



ORIGINAL RESEARCH PAPER

Management

ERGONOMIC ASSESSMENT OF HEALTH RELATED HAZARDS AND SUGGESTIONS TO OPTIMIZE COMFORT LEVEL FOR BANK EMPLOYEES

KEY WORDS:

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INTRODUCTION

Bankers are the back bone of the Nation's economy. They are devoted to their job and give high contribution to satisfy their customers. Work load is very high in banks. They are highly pressurized to work for more than 8 hours in static sitting posture in front of computer to fulfill the demands of their job. Workstation play a vital role for healthy life of the employees. Workplace is a place where a particular work is carried out. If there is any mismatch between work, worker and work environment, it will affects the physical and mental health of the employees and leads to severe occupational health related hazards like MSDs and work related stress, postural discomfort among employees. It will create hinder in their performance, reduces their work efficiency, work capacity and minimize productivity of the organization as well as the employees and end with stress, disorders and burden among employees.

1.Musculoskeletal Discomfort (MSDs) among Bank employees

MSDs are non traumatic injuries to the back, trunk, upper extremities and lower extremities.

They may be caused or aggravated by various hazards or risk factors in the workplace.

- The musculoskeletal system includes :-
- Muscles, tendons and tendon
- Nerves Blood Vessels
- Joints/Spinal Discs
- Ligaments



Symptoms of MSDs

- Pain with/without movement
- Swelling, tenderness and stiffness
- Tingling and or numbness in nerve-related injuries or disorders
- Visual stress define as the discomfort in eyes. Some people feels it when viewing text on a page or on a screen: sometimes after ten or fifteen minutes, sometimes immediately. Symptoms vary, but can include headaches, sore eyes and eyestrain and blurred vision (especially when working at the computer).

2.Fixed or awkward posture during work -

- Posture is another term for the position of various body parts during any activity.
- For most joints, good posture is near the middle of the full range of motion. This is called the "neutral" posture.
- Bank employees hold an awkward postures for a long time (i.e., the posture is fixed)
- Examples of tasks that requires awkward postures in banks include:

Computer related tasks

- Awkward sitting posture, forwarded neck and trunk posture
- Awkward keyboard and mouse posture for long period of time.

3.Visual stress among bank employees -

Visual stress define as the discomfort in eyes. Some people feels it when viewing text on a page or on a screen: sometimes after ten or fifteen minutes, sometimes immediately. Symptoms vary, but can include headaches, sore eyes and eyestrain and blurred vision (especially when working at the computer).

Risk factors for vision problems while doing computer tasks

- Working with background lighting which is too low or bright that create glare while work on monitor.
- Sitting in an inappropriate distance from the monitor screen (less than 18-24 inches)
- Looking at the monitor screen for long periods of time, particularly without breaks.
- Working in a stressful environment.

Effects of lighting at workplace

- Poor lighting can be a safety hazard – misjudgment of the position, shape or speed of an object can lead to accidents and injury.
- Poor lighting can affect the quality of work, specifically in situation where precision is required, and overall productivity.
- Poor lighting can be a health hazard - too much or too little light strains eyes and may cause eye discomfort (burning, etc.) and headaches.

How do you test and correct for insufficient light problems:-

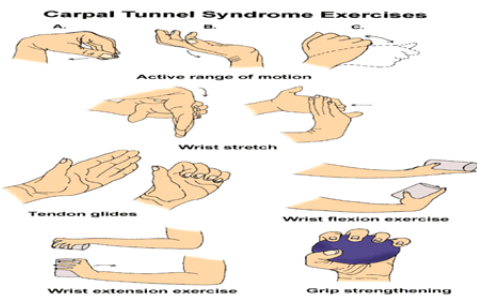
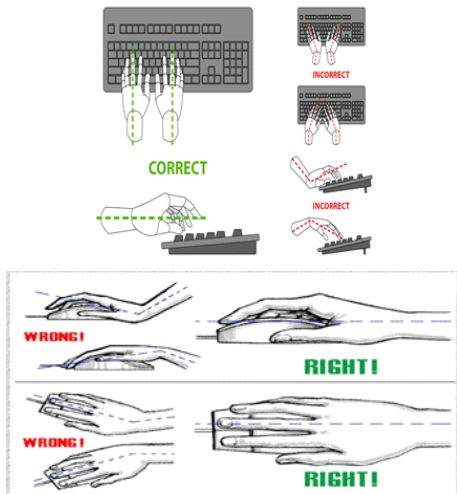
- Measure the average illumination throughout the workplace. Compare this to the recommended levels.
- Look for shadows, especially over work areas and on stairways.
- Ask workers if they suffer from eye strain or squint to see.
- Workers should sit in their normal working positions during measurement to give you accurate results.

Working condition can be improved:-

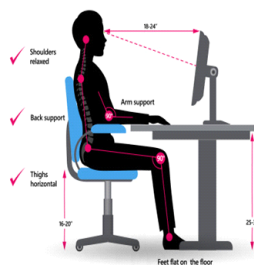
- Replace bulbs on a regular schedule. Old bulbs give less light than new ones, so replace them before they burn out. Follow manufacturers' instructions.
- Clean light fixtures regularly. Dirt on light fixtures reduces the amount of light given off. Light fixtures with open tops allow air currents to move dust up through the fixtures so dust and dirt do not accumulate on them.
- Add more light fixtures in appropriate places.
- Paint walls and ceilings in light colours so light can be reflected.
- Do not position work station with light fixture directly behind worker.
- Using several small low-intensity light fixtures rather than one large high-intensity light fixture.
- Covering bare bulbs with louvers, lenses or other devices to control light.
- Increasing the brightness of the area around the glare source.
- Using adjustable local lighting with brightness controls.
- Positioning light fixtures to reduce reflected light that is directed toward the eyes.

Some preventive measures and recommendations for improving the working posture while working with computer

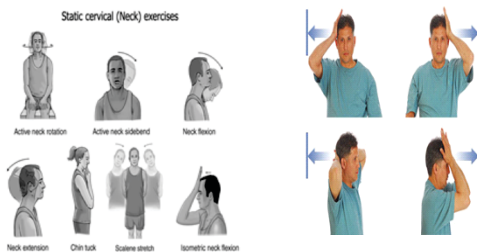
Postures of hands while working with keyboard and mouse



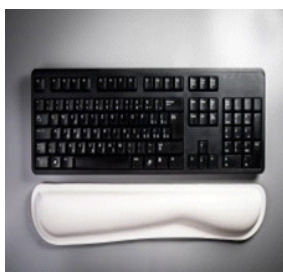
CORRECT SITTING POSTURE



Comfortable use of chair while working



Neck and shoulder relaxation exercise at workplace



enhancing work efficiency of bank employees



Ergonomic interventions for



Ergonomically designed mouse and keyboard with palm rest

CONCLUSION

It can be concluded that poor workplace and lack of knowledge of ergonomics and its use in workplace, employees faced musculoskeletal problems, postural discomfort and visual stress. Employees were unaware or having less knowledge about the proper working posture while working on computer which cause pain in neck, back and shoulders. Therefore during work, posture should be appropriate for minimizing the negative impacts on health. To generate awareness regarding ergonomics, work related musculoskeletal discomfort, postural discomfort campaigns should be organized. It will enhance the efficiency and performance of the worker and will increase the productivity of organization and reduce the health hazards and minimize absenteeism.