ORIGINAL | INDEPENDENT JOURNAL OF ALLIED HEALTH SCIENCES

https://doi.org/10.29309/IJAHS/2022.5.01.0574 IJAHS-0574

COMPARISON BETWEEN AWARENESS OF ERGONOMICS AMONG BANKERS OF PUBLIC AND PRIVATE SECTOR IN ISB/RWP

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Date of Received: 23/02/2022 **Date of Acceptance:** 13/04/2022

ABSTRACT

Objective: To compare the awareness of the ergonomics among bankers of public and private sector in Islamabad and Rawalpindi. **Study design:** comparative cross sectional survey. **Setting:** Private and Public Sector Banks in Islamabad and Rawalpindi **Period:** Jan 2021 to June 2021 within duration of 6 months. **Materials and Methods:** After getting approval from institutional review committee, Data was collected using non-probability purposive sampling technique.120 bank employees of both genders within age range of 20-60 years, with at least 6 months' experience were included and those with any previous musculoskeletal disorder/dysfunction, following any physiotherapist, physician etc. for correction of ergonomics were excluded. Maastricht Upper Extremity Questionnaire (MUEQ) was administered for data collection. Data was analysed using SPSS version 20. **Results:** Score of neck pain (36.67% in public bankers, 35% in private sector) and shoulderpain (28.33.67%in public bankers, 20 in private sector) showed that its more prevalent in public sector bankers as compare to private sector. On the other hand, private sector bankers have more access to ergonomically friendly environment, including use of back care material (16% in public bankers, 32% in private sector), adjustable height chair (54% in public bankers, 63 in private sector), monitor level adjustments (58% in public bankers, 63% in private bankers), freely moveable elbow, wrist and knee (28.33%, 28.33% and 27.50% in public and 37.50%,40.00 and 45.87% in private bankers) as compare to pubic sector bankers. **Conclusion:** The results show that private sector bankers were more aware about their health and postures as compared to the public sector bankers.

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Key words: Body Posture (BP), Ergonomics (ERGs), Musculoskeletal Dysfunction (MSD)

Article Citation: Rehman A, Shabbir M, Baig M, Shafi H, Bashir S, Begum R, Qazi L W. Comparison between awareness of ergonomics among bankers of public and private sector in ISB/RWP. **IJAHS,** Jan-Mar, Apr-Jun 2022;01,02(18-22):01-05. https://doi.org/10.29309/IJAHS/2022.5.01.0574

INTRODUCTION

A very less literature is available in Pakistan about working place conditions in relation to occupational hazards and its remedial measures. Employees are not trained at the start of their tasks about safety measures of certain work which causes injuries and lifelong damages. If ergonomic standards are actually applied in our work places, the musculoskeletal disorders will decrease down. Focusing this view, I started work on awareness of ergonomics.

The word ergonomics comes from Greek origin, "ergo" and "nomos", meaning work and law respectively. The word was coined by the late professor Hywell Murrell, as a result of meeting of a working party.[1] The relevance of this science to design a workplace in terms of tasks of the employee, make use of tools and the overall environment is called ergonomic design. A good

ergonomic design not only maximizes the capabilities of workers by increasing efficiency and job contentment, but also payback the company by decreasing the cost for health and absence of recruits. In further terminology, ergonomics makes sure "appropriating the duty to the worker".[2] Computer use has progressed fast in last 10 years. The health signs caused by recurring computer use that is characterized by neck, shoulder, elbow, wrist and hand pain, paresthesia, and numbness can be called 'Computer Related Upper Limb Musculoskeletal (ComRULM) disorders.[3]

The term "WMSDs" refers to musculoskeletal disorders to which the work environment and the performance of work contribute significantly or the musculoskeletal disorders that are made worse or longer long-lasting by job circumstances. These office danger factors, along with individual characteristics (e.g. physical limitations or existing health problems) and communal factors, are attention to supply to the growth of WMSDs.[4] Neck discomfort (35.0%) and shoulder discomfort (38.8%) were most prevalent among the administration group, whereas wrists/hands discomfort (33.3%) and upper back discomfort (31.95) were prevalent among bankers.[5] A self-reported survey showed that, the prevalence of musculoskeletal problems in general population of office workers was 42% in head and neck, 28% in upper back and 34% in lower back.[14] Annually, approximately 1 million people take time away from work because of repetitive motion or overexertion to treat or recover from musculoskeletal pain or functional loss.[6] Female gender, daily computer handling, mistaken computer positioning, wrong body posture, bad work-habits (sitting for long hours in one position, working with lifting shoulders and performing repetitive tasks), work overload and poor communal bear, were appreciably associated with neck complaints.[7] It has been generally accepted that the risk of developing musculoskeletal problems is due to poor posture and stationary positions of bank workers.[8] Symptoms like pain, numbness, tingling etc. in various body parts similar to wrists, shoulders, rear and legs and eye strains happen due to inadequate seating, lack of short breaks during work and improper viewing distance. Such symptoms are the warning signs of current or impending musculoskeletal disorders, such as peripheral nerve entrapments (e.g. carpal tunnel syndrome, ulnar tunnel syndrome), peripheral enthesopathies (e.g. shoulder tendinitis, lateral epicondylitis, pass wrist tendinitis) and a lot of additional non precise musculoskeletal soreness disorders.[9]

The European Foundation for the Improvement of Living and Working Conditions (EFILWC) indicated that women tended to perform more recurring career on average, whereas men were less likely to sit for long-drawn-out periods. Furthermore, women are more often open to the elements to added stress from unpaid labor such as housekeeping and child care.[10] In 1979, the United States National Institute for Professional Health and Safety issued a report that 25% suffered keyboard operators "Professional Cervico-brachial syndrome", which was a model of the neck, arm, shoulder and back strain with frequent inflammation of tendons.[11] A study conducted in banking institutions of Nairobi and Kenya indicated that majority of employees do not know about the application of ergonomics in the work place and women (41.32%) were more aware of the applicability of ergonomic exercises of men (35.71%).[12] Ergonomists often suggest medications work equipment and work live out design, and tender leadership in scheduling adequate periods of rest (recovery intervals). Redesign work practices or equipment only on the following objectives: (1) dipping uncomfortable postures i.e. anatomical positions deviate from Physiological neutral), (2) minimizing the want to use excess force, (3) reduction of highly repetitive movement, (4) reduce spending prolonged periods in one situation (e.g., stationary posture) and (5) providing enough rest / healing periods.(13) Appropriate use of computer workstations can help reduce bodily uneasiness arising from the use of computers for extended hours which can be achieved by adjusting the seating and posture

of the worker, rather than adjusting the ratio of worker keypad and display, and lighting and carefully examine the early treatment should include avoiding provocative exposures, workplace drugs, NSAIDs, and for cases with symptom period longer than four weeks, or for cases associated with severe pain, physical or occupational therapy Ranked.[14] Therapeutic modalities widely used for regional function of ice or heat, manual modalities such as Myofascial release and deep friction rub down, transcutaneous electrical nerve stimulus, ultrasound, iontophoresis, stretching and strengthening exercises.[15] Furthermore awareness programs are also known to be cost efficient investments for employers, as it reduces the happening of symptoms, improve efficiency and reduce medical cost.[16]

MATERIAL AND METHODS

It was acomparative cross sectional study, after getting approval from institutional review committee, it was conducted among private and public sector bankers of Islamabad and Rawalpindi area which is also called as "North" as a region in banking industry of Pakistan for the duration of 6 months.120 participants were included using Purposive sampling technique, who met the inclusion criteria of Age group (30-40), Bank employee (17th Grade or above in case of public bank), Both male and female with at least 6 months' experience. Interns, bankers not willing to participate or having any previous MSD and following any physiotherapist, physician etc. for the correction of ergonomics were excluded from the study. Participants were enrolled from National Bank, United Bank Limited, Habib Bank Limited, Faysal Bank, Bank Al Habib, Habib Metropolitan Bank, KASB Bank, Standard Chartered Bank, Dubai Islamic Bank, Summit Bank and Muslim Commercial Bank. Data was collected by taking written permission from the main branches of above-mentioned banks in Islamabad and Rawalpindi as well as a verbal consent was taken from the bankers after explaining the objective of the study. Maastricht Upper Extremity Questionnaire (MUEQ) was remodelled and important questions were subtracted from its detailed version. Validation of this questionnaire has been done through literature review. This was done to create easy solution way for bankers to understand the research problem and answer in the simplest way. The questionnaire assessed their working posture while using computer and work activities.

Ethical Approval: Data was collected by taking written permission from the main branches of above-mentioned banks in Islamabad and Rawalpindi as well as a verbal consent was taken from the bankers after explaining the objective of the study. The questionnaire assessed their working posture while using computer and work activities.

RESULTS

Total 120 participants were included, out of which 62 were male and 58 were females (Graph 1.1), with the mean age of 31.76±5.71.

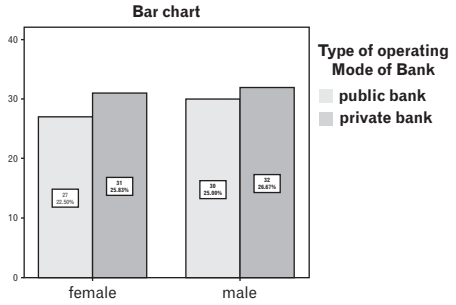

Figure: 1.1 Gender of subjects

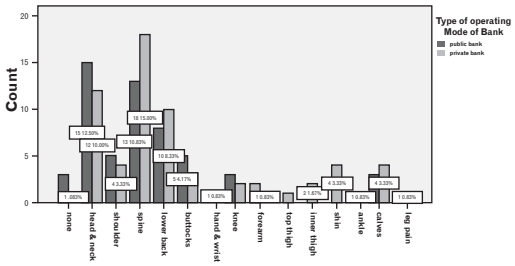

Figure: 1.2 Pain affecting area

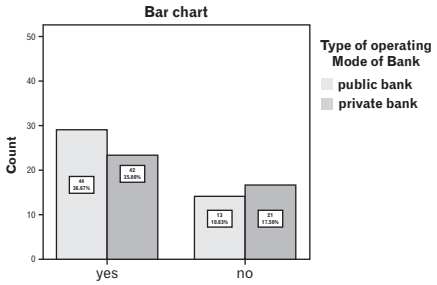

Figure: 1.3 Pain in neck

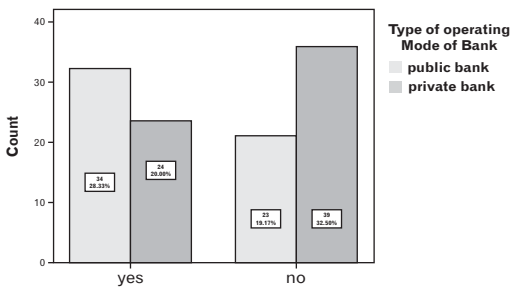

Figure: 1.4 Pain in shoulder

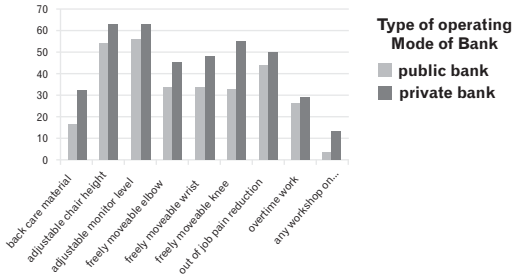

Figure: 1.5 Gender of subjects

DISCUSSION

This study mainly compares ergonomics awareness among public and private sector bankers and main findings indicate that primary areas to be effected are neck, shoulder and spine. All the ergonomics related activities analysis showed that private bankers are more aware of their work-related ergonomics and have more access to ergonomically modified work places as compare to public bankers. The bankers working in private banks are provided with more facilities as compared to public bankers as the previous findings coincide with the findings of this research study. The facilitated work environment leads to less development of ergonomic related issues among private than public bankers. The private bankers were more aware about the usage of Personal Protective Equipment (PPE) which usually provides a fence between the worker and hazard cause. Environmental friendly workplaces are more supportive in keeping employee in good health. As precedence, back pain and other musculoskeletal symptoms are a major health problem in the developed countries. On the other hand, MSD prevails at large in the underdeveloped nations. So these discussed previous findings were common with the findings of current study of private and public bankers' population.[17] There is need to create more awareness among public bankers that private ones about workplace ergonomics. A study conducted by Ryan suggested in his study that if ideal ergonomic environment is provided, this will lead to less development of physical fatigue, as well as less complaints of muscle pain and improved efficiency of doing work the results of this study support our findings as well as it is seen in private bankers and can be implemented among public bankers[18] In short, changing the resources such as using mechanical aid devices; alter work processes and decrease exposures to risk factors that can lead to ergonomic related musculoskeletal issues and findings also correlate with the findings of our study.

CONCLUSION

The findings of this study conclude that private sector bankers were more vigilant about their health. They were more frequently using back care support material as compared to public bankers; similarly, they were using adjustable chairs more frequently than public bank employees. The height of chairs which private bankers use is adjustable, whereas in public banks, greater number of employees feel pain in their arms, wrists, knee and back. Moreover, private bank employees also feel less pain outside job hours, which shows that private bankers are less exhausted during their job timings and feel fewer burden. On the basis of these findings, we can conclude that lack of facilities related to ergonomically friendly environment can increase the risk of musculoskeletal dysfunctions and other related injuries.

Recommendations

This study can further be used to determine the prevalence of MSDs in other sectors e.g. education industry where administrative and clerical staff has to perform task mostly in sitting postures. Employee physical engagement programs should be planned in work environment that contain active employee participation, such as classes, seminars that may reduce sitting duration or restraining overtime; preparation of more breaks to permit rest and improvement; revolving workers through several jobs with different physical load to reduce anxiety on the body; and adjusting the rapidity of work to alleviate repetitive motion risks and boost worker control of the job process so that common work related Musculoskeletal disorders can be avoided among public bankers as well just like the private bankers. Lastly, study with the larger sample size should be conducted for more generalizability. **Conflict of Interest:** There is no conflict of Interest

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