

## IMPORTANCE OF BACK CARE INSTRUCTIONS IN PATIENTS SUFFERING FROM ACUTE MECHANICAL LOW BACK PAIN

### IMPORTANȚA "ȘCOLII SPATELUI" PENTRU PACIENȚII CU DURERE LOMBARĂ ACUTĂ DE ORIGINE MECANICĂ

*Y.Pallavi<sup>1</sup>, Y.Praveen<sup>2</sup>, Shazia Malik<sup>3</sup>, Pallavi Talvekar<sup>4</sup>*

**Key words:** mechanical low back pain, back care instruction, adherence, pain intensity

**Cuvinte cheie:** durere lombară de natură mecanică, școala spatelui, aderențe, intensitatea durerii

#### Abstract.

**Introduction.** Low back pain is a common problem. Orthodox and complimentary practitioners have traditionally regarded it as a mechanical problem of the spine. The treatment of people with LBP often includes instructions about back care.

**Aim.** To know the effect of instructions on pain relief in acute mechanical low back pain.

**Method.** 100 patients were studied. LBP patients were evaluated and pain was taken by pain intensity scale. The back care physiotherapy programs were noted down along with the verbal instruction that were given to the patients, in the experimental group along with back care instruction & in the control group only the physiotherapy program was administered. In experimental group the back care instructions was noted down on the first day of evaluation & fortnightly re-evaluation was done.

**Results.** There was significant (78%) pain relief in experimental group as compared to control group (36%) with  $p=0.0000$ . 82% of individual followed the back care instruction in experimental group. Non adherence for instructions was also observed in 18% at the end of 15 days.

**Conclusion:** This study focuses on back care instruction and has found that back care instruction along with physiotherapy intervention has reduced the pain significantly. Patient adhering to the instruction along with physiotherapy interventions had shown relief of pain.

#### Rezumat.

**Introducere.** Durerea lombară este o problemă frecventă. În mod tradițional, practicienii au tratat această condiție a coloanei lombare ca fiind de cauză mecanică. Tratamentul pacienților cu durere lombară include adesea și instrucțiuni privind "școala spatelui".

**Scop.** Cunoașterea efectului aplicării școlii spatelui în ameliorarea durerii lombare acute de cauză mecanică.

**Metodă.** 100 de pacienți au fost incluși în studiu. Intensitatea durerii la pacienții cu durere lombară s-a evaluat cu ajutorul scalei intensității durerii. La grupul experimental, programul de recuperare a cuprins și instrucțiuni privind școala spatelui, iar la grupul de control s-a administrat doar programul de recuperare. Grupul experimental a primit instrucțiunile privind școala spatelui din prima zi, după evaluare. La finalul programului de recuperare s-a realizat reevaluarea.

**Rezultate.** S-a înregistrat o reducere semnificativă (78%) a durerii la grupul experimental, comparativ cu grupul de control (36%),  $p=0.0000$ . 82% dintre pacienții din grupul experimental au urmat instrucțiunile școlii spatelui. S-a observat o rată de abandon a respectării instrucțiunilor școlii spatelui de 18%, după 15 zile de tratament.

**Concluzii.** Studiul se concentrează pe eficiența școlii spatelui și s-a constatat că aceasta, alături de programul de recuperare, contribuie la ameliorarea semnificativă a durerii. Pacienții care au urmat programul complet au constatat reducerea durerii lombare.

#### Introduction

Low back pain is a prevalent and recurrent musculoskeletal disorder. Recurrence of low back pain leads to disability and absenteeism from work and a challenge for health care professionals. [1] In addition to pain and disability chronic back problems can have negative financial consequences for the individuals and their employer. [2,3]

<sup>1</sup> Associate professor VSPM College of physiotherapy, Nagpur, Maharashtra state, India, Email:pallaviy86@yahoo.com, Phone number: +919860058817

<sup>2</sup> Associate professor VSPM College of physiotherapy, Nagpur, Maharashtra state, India,

**Corresponding author.** Email:praveenwhy@yahoo.com [praveenwhy@yahoo.com](mailto:praveenwhy@yahoo.com); Phone number: +919850448817

<sup>3</sup> Post graduate student VSPM College of physiotherapy, Nagpur, Maharashtra state, India, Email:sar\_2008@rediffmail.com

<sup>4</sup> Post graduate student VSPM College of physiotherapy, Nagpur, Maharashtra state, India, Email:talvekarpallavi@gmail.com

WHO has included LBP as a disability code (ICF) on top priority as bone and joint decade 2000-2010. [4] LBP occurs in 80% of the population during their working life. Hardly 1% has serious disease like primary bone cancer, paravertebral abscess, arthritis etc. fewer than 5% have prolapsed disc. [4] Most of what remains are encompassed under the umbrella term mechanical LBP although only a proportion have a definite mechanical disturbance.

Management of LBP depends on the stage suffering from i.e. acute (less than 4-6 weeks duration), sub acute (between 6-12 weeks) or chronic (more than 12 weeks). [5] LBP symptoms need to be evaluated clinically and treated accordingly. [6] Literature supports 90% of patients with LBP in primary care stop consulting their doctor and physiotherapist within 3 months. However many patients have intermittent back pain that resolves to a lower level of pain or discomfort rather than complete relief. CORFT suggest that in many patients LBP fluctuates over time so recurrences are common. [7]

Physical therapy procedures are popular forms of treatment in rehabilitation of people with LBP. [8] The majority of physical therapists use stretching, strengthening, spinal mobilization, massage, manual traction, interferential therapy, ultrasound, posture correction and function activities education. [9] Patient education and strengthening exercises are the choice of treatment in acute LBP, however people with chronic LBP have less benefits from patient education. Educating patients about anatomy of back, principles of postures, back care during daily activity and health life style was advocated by Yen C, Gonyes M. [10] A problem frequently faced by physiotherapist is that patients may fail to recover from back complaints.

This may lead to frequent change in the treatment programme. Sandera Frances Basset stated that adherence to physiotherapy exercise program can be significantly greater when physiotherapists give patients positive feedback, regularly monitor their performance and frequently motivate them for home programme. According to Margareta Nordin, the combination treatments tailored to the patients' needs will enhance adherence and thereby improve outcomes. [11]

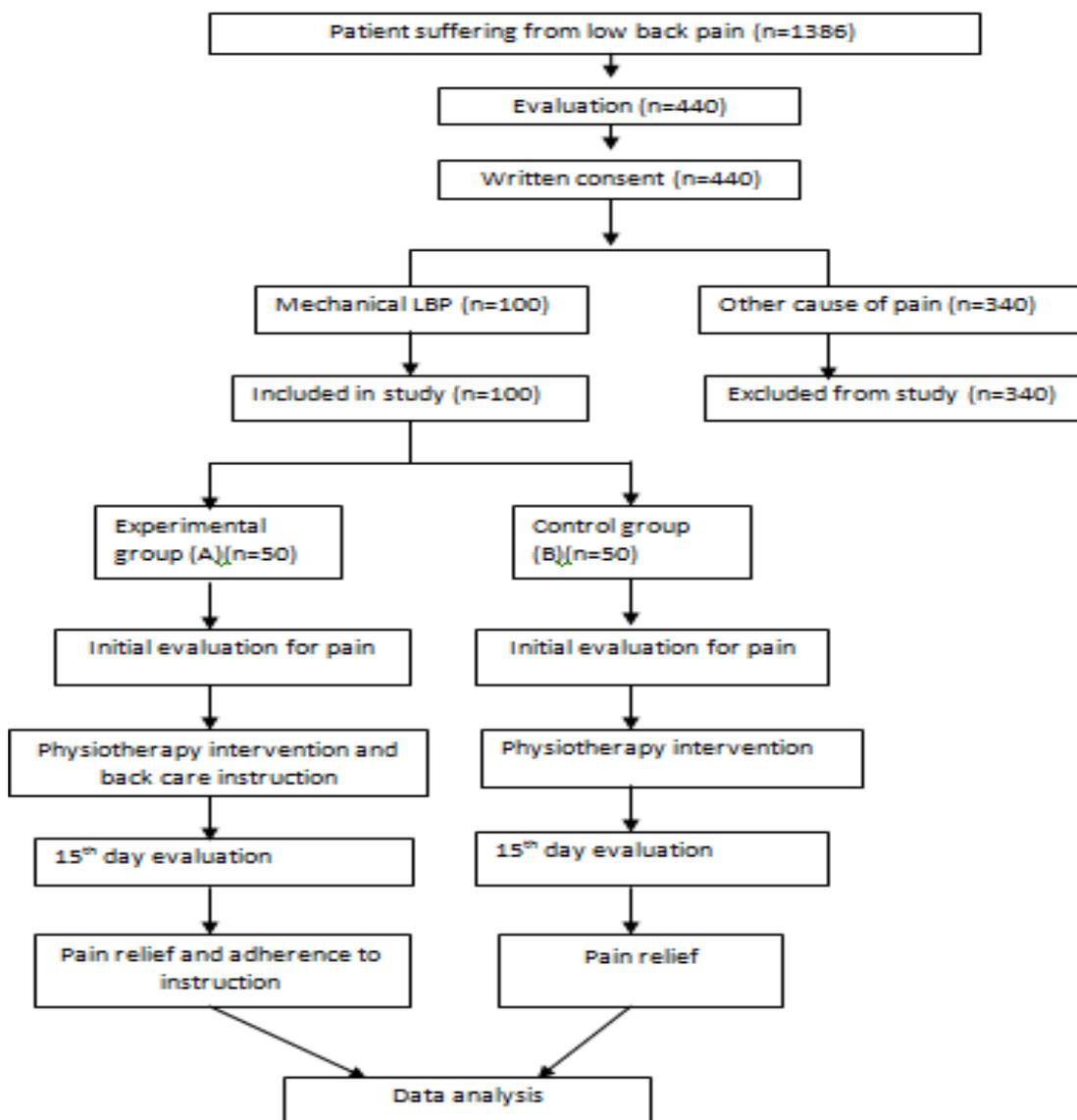
**Aim of the study:** To know the effect of instructions on pain relief in acute mechanical low back pain.

### **Material and method**

The study was conducted in VSPM, [8] College of physiotherapy Nagpur, India. Prior permission from ethical committee and head of the department was obtained. Study included back care advises written on registration forms of mechanical low back pain patients during 2008 to 2011. Patients were randomly divided into two groups of 50 each by lottery method. The individual who got A by lottery method by chits were group in experimental and individual who got B were in group in control. The experimental group comprised of 50 patients receiving physiotherapy and back care instructions whereas control group was receiving only physiotherapy treatment. Patients were selected for the study aged between 20 to 70 years so that a heterogeneous group is studied. Patients included for the study were only the acute mechanical low back pain within <1 year duration. Low back pain secondary to metastatic lesion, spondylolithesis, inflammatory disease of spine, female in their child bearing years were excluded for the study.

Present pain intensity on day 1 and day 15 was noted in both the groups and patients adhering to the back care instructions were noted only in experimental group on 15<sup>th</sup> day. And pain relief in both groups at the end of 15<sup>th</sup> day was noted. The patients who recovered earlier in 15<sup>th</sup> day were also requested to come on 15<sup>th</sup> day. The patient who did not recover even on 15<sup>th</sup> day was asked to continue the treatment.

## General procedure



## Data analysis

The obtained raw data was entered in the master chart and was spread in excel sheet and was analysed with STATA version 8.0 statistical software. Continuous variable age pain intensity was presented as mean and standard deviation. Unpaired t-test was used to compare difference in experimental and control group. Categorical variables i.e. sex distribution and relief of pain was expressed in percentages and was analysed by chi-square test. The Level of significance was fixed at  $p < 0.005$

## Results

The results obtained from the study indicate the mean age was  $30.82 \pm 11.75$  years for experimental group and for control group  $43.66 \pm 13.7$  years. In the experimental group 40% were male as against 46% in the control group. The female were 60% and 54% in experimental and control group respectively. At the end of 15<sup>th</sup> day evaluation 78% of subjects in experimental group and 37% in control group exhibited relief of pain and was highly significant with  $p = 0.000$ . 82% of individual reported with adherence to back care instruction at the end of 15<sup>th</sup> day. The pain intensity in the experimental group was  $3.3 \pm 0.86$  on day 1 which reduces to zero at end of 15<sup>th</sup> day in experimental group whereas in control group it was  $3.16 \pm 0.81$  on day 1 and on day 15 it was  $2.25 \pm 0.5$ .

Table no.01: Age distribution

Age in years	Experimental group (n=50)	Control group (n=50)
20-30	15	9
31-40	17	13
41-50	8	13
51-60	8	10
61-70	2	5
Total	50	50
Mean	30.82±11.75	43.66±13.78

Graph no.01: sexwise distribution of patients

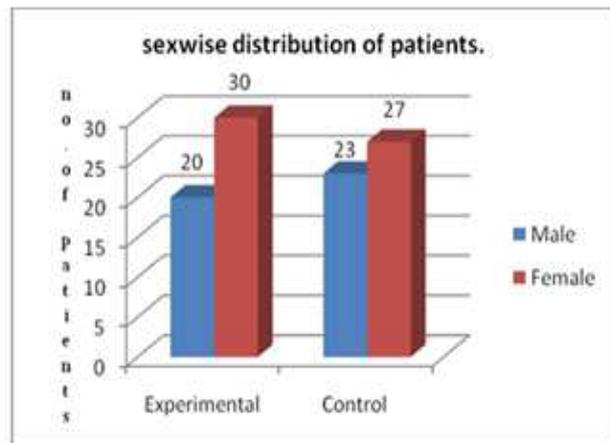


Table no.02: Showing pain relief

	Experimental	Control
Yes	39 (78%)	18 (36%)
No	11 (22%)	32 (64%)
Total	50	50

Graph no.02: showing pain relief in both groups

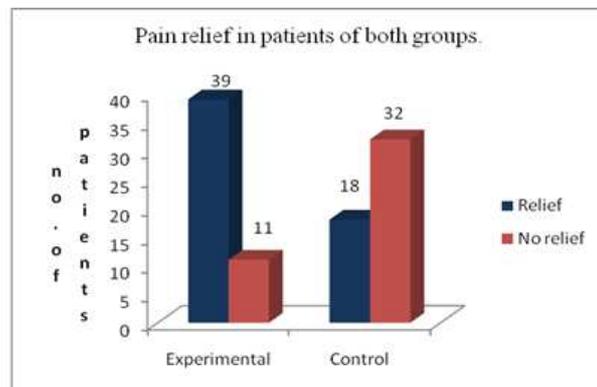
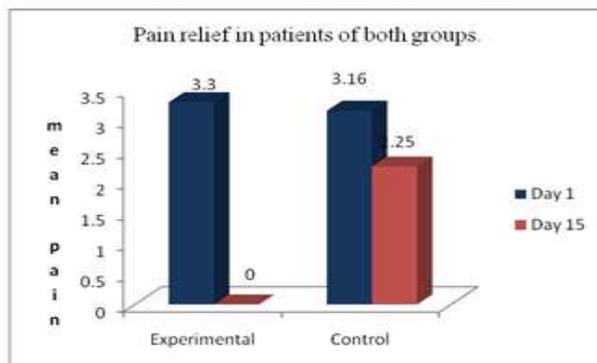


Table no.03: Shows the instructions followed by the patients of experimental group.

Experimental Group	Yes	No
50	41	9
%	(82%)	(18%)

Graph no.03: Pain intensity on PPI



**Discussion**

The study which was focus for knowing the importance of instruction provided to mechanical LBP patients has confirmed that the instruction are effective and i.e. the reason why experimental group had shown better improvement in pain relief.

Moreover the patients of experimental group in which pain relief was not seen (22%) adherence to back care instruction was not followed .there by providing the evidence that back care instruction is necessary and should be in-cooperated with mechanical LBP patients and this study is supported by Evan of in their respective studies.Indal in 1995 and Hegan in 2003 found that the patients receiving oral educational sessions showed significant improvement than patients receiving usual care [12] the same was noted from this study.

Improvement in pain relief in experimental group in this study was found to be 82%, which is contradictory to SLUJE who has noted 35% adherence to home exercise program.

This high percentage of adherence is attributed to the fact that patient considered in the current study were within 1 year of occurrence of back pain,

The control group has also shown sign of pain relief but this pain did not resolved completely. Hence, stressing the need for back care instructions. The common instruction provided in the instruction were to avoid lifting heavy weights, frequently changing the posture and avoid bending as per as possible.

### Conclusion

This study has provided the evidence that back care instruction along with regular physiotherapy treatment will have better improvement in terms of relief of pain and reduction in pain intensity.

It also stresses the fact that these instructions have to be followed for having improvement in mechanical LBP. Therefore physiotherapist should not only provide the instruction but also in-corporate back care instruction while treating mechanical LBP patients. These instructions would not only help in improvement but when these instruction are delivered by physiotherapist it helps in motivating the patients. Further work on standardising the instruction and implying these in chronic LBP patient would be required to further generalize the finding.

**Conflict of interest:** There is no conflict of interest.

**Finance:** It was self-finance study.

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