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PREVALENCE OF NECK PAIN IN BANKERS OF LAHORE

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ABSTRACT

Banking sector line is very necessary for the economical establishment of Pakistan. As in this profession work takes longer duration and also sizeable use of computer therefore neck pain is very common. However still there is lack of researches on this issues related to profession. So, neck pain in bankers was an essential concern. To find out the prevalence of neck pain among bankers a cross sectional study was conducted in the banks of Lahore. Data was collected by using self-made questionnaire in which 416 candidates participated. Sample size was calculated by Epitool Sample Size Calculator. Descriptive analysis was used which mainly focuses Bar Charts. Inclusion criteria included both gender with neck pain in age 18-55 years `whereas exclusion criteria included any disc prolapsed, trauma sand cervical spondylosis.416 candidates participated; out of which 176 have pain while rest of them has no pain. Their mean ages were 29.85 ± 6.82 years and the mean pain was 4.09 ± 1.509 on VAS (pain rating scale) and their duration of work was 8-12 hours maximum. While the prevalence of neck pain among bankers was 42.4%. The prevalence of neck pain in bankers was 42.4% in which 26.99% in male and 15.42% in female because the data which was collected consist of male compared to female.

Key Words: Numeric rating pain scale (VAS), Prevalence of Neck pain, Bankers

INTRODUCTION

Fast technological development, may affect workers, especially in the use of electronic data. Electronic statistics are mostly displayed on visual display screen. Neck pain is one of the health hazards caused by inappropriate body posture and long hours in front of these instruments (Jensen, *et al.*, 2002). A study in Finland showed that approximately 26% of 14 to 18-year olds experienced neck pain occurred at least once a week (Hakala *et al.*, 2006). Frequent studies have revealed that neck pain in teenagers is increasing, in recent years (Palmer *et al.*, 2000; Hakala *et al.*, 2002). These occurrence rates are particularly elevated in girls (Auvinen *et al.*, 2010; Pollock, *et al.*, 2011). Cervicalgia is also known as neck pain (Binder 2007). Neck pain at some point in their live is the common problem, with two-thirds of the population, 67% neck ache and disabilities are common in general population at some time at their lives (March *et al.*, 2014). Muscular stiffness of both neck and upper back, or impingement of the nerves radiating from the cervical vertebrae may arise neck pain along with joint disruption in the neck generates pain (Côté *et al.*, 2008). Pain can be acute or chronic. The pain that occurs suddenly from an injury or stress is acute pain. Within 7-10 days most of time the pain resolves itself by taking pain killers, rest or by using ice. The pain that continues longer than few weeks, a systemic assessment by a medical doctor is recommended which can be treated with conservative therapy (Côté *et al.*, 2008). Some neck pain causing factors include faulty positioning, depression, anxiety , strain of neck, and occupational activities (Binder 1993, Binder 2007). It also suggests that manual and low laser therapy, supervised exercise therapy are much more effective than other conventional treatments (Hurwitz *et al.*, 2009). In lower back pain; headache associated with neck and migraine; manipulation /mobilizations of spine is very useful in adults (Bronfort *et al.*, 2010). It is reported that in western countries, (Fejer *et al.*, 2006) and in Hong Kong (Chiu and Leung, 2006) the incidence of pain in neck were in between 34 - 54% and 64 % respectively. In Iran with an obvious difference in rural (17.9) and urban (13.4) , the prevalence of neck pain was reported as the highest rates in the Asia and Pacific area (Davatchi 2006). Among office workers in Iran 24.5% was reported to have neck pain in a survey in 2012 (Chamani *et al.*, 2012). A normal neck function as 32% in Hong Kong population was reported as 1 year incidence of neck

pain (Lau, Sham and Wong, 1996). The pathos-physiological mechanisms of neck ache are yet to be determined. In 1997, 688 office workers were studied by the Occupational Health and Safety Council and the Rehabilitation Sciences, Department of the Hong Kong Polytechnic University. In a local epidemiological study. The study revealed that out of all 98% were computer operators and half of them using VDU for more than 6 hr/per day. 56% discomfort was found in 1st year of prevalence of neck pain (Chiu *et al*., 2002). The aim of this survey was to find out the prevalence of neck in bankers because as there was no study conducted in Pakistan yet.

LITERATURE REVIEW

Frequency of neck pain in various populations is fairly high. In general agreement, however, person's quality of life is affected by the symptom and need for health care (Brattberg, Thorslund and Wikman, 1989; Côté *et al*., 2004). The prospective studies on occurrence of neck pain are not completely similar because of differences in their designs (Hasvold and Johnsen 1993). Epidemiology of neck pain is significant. Extra information about the extent and size of this problem would make possible correct predictions of the need for physiotherapy in developed countries. Neck pain is common in young aged people and contributes prominently to the requirement for the general economy. Burden of work is due to absence from work because of sickness and medical services. Studies on population based samples suggested life span prevalence of 70% and a top prevalence was in between 12% and 34% (Borghouts, Koes and Bouter, 1998; Croft *et al.*, 2001).

FHP(Forward Head Posture) where the head is located onward, is a posture that frequently appear in cervical trouble patients as a means of diminishing the curve of the cervical spine (Hickey *et al.*, 2000). Workstations design in offices or banks have vast impact on worker's fitness. Efforts are made in order to generate an environment for working that would improve the capabilities of work of the workers and decrease the risk factors in order to increase a variety of musculoskeletal disorders. Relationship of worker and his or her environment optimizes by the applying the ergonomic principles on workstations (Eltayeb *et al.*, 2007). The study conducted in Pakistan studied 120 participants including 48.33% females. Mean standard deviation for the age of participants in private sector and public bankers was 32.82 ± 6.240 and 30.79 ± 5.055. Out of 120, 63 respondents were from private banks and 57 were from public banks.16.67% of participants used adjustable keyboards. Material used for back care was used in 40% of bankers. 95.83% of the respondents used adjustable chairs, whereas only 3% of the bankers were not having chairs. 25% bankers used chairs with comfortable arm rests. 72.2% participants used monitors of adjustable level. The 65.83%, 73.33% and 68.33% are percentages of participants who were able to move to move wrist, knees and elbows freely. 71.67% of the respondents had pain while working hours and 48.33% had shoulder pain. During the non-working hours 78.34% participants reported a reduction in pain level (Shabbir *et al.*, 2016).

Level of pain has been found greater in computer users who used computer for greater than five hours per day (Sabeen *et al.*, 2013). Neck pain which is related with job type, design of workstation and demand of job more prevalent among bankers of Dhaka (Islam, 2014). In one study which was conducted in Nairobi shown that many bank staffs using computer had musculoskeletal issues (Boro, Andanje and Onywera, 2012). There is solid relationship between improper workstation design and work related musculoskeletal disorders causing neck pain. Posture related neck ache was prevalent among Dhaka bankers in private sector bankers and public sectors (Naqvi, Zehra and Nizami, 2013). Multidimensional work related disorders etiology which was related with, and predisposed by, a selection of specific individual, psychosocial or physical aspects. Among them many causative factors, psychosocial causes related to work appear which plays the main role. The study conducted by Arians, psychosocial causes might contain factors of the work related content, organizational and interactive relationships to work, economics & finance.

OBJECTIVES

- To find out the prevalence of neck pain among bankers
- Check the association between the working hour and pain

Operational Definitions

NECK PAIN : Cervicalgia is also known as neck pain (Binder, 2007). It is the feeling of discomfort in cervical region due to the compression of the structure of the neck region, which may be due muscle strain, nerve

compression, Individual factors are confusing factors which affect the relation of the incidence of neck pain and psychosocial demand (Islam, 2014) protrusion of intervertebral disc of cervical.

VISUAL ANALOGUE SCALE (VAS): It is the pain measurement scale which tries to calculate the intensity of pain that is often used in epidemic or clinical studies. The scale marked from 0-10, 0 for no pain 1-3, for mild pain 4-7 moderate pain and 8-10 as severe pain.

METHODOLOGY

Descriptive cross-sectional study was conducted in the banks of Lahore. Data was collected by using Self-made questionnaire. Sample size was calculated by using formula Epitool Sample size Calculator. The sample size was 416. Descriptive analysis was used which mainly focuses Bar Charts. Inclusion criteria included both gender with neck pain in age between 18-55 years `whereas exclusion criteria included any disc

RESULTS

Table-1: Descriptive statistics for age

Mean	Std. Deviation	Range
29.85	6.826	22-56

Table-2: Descriptive statistics for gender

Gender	Frequency	Percentage (%)
Female	96	23.1
Male	320	76.9
Total	416	100

Table-3: Descriptive statistics for working hours

Working hours	Frequency	Percent (%)
Eight	96	23.1
Ten	207	49.9
Twelve	104	25.1
Greater than twelve	8	1.9
Total	415	100

Table-4: Descriptive statistics of Visual analogue scale (VAS)

Mean	Std. Deviation	Range
4.09	1.509	1-8

Table-5: Distributions of the subjects of neck pain patients according to self-reported work related physical factors

Does neck pain increased during driving	Frequency	Percent (%)
Strongly agree	24	13.6
Agree	56	31.8
Neutral	60	34.1
Disagree	32	18.2
Strongly disagree	4	2.3
Total	176	100
Have you stop lifting heavy objects	Frequency	Percent (%)
Strongly agree	24	13.6
Agree	52	29.5
Neutral	72	40.9
Disagree	20	11.4
Strongly disagree	8	4.5
Total	176	100
Does neck pain interfere your daily activities	Frequency	Percent (%)
Strongly agree	8	4.5
Agree	56	31.8
Neutral	84	47.7
Disagree	24	13.6
Strongly disagree	4	2.3
Total	176	100

Does your pain radiate	Frequency	Percent (%)
Strongly agree	8	4.5
Agree	44	25.0
Neutral	68	38.6
Disagree	44	25
Strongly disagree	12	6.8
Total	176	100.0
Pain aggrava ted with work	Frequency	Percent (%)
Strongly agree	4	2.3
Agree	96	54.5
Neutral	56	31.8
Disagree	16	9.1
Strongly agree	4	2.3
Total	176	100
Does neck pain require any break during work	Frequency	Percent (%)
Strongly agree	16	9.1
Agree	60	34.1
Neut ral	56	31.8
Disagree	36	20.5
Strongly disagree	8	4.5
Total	176	100
Visual disturbance associated with headache	Frequency	Percent (%)
Strongly agree	24	13.6
Agree	64	36.4
Neutral	48	27.3
Disagree	28	15.9
Strongly disagree	12	6.8
Total	176	100

Feeling tingling sensation and numbness	Frequency	Percent (%)
Strongly agree	4	2.3
Agree	52	29.5
Neutral	92	52.3
Disagree	16	9.1
Strongly disagree	12	6.8
Total	176	100

Table-6: Chisquare Analysis

Gender	**Neck pain**		**Total**	***P* Value Chi Square**
	No	Yes		
Female	32	64	96	
Male	207	112	319	*P*<0.05(0.00)
Total	239	176	415	

p<0.05 Statistically significant association between gender and pain*

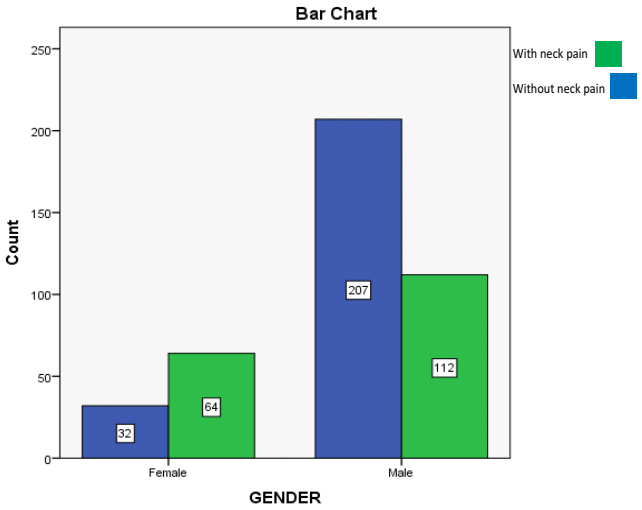

Figure1. Illustrated number of male & female candidates are suffering with and without neck pain.

DISCUSSION

A basic objective of this study was to find the prevalence of neck pain among the bankers. Electronic data was mainly displayed on visual display screen. Improper body posture and long hours in front of these instruments can result in many health hazards such as

neck pain (Jensen *et al.*, 2002). According, to this study the occurrence of the neck pain was 42.4% which means neck pain was prevalent among bankers.

Out of the 416 candidates 176 responded "YES" of having pain while 239 candidates had "NO" pain. Those 176 candidates who reported with neck pain their mean value of pain was 4.09 ± 1.509 on VAS; the pain rating scale. Moreover, their pain intensity increased with work. A study conducted in 2012 in Bangladesh, in which the prevalence of neck pain was 45.7%, that was very close to this research. Md. Saiful Islam, studied that the prevalence of neck pain was more common in women that was 66.66% than the men 43.7% (Islam, 2014). In contrary to that, in this research prevalence was more common in men than women because the sample size of this study mostly consisted of men as compared to women bankers so my outcomes have more prevalence in men bankers.

In this research there was relation between the neck pain and the working hours in which results show that the pain increases with increasing working hours 10-12 as in 2006 (Cagnie *et al.* 2017) analysis have shown that the prevalence of neck pain in bankers who had working hour more than 11 hours, which is high.

Out of the 176, who filled the questionnaire, 60 of the candidates, takes medication for relieving pain, 40 of them takes physiotherapy while rest of them take uses of other method. The population between the 55-64 years of age was more prone to neck pain. As statistics shown by Health and safety executive, 2008. However, analysis of my study shown that the mean age of neck pain is 29.85 ± 6.82 years; the minimum age was 22 years and maximum was 56 years.

Musculoskeletal problems have an element for work position ergonomics shown by latest literature. The knowledge of designing the work place, accessories to fit the candidates, appropriate ergonomic plan were all essential to avoid consecutive, muscular damage which can go for long duration disability.

CONCLUSION

The prevalence of neck pain in bankers was 42.4% in which 26.99% in male and 15.42% in female because the data which was collected mostly consisted of male than female. Therefore, the prevalence was more in male than female. The pain increases with long duration of work its intensity was usually mild to moderate. Pain is relieved by medication and by taking rest. Pain is associated with headache and visual disturbance.

RECOMMENDATIONS

- Neck pain is mainly associated with the long duration of work.
- Neck pain is not due to musculoskeletal injuries; it is also due to job related ergonomics or work places.
- The first recommendation is that we should go for the other leading causes of the neck pain in this profession.
- It also recommended to finding out the cause of neck pain related to their job.
- Specifically, to the age related neck pain.
- As I collected my data randomly, so I recommended more relevant studies on specific age groups.

LIMITATIONS

- My study limited to the area of Lahore.
- Time duration.
- Lack of resources

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