

## To Develop a Standard Occupational Therapy Protocol for Persons Working in Industrial Set up having Low Backache Problems

Satish Maslekar<sup>1</sup>, Ranjit Pathak<sup>2</sup>, Amitabh Dwivedi<sup>3</sup>

### Abstract

*Background:* Now these employees, so called patients came to Occupational Therapist for treatment. Then Occupational Therapists first do treatment of pains by using some physical Modalities as well as an Activity program. So it is very necessary for Industrial area that they should have a standard Occupational Therapy Protocol for avoiding spinal problems. So the persons who are working in industrial set-up will have a fruitful life and pain free working environment.

*Need of the Study:* Presently in industrial set up, 90% (ninety percent) of persons are suffering from different problems. Among them approximately more than 60% (sixty percent) persons are having low backache, neck pain. Hence, it was decided to conduct this study as there is very little research work on this industrial population. A standard protocol of Occupational Therapy would be developed for the subjects with Low back pain.

#### *Materials and Methods*

##### *Research Design*

##### Post Test Comparison

##### 1. Independent Variables-

Interventions- a. Activities and Exercises

b. Do's and Don't's for selected Subjects

##### 2. Dependent Variables-

a. Pain

b. Unable to perform an activity related back pain

3. Subjects-50 subjects are randomly selected from particular age group

*Results:* Clinical Analysis clearly shows excellent improvement in persons working in industrial set up after successful intervention of Standard Occupational Therapy Protocol, which includes Occupational Therapy activities and exercised, Occupational therapy Do's and Don't's and Ergonomic advice.

*Conclusion:* Result of this research is accepted hypothesis that use of Standard Occupational Therapy protocol which includes Occupational Therapy treatment, Do's and don'ts and Ergonomic advice tremendously reduced symptoms of low backache in persons working with Industrial set up. These persons are more happily doing their work and also with pleasure. Among four questionnaire, for 4 questions means for Four types of complaints, persons (subjects) got relief.

**Keywords:** Pain; Low back pain.

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**Author Affiliation:** <sup>1</sup>Senior Occupational Therapist, Government Medical College and Hospital, Aurangabad, Maharashtra 431001, India. <sup>2</sup>Occupational Therapist, Post Graduate Institute of Medical Education & Research, Chandigarh, Chandigarh 160012, India. <sup>3</sup>Principal, College of Occupational Therapy, Maharaj Vinayak Global University, Jaipur, Rajasthan 302015, India.

**Corresponding Author:** Satish Maslekar, Senior Occupational Therapist, Government Medical College and Hospital, Aurangabad, Maharashtra 431001, India.

**E-mail:** [s\\_maslekar@yahoo.com](mailto:s_maslekar@yahoo.com)

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### Introduction

#### *Basic Introduction*

Occupational Therapy practitioners are trained in the structure and function of human body and effects of illness and injury. They also can determine the components of the work place can facilitate a

healthy and efficient environment or one that could cause injury or illness.

Occupational Therapists help the patients to live and function productively. Within the context of chronic pain, Occupational Therapists evaluate the pain's impact on a client's desired activities and quality of life, and equip him or her with the skills and strategies to manage the pain.

Occupational Therapist have much broader view than other disciplines. They understand the sensory, motor, cognitive and emotional dimensions of multi-factorial pain.

Occupational Therapy practitioners can show patients how to redirect their pain, so that it interferes less in their daily living. Relaxation and Visualization activities cognitively redirect pain. Because of chronic pain patients are often physically deconditioned, and the practitioner will work on gentle exercises to increase patient's strength and stamina. They might also use such activities as self-hypnosis, meditation, and Yoga, all of which can be effective ways of coping with pain.

Pain is infinitely complex and Occupational therapy practitioners understand its many dimensions. According to McGeary, a lot of current research and data suggest that the chronic pain occurs because the dorsal horn cells of the spinal cord actually change and exacerbate the pain response. Dorsal horn cells are the first site for integrating and processing incoming sensory information, providing ascending information to the higher centers of the brain that influences the awareness and interpretation of pain.

Occupational Therapists also understand its subjectivity and respect clients self report. By evaluating the various Physical, Cognitive, and psychological elements simultaneously at play in someone with chronic pain, Occupational Therapy practitioners can help clients to cope with and manage their pain, so they can accomplish the activities most important to them.

Chronic pain is pain that continues beyond its usefulness as a warning to someone that there is a problem. There are countless sources of chronic pain including Amputation procedures, arthritis, fibromyalgia, traumatic injuries, and disorders such as herniated discs or surgeries on the back that leave residual hypersensitivity.

An Occupational Therapist can help employers by identifying hazards that may contribute to the job injury and determine how it can be eliminated. Presently in Industrial area, many employees are suffering from low backache, neck pain. But

because of their daily busy schedule, initially they neglect these pains. After some days, these pains become diseases which need proper medical treatment, Drug management etc.

Now these employees, so called patients came to Occupational Therapist for treatment. Then Occupational Therapists first do treatment of pains by using some physical Modalities as well as an Activity program.

So it is very necessary for Industrial area that they should have a standard Occupational Therapy Protocol for avoiding spinal problems. So the persons who are working in industrial set-up will have a fruitful life and pain free working environment [1,2,3].

#### *Null Hypothesis:*

The person who working in industrial set up will not be benefited with standard occupational therapy protocol.

#### *Alternative hypothesis*

The person who working in industrial set up will be benefited with standard occupational therapy protocol.

### **Review of Literature**

- Ergonomics and Occupational Therapy: Improving workplace productivity by Ashlay OPP.
- Ergonomics tips for Healthy workplace by Julie Entwistle.
- Low back pain Interventions at the workplace by Toril H Tvito, Marysying and Hege R Eriksen.
- Backpain Injury prevention and interventions in the workplace an Integrative review by Karas B.E. Conrad K.M.
- Disability resulting from Occupational Low Back pain by Frank JW, Brooker AS, De Maio SE, et al.

### **Need of the Study**

Presently in industrial set up, 90% (ninety percent) of persons are suffering from different problems. Among them approximately more than 60% (sixty percent) persons are having low backache, neck pain.

Hence, it was decided to conduct this study as there is very little research work on this industrial population. A standard protocol of Occupational Therapy would be developed for the subjects with Low back pain.

## Materials and Methods

### Research Design

Post Test Comparison

1. Independent Variables-  
Interventions- a. Activities and Exercises  
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### Research Methodology

#### Phase A: Research Plan

Sample size- 50

Duration of study- six months

Random selection of 50 patients and all patients have gone through assessment. Preparation of the field visit and collection of secondary materials were the main tasks. This were also consists of survey of industrial area, working environment, sitting arrangement etc. also preparation of questionnaires for subjects which are chosen.

#### Phase B:

The Treatment accomplished during this phase include:

- Questionnaire survey- All persons have gone through screening through given questionnaires.
- Activities and Exercise Booklets and Do's and Don't's Booklets are given to all selected subjects
- Application of Occupational Therapy Protocol-

Precautionary measures like to avoid long sitting, frequent bending

Dos and Don'ts -

Do's- regular exercise, avoid long sitting, avoid

bending activities, use ergonomically designed chair etc

Don't s- Long sitting, Bending activities, overhead activities etc

Activity Training Programs like sanding board, balancing board, peg board, Energy conservation and Work simplification techniques etc.

After Application of a Standard Occupational Therapy protocol on selected subjects need proper assessment on every fifteen days for pain. This should continue for next six months continuously.

- After compiling of all records, a detailed report would be made. Data would be analyzed and finally results and conclusion would be given.

#### Phase C:

After compiling of all records, a detailed report would be made. Data would be analyzed and finally results and conclusion would be given.

#### Phase D: Materials Required- (Tools to be Used)

- a) Roland and Morris Questionnaire
- b) Sanding board, balancing board
- c) Booklets for Postural care
- d) Activities etc.

#### Inclusion Criteria:

Persons having Mechanical Backache

- Age groups from 25 to 50 years.
- Nature of Work position- sitting, standing and lifting.
- Sex- Both male as well as female will be taken for the study.

#### Exclusion Criteria:

Age more than fifty

Persons having Malignancy

Persons having psychological problems like depression or Anxiety

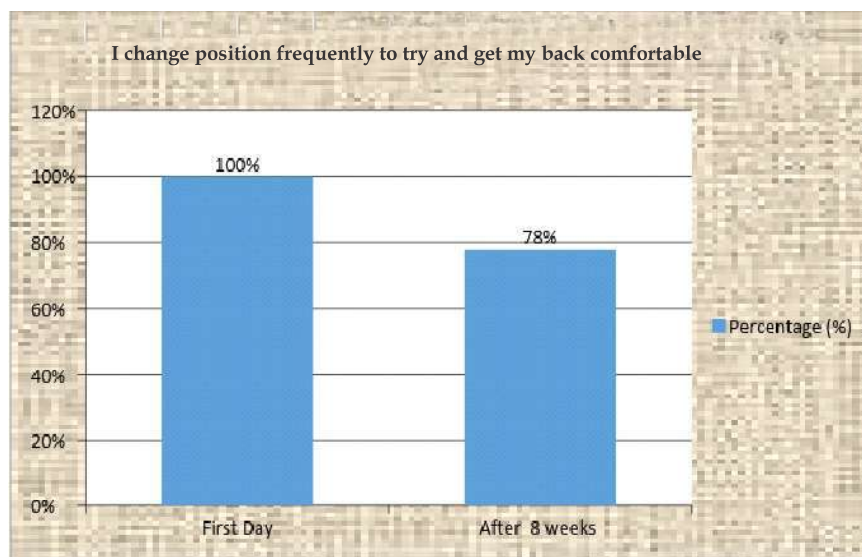
Persons having Psychiatric problems

Assessment Schedule- On every fifteen days assessment will be done. [4,5,6,7].

**Results**

**Table 1:** I change position frequently to try and get my back comfortable

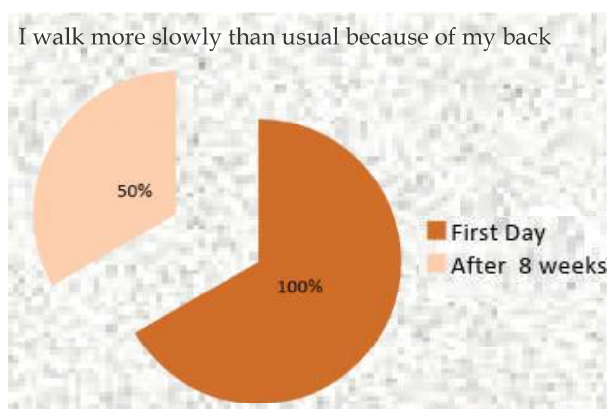
Change of position	No. of Subjects	Percentage (%)
First Day	61	100%
After 8 weeks	48	78%



**Fig. 1:** change position frequently to try and get my back comfortable

**Table 2:** I walk more slowly than usual because of my back

Walk more slowly	No. of Subjects	Percentage (%)
First Day	16	100%
After 8 weeks	8	50%



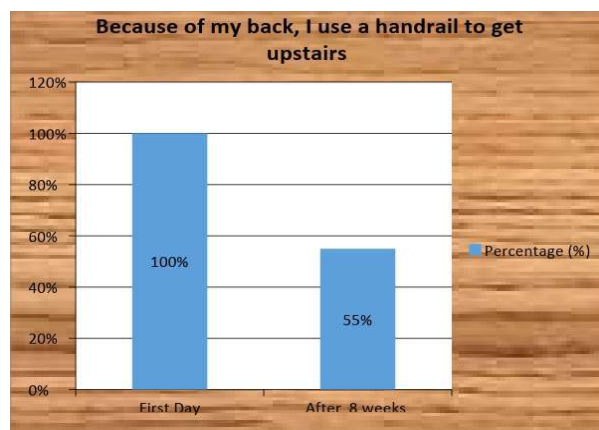
**Fig. 2:** I walk more slowly than usual because of my back

**Table 3:** Because of my back, I use a handrail to get upstairs

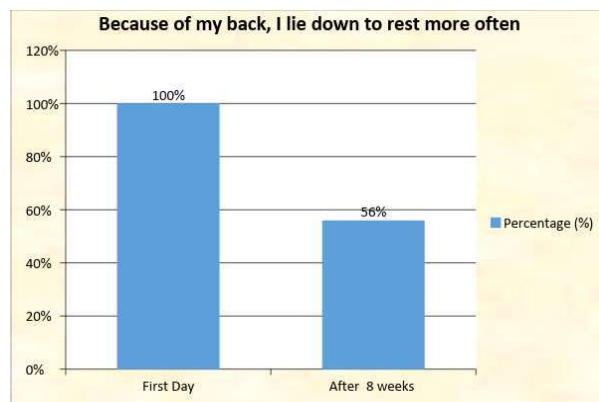
Handrail to get	No. of Subjects	Percentage (%)
First Day	11	100%
After 8 weeks	6	55%

**Table 4:** Because of my back, I lie down to rest more often

Down to rest	No. of Subjects	Percentage (%)
First Day	36	100%
After 8 weeks	20	56%



**Fig. 3:** Because of my back, I use a handrail to get upstairs



**Fig. 4:** Because of my back, I lie down to rest more often

## Discussion

Clinical Analysis clearly shows excellent improvement in persons working in industrial set up after successful intervention of Standard Occupational Therapy Protocol, which includes Occupational Therapy activities and exercised, Occupational therapy Do's and Don't's and Ergonomic advice.

In maximum patients, they got excellent improvement in their low backache, since they have followed Standard Occupational Therapy Protocol regularly which was very well prescribed and explained to them. Some following factors are also found to be important in their speedy recovery-

- 1) Early Intervention
- 2) Less pain
- 3) Regularly Followed Standard Occupational Therapy Protocol
- 4) Followed correctly sitting and standing postures

In some patients, got no improvement, because of severity of pain was too much, serious low backache from 2-3 years, not followed Standard Occupational Therapy Protocol regularly and also neglected themselves. [8].

## Conclusion

Result of this research is accepted hypothesis that use of Standard Occupational Therapy protocol which includes Occupational Therapy treatment, Do's and don'ts and Ergonomic advice tremendously reduced symptoms of low backache in persons working with Industrial set up. These

persons are more happily doing their work and also with pleasure. Among four questionnaire, for 4 questions means for Four types of complaints, persons(subjects) got relief.

### *Recommendation*

It is recommended that Occupational Therapy protocol should include in every Industry to reduce Low backache. More research with more number of samples is recommended.

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