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Effectiveness of Yoga in Computer Workers Having Low Back Ache

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Abstract
The aim of this paper is to determine the effect of yoga in computer workers having low back ache. Back pain is a complex symptom from adolescence to adulthood. 80-85% of people suffer from this pain in modern world. Acute low back pain lasts less than 6 weeks whereas chronic Low back pain lasts for more than 12 weeks. A safe workplace design commonly presumes the decrease of physical overload factors like heavy weight, working in compulsory position or monotonously but often the work environmental hazards. The hazards in the work environment which affect office workers are considered to be stress factors that after functioning of the organs & damage the peripheral & central nervous system. Working with computers presents ergonomic risks due to fixed and often awkward postures that are maintained for too long time, repetitive & sometimes forceful.
Keywords: Monotonous, chronic pain.

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I. INTRODUCTION

Low back pain is a complex symptom from adolescence to adulthood . 80-85% of people suffer from this pain in modern world. Acute low back pain lasts less than 6 weeks whereas chronic Low back pain lasts for more than 12 weeks. A safe workplace design commonly presumes the decrease of physical overload factors like heavy weight, working in compulsory position or monotonously but often the work environmental hazards. The hazards in the work environment which affect office workers are considered to be stress factors that after functioning of the organism & damage the peripheral & central nervous system. Working with computers presents ergonomic risks due to fixed and often awkward postures that are maintained for too long time, repetitive & sometimes forceful 2 . There are many work related musculoskeletal disorders (WMSD) there are the class of musculoskeletal disorders like damage of tendon, tendon injury, synovial lubrication of tendon sheaths, bone disorders, muscle pain & all muscle related pain, nerves of hand. Wrists, elbow , shoulders, neck & back. Cumulative Trauma Disorders (CTD) are commonly used terms, these injuries develop gradually over a period of week , months or even years like low back pain , postural pain, Mechanical low back pain due to constant posture, Repeated exertion & movements of body. Musculoskeletal symptoms & impairment affects approximately 30-32% population of United States & low back pain is most frequent disorder to be involved. The incidence of neck disorders as a source of musculoskeletal impairment or disability is a second to lower back disorder An investigation on the effect of shift work on the health of workers is therefore urgent and important. The effect of shift work on health has been studied extensively. An association between shift work and high blood pressure has been reported in several studies with disturbed circadian rhythms, sleep and lifestyle problems, and increased stress being implicated as possible risk factors for disease in shift workers. Because of constant sustain postural position in these modern world chances of obesity also increasing. The most commonly used method today for classifying an individual as overweight or obese is based on body mass index (BMI), a value that is determined by dividing body. The current study will help in providing information of awareness of overweight & effect of overweight on human body structures specially due to sustain work in constant upright position as well as how to quantify dimensional work related musculoskeletal discomfort in ergonomic computer workers with correlation to their Body Mass Index (BMI) as well as how to relieve these postural pain from postural correction exercises and Yoga exercises. Importance of Yoga exercises is not used to strengthen the back muscles, but to promote rapid symptom relief. A key principle is to teach the patient simple strategies to self-manage their pain.

Yoga exercise consists of,

BHUJANGASANA(Cobra Pose) –i) Lie on the floor on your stomach. Place hands on the floor beside the pectoral muscles. ii) Place the hands with palms down under the shoulders. Inhale and keeping your navel to the floor, lift chest and head upwards while arching the back. iii) Exhale while slowly lowering the upper body to the floor. Rest for a few seconds & repeat exercise 2-5 times.

Benefits of this asana;

- Stretches muscles in shoulder and chest.
- Decreases the stiffness of the back.
- Increases the flexibility of the spine.

KAPOTASANA (Pigeon Pose)

i) Start with Lying on the ground and place your hands in front of you. Lift your torso off the ground. Bring your right knee behind your right wrist. Stretch your left leg out behind you . Your knee should face the floor. Ii) Stretch your legs backward while you curve your back and lift it up. Pull your abdominal muscles to your spine and maintain this for 5-10 deep breaths.

Benefits of this asana;

- Relieves impinged piriformis and alleviates sciatic pain.
- Stretches the gluteus muscles.
- Helps with urinary disorders so as to reduce the referred pain to the back.

ARDHA MATSYNDRASANA(Twist the spine) – i)Sitting position. Place your left hand on your right knee. Take a deep breath and slowly twist your body to your right side. Stretch upward by pressing your hand against the floor. Try to keep your back as straight as possible. ii) Inhale and come back to your Centre position.

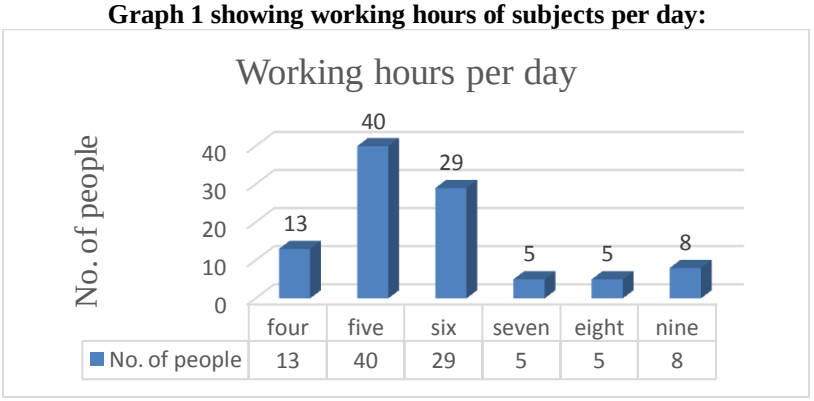
Benfits of this asana;

- Relieves backache.
- Tones the abdominal muscles.
- Reduces the stress and anxiety**.**

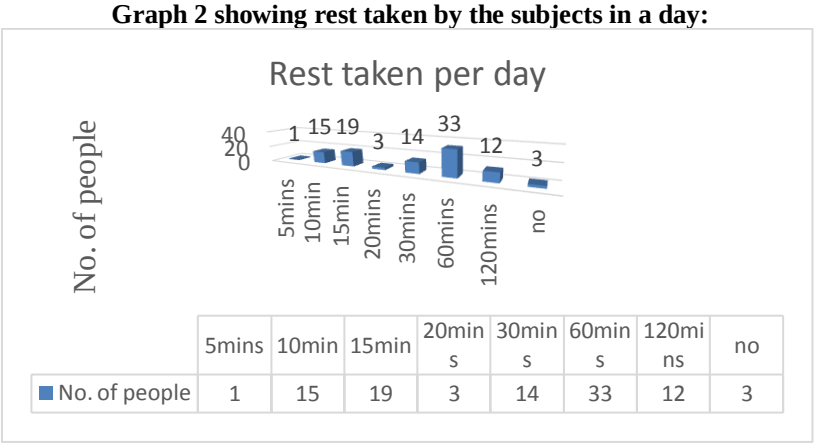
II. DATA ANALYSIS AND INTERPRETATION:

Total 100 workers were screened to find out incidence of low back pain in them and the following are the finding of the study.

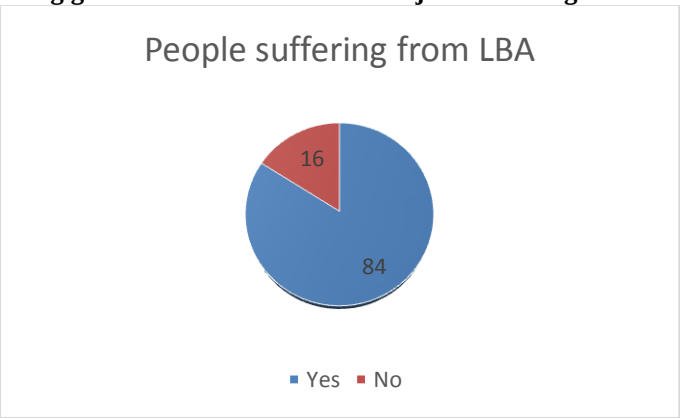
Graph 1 showing working hours of subjects per day:



Graph 2 showing rest taken by the subjects in a day:

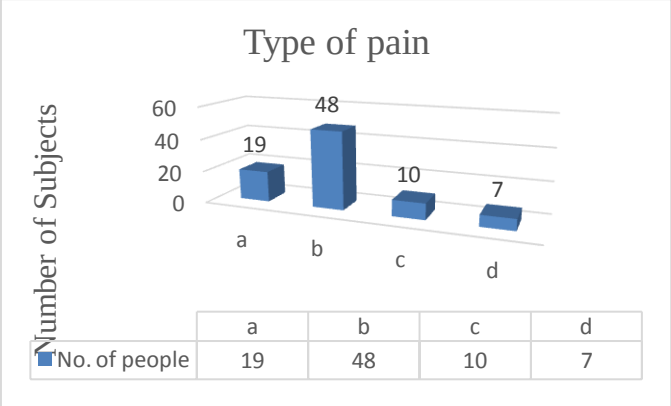


Graph 3 showing generalised distribution of subjects suffering from low back ache:



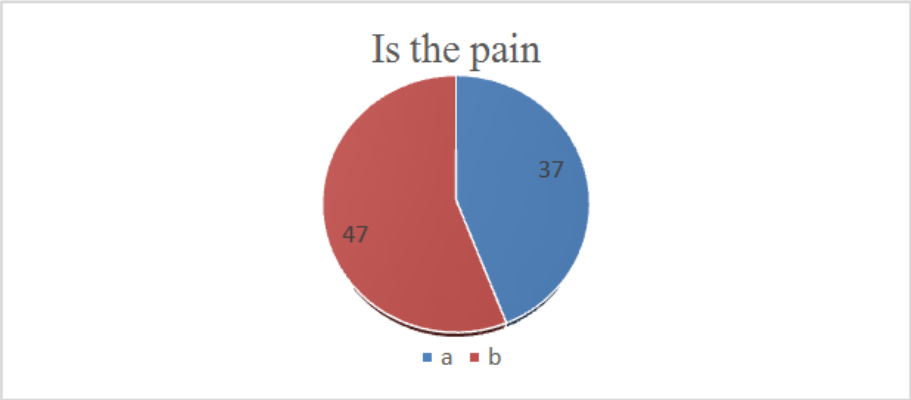
Graph 4 showing type of pain among subjects:

Domain	Description
a	Throbbing
b	Dull aching
c	Sharp shooting
d	tingling

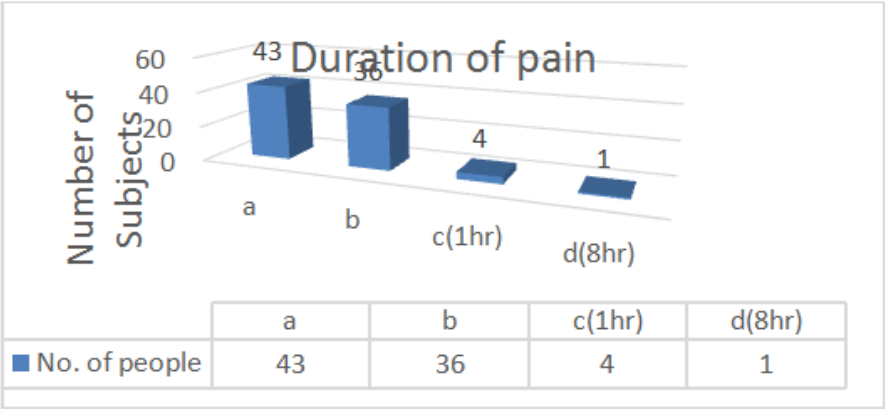


Graph 5 showing Progression of pain in subjects:

Domain	Description
a	Intermittent
b	Continuous



Graph 6 showing duration of pain among subjects:



III. DISCUSSION :

The objective of the study was to find the incidence of low back pain in computer workers. In which out of 100 workers, 84 people are having low back pain.

More number of sufferers from low back pain seen in computer workers are females than males.

Out of 100 samples; low back pain seen in age group 20-25years.

The most obvious reason for this is their work station and working position. Computer workers mainly in the standing posture involve lumbar flexion and lumbar rotation. Too little or too much of sitting leads to higher risk of herniated disc. In sitting the pelvis rotates & higher pressures exists in the discs. A back rest inclined to 110 degree or more & with a lumbar support will reduce the disk pressure.[7]

Repetitive movements & prolonged body postures can be expected to cause muscle damage as well as ligament & joint injuries.[7]

Precautions which can be taken to avoid low back pain:

- As far as possible, while you are suffering from Back Pain; avoid bending forward.
- Do not lift any heavy objects
- If you are overweight, try to lose weight gradually.
- Avoid exercises that cause sudden jerks.
- Maintain a good posture while sitting, & don't remain seated for long period of time.

IV. CONCLUSION:

The study implies that there is high incidence of low back pain in computer workers.

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