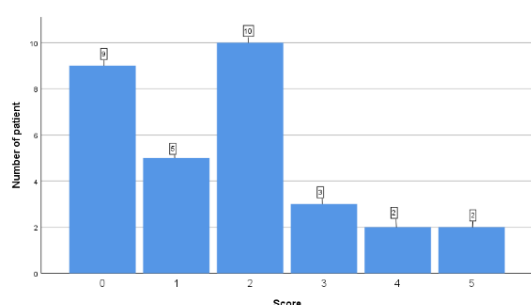
**Graph 3: Comparing “How bad is your pain at its worst” among 31 patients**



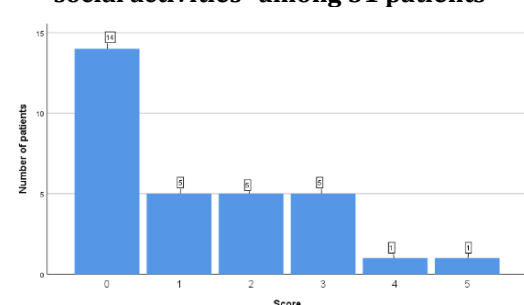
**Graph 7: Comparing “Does your pain interfere with driving or riding a car” among 31 patients**



**Graph 4: Comparing “Does your pain interfere with your sleep” among 31 patients**



**Graph 8: Comparing “Does your pain interfere with social activities” among 31 patients**





## DISCUSSION:

- Graph 1 represents question 1 of the scale that is “How bad is your pain today?” This graph shows that 8 patients have reported pain of score 3 and above (that is significant pain) on the day of evaluation. 23 patients have reported pain of score less than 3 on the day of evaluation.
- Graph 2 represents question 2 of the scale, that is “How bad is your pain on average?” This graph shows that 17 patients have reported average pain of score 3 and above (that is significant pain). 14 patients have reported pain of score less than 3 on average.
- Graph 3 represents question 3 of the scale, that is “How bad is your pain at its worst?” This graph shows that 11 patients have reported maximum pain of score 3 and above (that is significant pain). 20 patients have reported pain of score less than 3 as maximum pain.
- Graph 4 represents question 4 of the scale, that is “Does your pain interfere with your sleep?” This graph shows that 7 patients have reported pain of score 3 and above (that is significant pain) interferes with their sleep. 24 patients have reported pain of score less than 3 and does not significantly interfere with their sleep.
- Graph 5 represents question 5 of the scale, that is “How bad is your with standing?” This graph shows that 7 patients have reported pain of score 3 and above (that is significant pain) while standing. 24 patients have reported pain of score less than 3 and does not experience pain while standing.
- Graph 6 represents question 6 of the scale, that is “How bad is your pain with walking?” This graph shows patients have reported pain of score 3 and above (that is significant pain) while walking. 21 patients have reported pain of score less than 3 and does not experience pain while walking.
- Graph 7 represents question 7 of the scale, that is “Does your pain interfere with driving or riding a car?” This graph shows that 8 patients have reported pain of score 3 and above (that is significant pain) while driving or riding in car. 23 patients have reported pain of score less than 3 and does not experience pain while driving or riding in car.
- Graph 8 represents question 8 of the scale, that is “Does your pain interfere with social activities?” This graph shows 7 patients have reported pain of score 3 and above (that is significant pain) that interferes with their social activities. 24 patients have reported pain of score less than 3 and does not significantly interfere with their social activities.
- Graph 9 represents question 9 of the scale, that is “Does your pain interfere with recreational activities?” This graph shows that 8 patients have reported pain of score 3 and above (that is significant pain) that interferes with their recreational activities. 23 patients have reported pain of score less than 3 and does not significantly interfere with their recreational activities.
- Graph 10 represents question 10 of the scale, that is “Does your pain interfere with work activities?” This graph shows that 10 patients have reported pain of score 3 and above (that is significant pain) that interferes with their work activities. 21 patients have reported pain of score less than 3 and does not significantly interfere with their work activities.
- Graph 11 represents question 11 of the scale, that is “Does your pain interfere with personal care?” This graph shows that 6 patients have reported pain of score 3 and above (that is significant pain) that interferes with their personal care like eating, dressing, bathing, etc. 25 patients have reported pain of score less than 3 and does not significantly interfere with their personal care.
- Graph 12 represents question 12 of the scale, that is Does your pain interfere with personal relationships? This graph shows that 4 patients have reported pain of score 3 and above (that is significant pain) that interferes with their personal relationships. 27 patients have reported pain of score less than 3 and does not significantly interfere with their personal relationships.
- Graph 13 represents question 13 of the scale, that is “How has your pain changes your outlook on life and future?” This graph shows that 4 patients have reported experiencing depression and hopelessness on score of 3 and above. 27 patients did not significantly experience depression and hopelessness.
- Graph 14 represents question 14 of the scale, that is “Does your pain affect your emotions?” This graph shows that 8 patients have reported that neck pain affects their emotions on score of 3 and above. 23 patients reported that pain does not affect their emotions.
- Graph 15 represents question 15 of the scale, that is “Does your pain affect your ability to think or concentrate?” This graph shows that 10 patients have reported that pain affects their ability to think or concentrate on score of 3 and above. 21 patients have reported that pain does not affect their ability to think or concentrate.
- Graph 16 represents question 16 of the scale, that is “How stiff is your neck?” This graph shows that 8 patients have reported experiencing stiffness of neck on score of 3 and above. 23 patients did not significantly experience neck stiffness.
- Graph 17 represents question 17 of the scale, that is “How much trouble do you have turning your neck ?” This graph shows that 6 patients faced difficulty while turning their neck on score of 3 and above. 25 patients did not significantly experience difficulty while tuning their neck.
- Graph 18 represents question 18 of the scale, that is “How much trouble do you have while looking up and down ?” This graph shows that 5 patients faced difficulty while looking up and down on score of 3 and above. 26 patients did not significantly experience difficulty while looking up and down.
- Graph 19 represents question 19 of the scale, that is “How much trouble do you have working overhead?” This graph shows that 6 patients faced difficulty while working overhead on score of 3 and above. 25 patients did not significantly experience difficulty while working overhead.
- Graph 20 question 20 of the scale, that is “How much do pain pills help?” This graph shows represents that 21 patients did not experience relief with pills. 10 patients experienced complete relief with pills.

- Hence, graphs 1 to 20 show that a significant number of patients were experiencing a significant disability and affectation in their daily life and occupational performance, as was seen from the following questions of the NPAD scale:
- "How bad is your pain on average?"
- "Does your pain affect your ability to think or concentrate?"
- "Does your pain interfere with work activities?"
- "How bad is your pain at its worst?"
- Graph 21 shows the comparison between the total scores of 31 patients.
- 50-100 : maximum pain: 4 patients
- 30 - 50 : moderate pain: 15 patients
- 0 - 30 : mild pain: 12 patients

## CONCLUSION

According to the study conducted, it was seen that neck pain was significantly present among sedentary workers, and it was seen to interfere in their occupational performance and daily life.

This study can be further expanded to include treatment methods for the patients, which may include:

- Physical agent modalities – hot / cold fomentation
- pain medication
- corticosteroid injections
- muscle relaxants
- neck collar
- traction
- antibiotics
- surgery, which is rarely necessary
- Cervical mobilization / manipulation
- Thoracic mobilization / manipulation
- Stretching exercises
- Co-ordination, strengthening and endurance exercises
- Patient education and counseling
- Relaxation techniques

## Limitation and Suggestion:

The current study only investigated the prevalence of NP and associated risk factors. Future studies should focus on the assessment of different protective strategies and long-term

follow up with a greater emphasis on the effect of ergonomic factors to reduce the impact of NP on office employees.

## References:

- [1] Fejer R, Jordan A, Hartvigsen J. Categorising the severity of neck pain: establishment of cut-points for use in clinical and epidemiological research. *Pain*. 2005; 119(1-3): 176 -82 [DOI][PubMed]
- [2] Ranasinghe P, Perera YS, Lamabadusuriya DA, Kulatunga S, Jayawardana N, Rajapakse S, et al. Work-related complaints of arm, neck and shoulder among computer office workers in an Asian country: prevalence and validation of a risk-factor questionnaire. *BMC Musculoskelet Disord*. 2011; 12 : 68 [DOI][PubMed]
- [3] Daffner SD, Hilibrand AS, Hanscom BS, Brislin BT, Vaccaro AR, Albert TJ. Impact of neck and arm pain on overall health status. *Spine (Phila Pa 1976)*. 2003; 28(17): 2030-5 [DOI] [PubMed] Bassols A, Bosch F, Banos JE. How does the general population treat their pain? A survey in Catalonia, Spain. *J Pain Symptom Manage*. 2002; 23(4) : 318 -28 [PubMed]
- [4] Borghouts JA, Koes BW, Vondeling H, Bouter LM. Cost-of-illness of neck pain in The Netherlands in 1996. *Pain*. 1999; 80(3) : 629 -36 [PubMed]
- [5] Brandt LP, Andersen JH, Lassen CF, Kryger A, Overgaard E, Vilstrup I, et al. Neck and shoulder symptoms and disorders among Danish computer workers. *Scand J Work Environ Health*. 2004; 30(5) : 399 -409 [PubMed]
- [6] Jensen C. Development of neck and hand-wrist symptoms in relation to duration of computer use at work. *Scand J Work Environ Health*. 2003; 29(3) : 197 -205 [PubMed]
- [7] Juul-Kristensen B, Jensen C. Self-reported workplace related ergonomic conditions as prognostic factors for musculoskeletal symptoms: the "BIT" follow up study on office workers. *Occup Environ Med*. 2005; 62(3) : 188 -94 [DOI][PubMed]
- [8] Ortiz-Hernandez L, Tamez-Gonzalez S, Martinez-Alcantara S, Mendez-Ramirez I. Computer use increases the risk of musculoskeletal disorders among newspaper office workers. *Arch Med Res*. 2003; 34(4): 331 -42 [DOI] [PubMed]
- [9] van den Heuvel SG, van der Beek AJ, Blatter BM, Bongers PM. Do work-related physical factors predict neck and upper limb symptoms in office workers? *Int Arch Occup Environ Health*. 2006; 79(7) : 585 -92 [DOI][PubMed]

## ANNEXURES

### Neck Pain and Disability Scale

Name \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_  
 Last First Middle Initial Month Day Year  
 ID Number \_\_\_\_\_ Chart Number \_\_\_\_\_ Examiner's Initials \_\_\_\_\_

PLEASE MAKE AN "X" ALONG THE LINE TO SHOW HOW FAR FROM NORMAL TOWARD THE WORST POSSIBLE SITUATION YOUR PAIN PROBLEM HAS TAKEN YOU  
 SCORE

1. How bad is your pain today?  
 0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NO PAIN MOST SEVERE PAIN

2. How bad is your pain on average?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NO PAIN MOST SEVERE PAIN

3. How bad is your pain at its worst?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NO PAIN CANNOT TOLERATE

4. Does your pain interfere with your sleep?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NOT AT ALL CAN'T SLEEP

5. How bad is your pain with standing?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NO PAIN MOST SEVERE PAIN

6. How bad is your pain with walking?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NO PAIN MOST SEVERE PAIN

7. Does your pain interfere with driving or riding in a car?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NOT AT ALL CAN'T DRIVE OR RIDE

8. Does your pain interfere with social activities?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NOT AT ALL ALWAYS

9. Does your pain interfere with recreational activities?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NOT AT ALL ALWAYS

10. Does your pain interfere with work activities?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NOT AT ALL CAN'T WORK

11. Does your pain interfere with personal care (eating, dressing, bathing, etc.)?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NOT AT ALL ALWAYS

12. Does your pain interfere with personal relationships (family, friends, sex, etc.)?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NOT AT ALL ALWAYS

13. How has your pain changed your outlook on life and the future (depression, hopelessness)?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NO CHANGE COMPLETELY CHANGED

14. Does pain affect your emotions?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NOT AT ALL COMPLETELY

15. Does your pain affect your ability to think or concentrate?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NOT AT ALL COMPLETELY

16. How stiff is your neck?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NOT STIFF CAN'T MOVE NECK

17. How much trouble so you have turning your neck?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NO TROUBLE CAN'T MOVE NECK

18. How much trouble do you have looking up and down?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NO TROUBLE CAN'T LOOK UP OR DOWN

19. How much trouble do you have working overhead?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

NO TROUBLE CAN'T WORK OVERHEAD

20. How much do pain pills help?

0|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|5 \_\_\_\_\_

COMPLETE RELIEF NO RELIEF

TOTAL SCORE \_\_\_\_\_ AGE \_\_\_\_\_ OCCUPATION \_\_\_\_\_

