

Prevalence of Cervical Pain & its contributing factors in Bank Officers

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ABSTRACT:

Aims and Objectives: The aim of this study was to find the prevalence of cervical pain, to investigate the effect of work overload on the cervical region, and to explore the effect of awkward posture on the cervical pain among bank officers.

Methodology: In this study, cross sectional survey was used to accumulate the data from participants. One hundred and ten bank officers who met the inclusion and exclusion criteria were involved in this study. Modified questionnaires NDI and NBQ were used for data collection procedure. The obtained data was entered and analyzed by using Statistical Package For The Social Sciences (SPSS).

Result: Results revealed that 66.36% participants had neck pain of which 48.18% of the bank officers reported the neck pain due to awkward posture, 55.45% of the bank officers informed neck pain due to work overload and the most common causes of neck pain reported in partakers was muscle spasm which was 57.3%.

Conclusion: Our study established that there was an association between prevalence of cervical pain and work overload and awkward posture that can be reduced by encouraging the postural and ergonomic adaptations.

Key words: Cervical pain, neck pain, bank officers, work overload, awkward posture,

INTRODUCTION :

In many professions especially banking, initially paper work was used to be done. However, with the advancement of technology, usage of computer replaced papers work in banking profession which created health related problems in workers and other offices due to continuous usage of computer and posture unawareness. Awkward posture and prolonged working hours on computers can lead to health problems such as fatigue, eye strain and musculoskeletal disorders (MSDs) (Warikoo, 2013).

It is observed that approximately 70 % of the people experiences cervical pain at any stage of their life (Daniels and Hoffman, 2010). In addition. Cervical pain is most common problem

& approximately two-thirds of population having cervical pain at any stage of their life. Moreover, sedentary life style, demanding work, less physical activity, prolonged sitting with stoop neck lead to the more stress on their cervical region (Binder, 2007).

Neck disorders are more common in office workers due to their work overload especially in those who are continuously using computers. Many psychosocial, physical & individual factors increases the cervical disorders related to working environment and psychosocial factors play key role in causing cervical pain (Cagnie, et al., 2007).

Work overload affect the physical and mental health of bankers and lead to the psychological and psychosocial problems such as anxiety and depression, mood swings, sleep disturbance & interference with the leisure activities (Warikoo, 2013).

According to Ariens, et al. (2001) psychosocial work-related variables may include aspects of content, organization, and interpersonal relationships at work, finance and economy. Individual factors act as confounders influencing the relationship between the psychosocial demands & increase chances of cervical pain, which lead to the emotional and psychological disturbance.

Anxiety, distress, mood swings, cognitive functioning, nature of pain and stress are major risk factors for neck pain (Linton, 2000). Prolong working in a static posture or repetitive movements and work over load during work are the major risk factors for cervical pain (Straker, et al., 2009).

Most commonly reported Musculoskeletal Disorders among bank officers in Kuwait by Akrouf, et al. (2010) is 53.5% pain in cervical region. Furthermore, Sadeghian, et al. (2012) cervical pain prevalence was 39.6%. Results of another study conducted in Sri Lanka Ranasinghe, et al. (2011) shows high prevalence of neck pain.

The aim of this study is to find the prevalence of cervical pain & to investigate the effect of work overload and awkward posture on the cervical pain among bank officers

METHODOLOGY:

A cross sectional survey and non-probability purposive sampling technique was applied to conduct this study. One Hundred and ten bank officers who gave consent & met the inclusion/exclusion criteria were added in our study. Data was collected by using modified questionnaires NBQ & NDI that included all personal data & information regarding the neck pain of the participants. Visual analogue scale

was used to measure the intensity/severity of the cervical pain.

The **Neck Disability Index (NDI)** consists of ten (10-items) and it was reliable & has test-retest score ($ICC=0.96$), for patients having cervical pain the Neck Disability Index (NDI) had proven to be a reliable and sensitive tool (Vos, Verhagen and Koes, 2006).

The **Neck Bournemouth Questionnaire (NBQ)** consists of 7 items Validity & reliability results shows that “The instrument was reliable in test-retest administrations in stable patients ($ICC = 0.65$) and has been shown to be reliable, valid and sensitive to clinically meaningful change in patients with nonspecific neck pain” (Bolton and Humphreys, 2002). Five items from NDI & five from NBQ were used according to circumstances & objectives of the study.

Statistical Analysis and Result:

Collected data entered into the Statistical package for social sciences (SPSS) software and was used for the analysis of data and presented with the help of charts, frequency tables & chi squares.

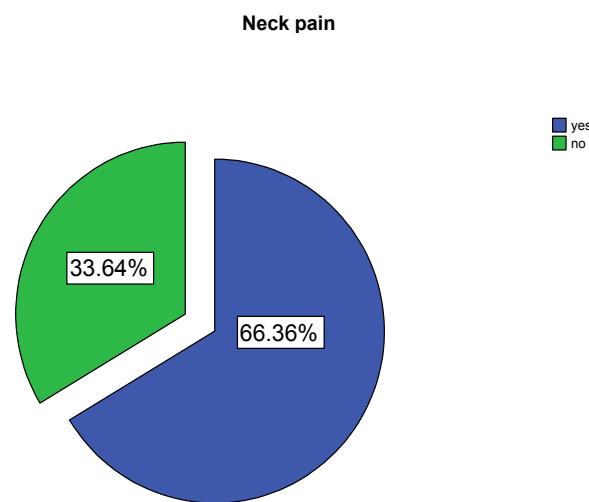


Figure 1: Neck Pain

Figure 1 shows ‘Neck pain’ had 2 categories yes and no. Total sample size was 110 in which 66.36% (73) participants had neck pain and 33.64 % (37) participants had no neck pain.

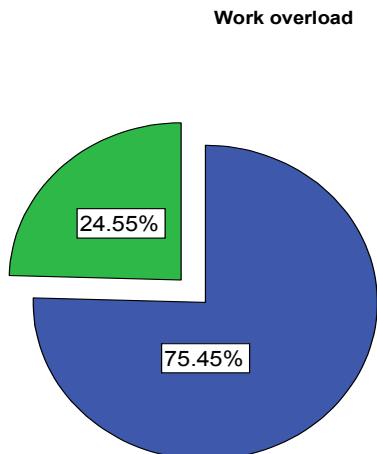


Figure 2: Work load

Figure 2 shows variable 'Work Overload' having two categories yes and no. total participants were 110 in which 75.45% (83)participants had work overload and 24.55%(27) participants had no work overload.

Table 1: Neck pain * Work overload Cross-tabulation

		work overload		Total
		Yes	No	Yes
Neck pain	Yes	61	12	73
	No	22	15	37
Total		83	27	110

55.45%(61participants) reported neck pain due to work overload. Chi-square was applied to find association between neck pain & work overload, the p-value was 0.009 which was less than 0.05 so there was association between neck pain & work overload.

Figure 2 shows variable 'Awkward posture' having two categories yes and no. total participants were 110 in which 60.91% of participants had awkward posture and 39.09% of participants had no awkward posture.

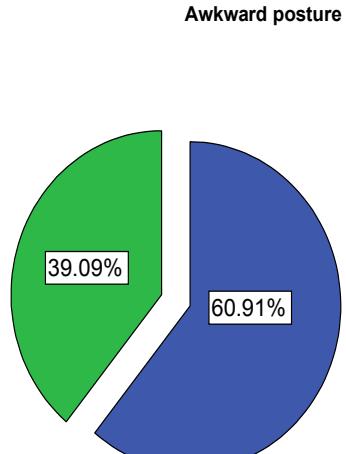


Figure 3: Awkward Posture

Table 3: Neck pain * Awkward Posture Cross tabulation

		Awkward Posture		Total
		Yes	No	Yes
Neck pain	Yes	53	20	73
	No	14	23	37
Total		67	43	110

48.18%(53 participants) reported neck pain due to awkward posture. Chi-square was applied to find the association between neck pain & awkward posture, in which the p-value was 0.001 which was less than 0.05 so there was association between neck pain & awkward posture.

RESULTS:

The age limitation was 25-60 years and mean age was 34.0909, St. is \pm 9.528 in which 84.5% were males and 15.5% were females. 66.36% bank officers reported cervical pain. 75.45 % participants had work overload and 55.45% of the bank officers who reported neck pain due to work overload. 60.91% participants had awkward posture and 48.18% of the bank officers who reported neck pain due to awkward posture.

DISCUSSION:

In this study 66.36% (73) bank officers reported cervical pain. It is supported by many studies, as according to Sadeghian, et al. (2012) cervical & shoulder pain prevalence was 39.6%.

This percentage was higher in the results of related studies in Japan (Iwakiri, 2004), Sudan & New Zealand (Harcombe, et al. 2009) and results of similar studies in Sri Lanka (Ranasinghe et al., 2011) and Germany (Eltayeb, et al., 2009) was greater than this percentage. According to choobineh, et al. (2006) cervical pain was reported 59.9%. Some other studies supported our results they reported higher prevalence of cervical pain than shoulder region pain conducted on computer users (Ranasinghe, et al., 2011; Eltayeb, et al., 2011; Harcombe, et al., 2011)

According to results of this study 75.5% participants had shown work overload and there was 55.45% of the participants who reported neck pain due to work overload. As Keshawri (2008) had investigated that major type of cervical pain was muscular spasm presented by 70% of participants due to work overload.

In current study 60.91% participants had shown awkward posture and 48.18% of the participants reported neck pain due to awkward posture. It is supported by Winkei, et al. (1992) static awkward posture is the leading cause of neck pain. Cervical pain is very common in many other professions as reported by many researches, as according to (Kuorinka, et al., 1995).

The rate of cervical pain was higher in white collar professions than blue collar workers due to their static posture & according to a research on drivers by Magnusson, et al. (1996) cervical pain is higher in truck drivers than bus drivers. 26). According to Ariens, et al. (2000) cervical pain prevalence was higher in dentists because they use drills of high speed.

Greater prevalence of musculoskeletal problems is the predictor of “organization failure” There should be proper management to increase efficiency & quality. There should be planes related to ergonomics to decrease prevalence of

musculoskeletal disorders and improvement of employee's.

CONCLUSION:

The study concluded that the prevalence of cervical pain is associated with work overload and awkward posture that can be reduced by encouraging the postural and ergonomic adaptation . Results show that 66.36% of the participants reported neck pain, 55.45% shows neck pain due to work overload and 48.18% shows neck pain due to awkward posture.

Limitations of the study:

This study is conducted on the bank officers of Faisalabad so this is applicable for the bank officer of Faisalabad results may not be generalized for the all bank officers of Pakistan. Because there are gender, age, ethnicity, and environmental differences between Faisalabad and other areas of Pakistan.

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