



## To develop a standard Occupational Therapy Ergonomic advice for persons working in industrial set up having low backache problems

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### ABSTRACT

Occupational Therapists help 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. An Occupational Therapist can help employers by identifying hazards that may contribute the job injury and determine how it can be eliminated. Presently in the Industrial area, many employees are suffering from a 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 the Occupational Therapist for treatment. Then Occupational Therapists first do the 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 Ergonomic Advice for avoiding spinal problems. So the persons who are working in an industrial set-up will have a fruitful life and pain-free working environment. 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 Ergonomic Advice of Occupational Therapy would be developed for the subjects with Low back pain. Post Test Comparison- • Independent Variables- Interventions- a) Activities and Exercises b) Ergonomic Advice 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. Clinical Analysis clearly shows excellent improvement in persons working in an industrial set up after a successful intervention of Standard Occupational Therapy Ergonomic Advice, which includes Occupational Therapy activities and exercised, Occupational therapy Do's and Don'ts and Ergonomic advice. The result of this research is accepted hypothesis that use of Standard Occupational Therapy Ergonomic Advice which includes Occupational Therapy treatment, Do's and don'ts and Ergonomic advice tremendously reduced symptoms of a low backache in persons working with Industrial set up. These persons are more happily doing their work and also with pleasure. Among four questionnaires, for 4 questions means for four types of complaints, persons (subjects) got relief.

**Keywords**— Occupational Therapy, Pain, Injury, Backache

### 1. NULL HYPOTHESIS

The person who works in industrial set up will not be benefited with standard occupational therapy Ergonomic Advice

### 2. ALTERNATIVE HYPOTHESIS

The person who works in industrial set up will be benefited with standard occupational therapy Ergonomic Advice

### 3. REVIEW OF LITERATURE

- (1) Ergonomics and Occupational Therapy: Improving workplace productivity by Ashlay OPP.
- (2) Ergonomics tips for Healthy workplace by Julie Entwistle.
- (3) Ergonomic intervention Research for improved Musculo Skeletal Health by WestgaardRH , Winkel J.
- (4) Occupational Therapy for Physical Dysfunction by Pedrette.
- (5) Assessment in Occupational Therapy by Julia Deuson.

- (6) Occupational Therapy for Practice by Willard and Spackemans.
- (7) Basic Anatomy by Dr B D Chourasiya.

#### **4. 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.

In our Outpatient department, many patients are used to coming with low back pain, neck pain. And when they come to O.P.D., these problems became a disease. This happens because; initially, they neglect their pain because of less severity or their busy schedule or shifts as well as family problems. But if proper treatment is given on time, these things can be prevented.

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

#### **5. OBJECTIVES OF THE STUDY**

To develop the occupational therapy Ergonomic Advice for industrial set up having Low Backache problems.

#### **6. MATERIALS AND METHODS**

**Research design:** Post Test Comparison

##### **6.1 Independent Variables**

Interventions:

- a) Activities and Exercises
- b) Ergonomic Advice

##### **6.2 Dependent Variables**

- a) Pain
- b) Unable to perform an activity related to back pain

##### **6.3 Subjects**

50 subjects are randomly selected from a particular age group

#### **7. RESEARCH METHODOLOGY**

##### **7.1 Phase A-Research plan**

**Sample size-50**

**Duration of study- Six Months**

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

##### **7.2 Phase B**

The Treatment accomplished during this phase include:

- a) Questionnaire survey- All persons have gone through screening through given questionnaires.
- b) Activities and Exercise Booklets
- c) Application of Occupational Therapy Ergonomic Advice: Some precautionary measures are:
  - Ergonomically Advise
  - Activity Training Program like sanding board, balancing board, pegboard, Energy conservation and Work simplification techniques etc.After Application of a Standard Occupational Therapy Ergonomic Advice on selected subjects needs proper assessment every fifteen days for pain. This should continue for the next six months years continuously.
- d) After compiling all the records, a detailed report would be made. Data would be analyzed and finally, results and conclusion would be given.

##### **7.3 Phase C**

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

##### **7.4 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 males, 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

Every fifteen days, the assessment will be done.

### 8. RESULTS

**Table 1: 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%

**Table 2: Because of my back, I have to hold on to something to get out of any easy chair**

Hold to something	No. of Subjects	Percentage (%)
First Day	20	100%
After 8 weeks	13	56%

**Table 3: Because of my back, I try to get other people to do a thing for me**

Get other people	No. of Subjects	Percentage (%)
First Day	08	100%
After 8 weeks	04	50%

**Table 4: I get to dress more slowly than usual because of my back**

Get dress more slowly	No. of Subjects	Percentage (%)
First Day	12	100%
After 8 weeks	06	50%

### 9. DISCUSSION

Clinical Analysis clearly shows excellent improvement in persons working in industrial set up after the successful intervention of Occupational Therapy Ergonomic Advice, which includes Occupational Therapy activities and exercises, Correct Sitting and standing Posture with accessories. In maximum patients, they got excellent improvement in their low backache, since that 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 patient, got no improvement, because of the severity of pain is too much, serious low backache from 2-3 years, not followed Standard Occupational Therapy Protocol regularly and also neglected themselves.

### 10. CONCLUSION

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

### 11. RECOMMENDATION

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