

A CROSS-SECTIONAL STUDY AMONG PHYSIOTHERAPIST TO FIND THE CURRENT PRACTICE PATTERN IN TREATING MECHANICAL LOW BACK PAIN, AND ITS BARRIER IN ADOPTING STANDARD LOW BACK PAIN PRACTICE GUIDELINES.

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ABSTRACT

Background: Low back pain is considered as a foremost public health problem, with the life time prevalence ranging up to 84%. The STarT back is the best screening tool in the current practice which stratifies the patients in three different treatment categories. There are many MLBP management guidelines but little is known about the effect and implication of these guidelines in clinical practice. Purpose of the study is to explore the current practice pattern among physiotherapist in Bangalore and to find out the barrier in adopting the guidelines.

Objective: To explore PTs existing mechanical low back pain classification and their practice pattern. To find out whether education about classification and MLBP management guidelines change their practice pattern. To find out the barriers in adopting MLBP guidelines.

Method: Physical therapists treating mechanical low back pain (n-90) were surveyed regarding their current practice pattern. Physical therapists of both the gender were selected through convenient sampling method. Practice pattern questionnaire, adopted from APTA and the questionnaire for barriers was used for the data collection.

Results: In common practice pattern followed by the therapist treating MLBP, patient education, exercise, and electrotherapeutic and thermal modalities were the preferred interventions for MLBP. There was a trend of using electrotherapeutic and thermal modalities of uncertain effectiveness. There are barriers that are perceived to prevent the implementation of LBP guidelines in the current practice .

Conclusion: Study concluded that the therapist remains reluctant to change and follow the same old practice which they think is more feasible for the clinical routine management of the MLBP and there are various barriers which restrict therapist from adopting the practice guidelines.

KEYWORDS:

Evidence based practice,
Mechanical Low back pain,
Practice pattern,
Keele STarT back tool,
Barriers.

INTRODUCTION

Low back pain is considered as a foremost public health problem. Symptoms are tenacious, and though many LBP patients consult their practitioner within a moderately short time frame, 60-80% of people after one year still report pain and disability. High rate of disability is associated with low back pain. The yearly prevalence of low back pain varies from 5% to as high as 65%, the life time prevalence can range up to 84% and the monthly prevalence has been placed between 35% and 37%.¹

MLBP is tension, soreness and/or tightness in the lower back region for which it is not possible to identify a specific cause of pain. Several structures in the back including the joints, disk and connective tissue, may contribute to symptoms due to mechanical factors, such as lifting and carrying.²

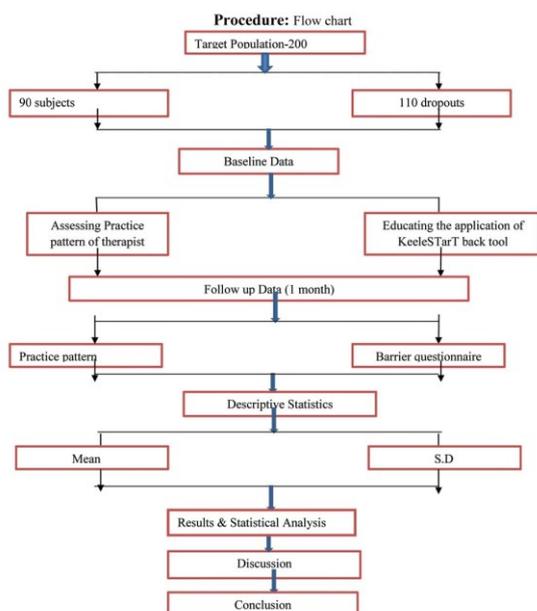
METHODOLOGY:

This is a cross sectional survey study done in hospitals and clinics on physiotherapists

Selection Criteria:

Inclusion Criteria	Exclusion Criteria
Physiotherapist of both the gender treating mechanical low back pain with at least one or more years of experience.	Therapists those are not willing to participate in the study. The therapists who didn't had any experience in treating mechanical low back pain.

Data collection was done by convenient sampling, initially it was planned to conduct the study on 200 subjects but due to dropouts the current study is conducted on 90 subjects. There were 110 drop outs in the study, as it was one month follow up many subjects didn't turned up after baseline, some subjects didn't had sufficient time and some subjects returned the blank questionnaire.



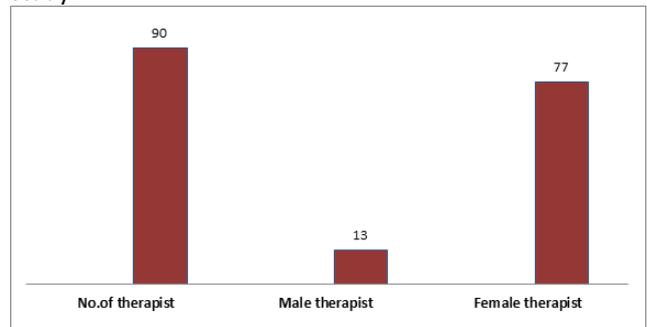
Results:

All eligible respondents practiced in hospitals and clinical settings. Out of 90 therapists, 77 were female and 13 were male therapists.

Table no.1. Showing numbers of male and female in the study.

No. of subjects	Male therapist	Female therapist
90	13	77

Graph no.1 Showing number of males and female in the study.



The practice pattern questionnaire covers 3 areas related to physical therapy management of MLBP.

1. Physical examination preference
2. Treatment and recommendations preferences
3. Therapists belief regarding treatment of MLBP

Table no. 2. Baseline examination preference for practice pattern.

Questions	Baseline examination Preference
Back Inspection/palpation	93%
Lumbar spine ROM	83%
Back extensor muscle strength	72%
Abdominal muscle strength	28%
Lower extremity muscle strength	24%
Sensation	13%
SLR	100%
Reflex	7%

Graph no.2. Baseline examination preferences for practice pattern

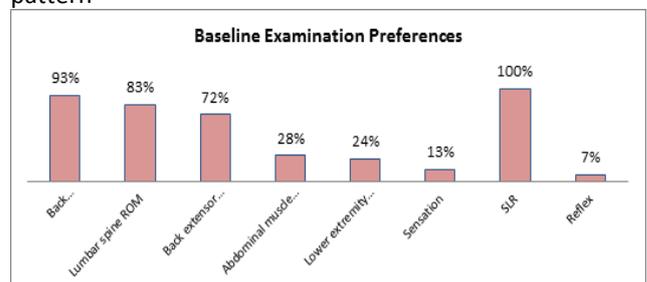
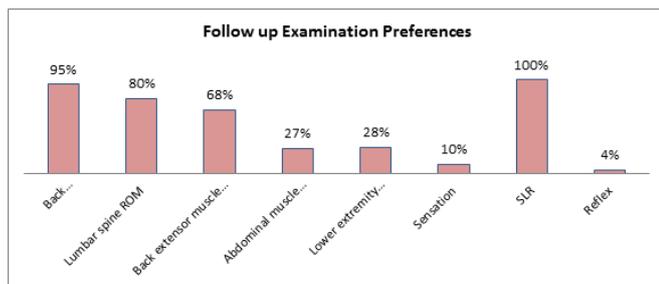


Table no.3. Follow up examination preferences for practice pattern.

Questions	Follow up Examination Preference
Back Inspection/palpation	95%
Lumbar spine ROM	80%
Back extensor muscle strength	68%
Abdominal muscle strength	27%
Lower extremity muscle strength	28%
Sensation	10%
SLR	100%
Reflex	4%

Graph no.3 Follow up examination preferences for practice pattern.

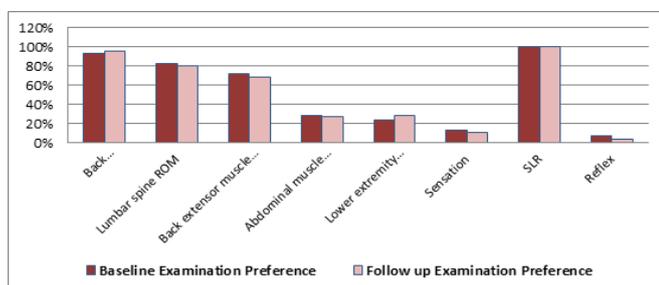


The above graph shows follow up examination preferences response in percentile values

Table no.4 Comparison between baseline and follow up examination preferences

Questions	Baseline Examination Preference	Follow up Examination Preference
Back Inspection/palpation	93%	95%
Lumbar spine ROM	83%	80%
Back extensor muscle strength	72%	68%
Abdominal muscle strength	28%	27%
Lower extremity muscle strength	24%	28%
Sensation	13%	10%
SLR	100%	100%
Reflex	7%	4%

Graph.no.4 Comparison between baseline and follow up examination preferences

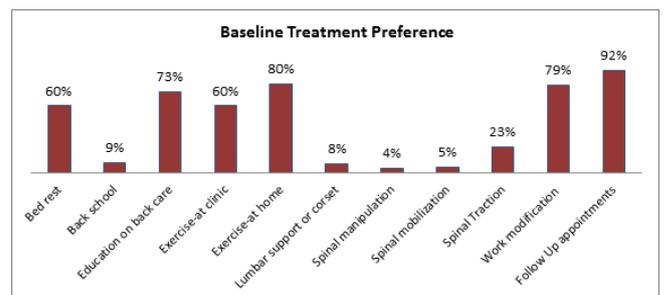


The above graph shows the comparison between baseline and the follow up in the percentile values.

Table No5..Baseline Treatment Preferences for Practice Pattern.

Questions	Baseline treatment Preference
Bed rest	60%
Back school	9%
Education on back care	73%
Exercise-at clinic	60%
Exercise-at home	80%
Lumbar support or corset	8%
Spinal manipulation	4%
Spinal mobilization	5%
Spinal Traction	23%
Work modification	79%
Follow Up appointments	92%

Graph No.5. Baseline treatment Preferences for Practice Pattern Baseline data.

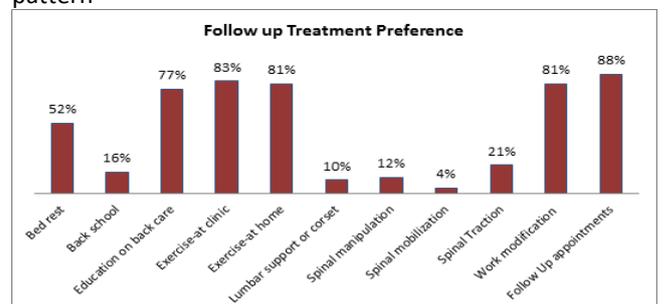


The above graph shows baseline treatment preferences response in percentile values.

Table no.6. Follow up Treatment preferences for practice pattern.

Questions	Follow up Treatment Preference
Bed rest	52%
Back school	16%
Education on back care	77%
Exercise-at clinic	83%
Exercise-at home	81%
Lumbar support or corset	10%
Spinal manipulation	12%
Spinal mobilization	4%
Spinal Traction	21%
Work modification	81%
Follow Up appointments	88%

Graph no.6. Follow up Treatment preferences for practice pattern

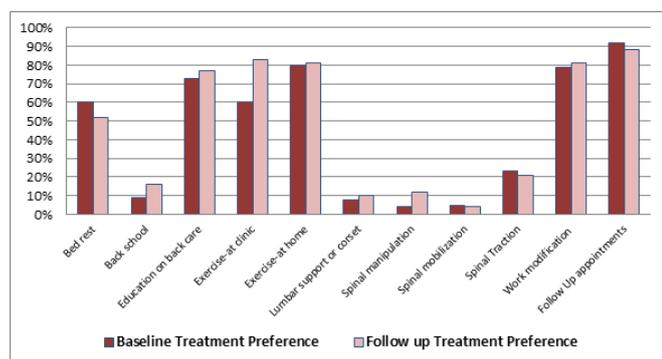


The above graph shows follow up treatment preferences response in percentile values.

Table no.7.Comparison between baseline and follow up for treatment preferences.

Questions	Baseline Treatment Preference	Follow up Treatment Preference
Bed rest	60%	52%
Back school	9%	16%
Education on back care	73%	77%
Exercise-at clinic	60%	83%
Exercise-at home	80%	81%
Lumbar support or corset	8%	10%
Spinal manipulation	4%	12%
Spinal mobilization	5%	4%
Spinal Traction	23%	21%
Work modification	79%	81%
Follow Up appointments	92%	88%

Graph no.7. Comparison between baseline and follow up for treatment preferences.

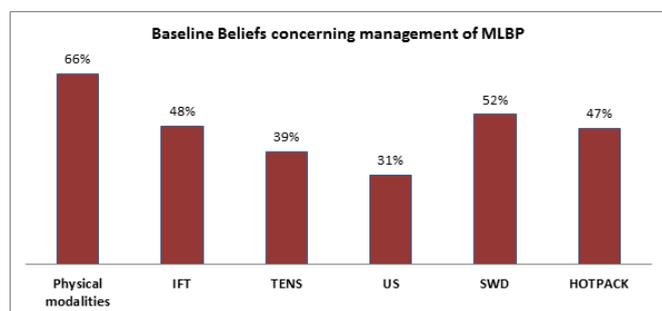


Above graph shows the comparison between baseline and follow up treatment preferences in the percentile values.

Table no.8.Baseline data for beliefs concerning Management of MLBP in Practice Pattern.

Questions	Beliefs concerning management of MLBP in practice pattern
Physical modalities	66%
IFT	48%
TENS	39%
US	31%
SWD	52%
HOTPACK	47%

Graph.no.8.Baseline data for Beliefs Concerning Management of MLBP in Practice Pattern.

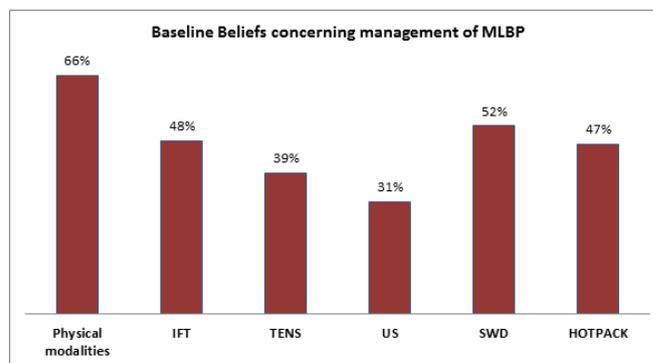


The above graph shows baseline beliefs concerning Management of MLBP in Practice Pattern in the percentile values.

Table no.9.Follow up data for beliefs concerning Management of MLBP in Practice Pattern.

Questions	Beliefs concerning management of MLBP
Physical modalities	62%
IFT	49%
TENS	37%
US	28%
SWD	50%
HOTPACK	46%

Graph no.9.Follow up data for beliefs concerning Management of MLBP in Practice Pattern.

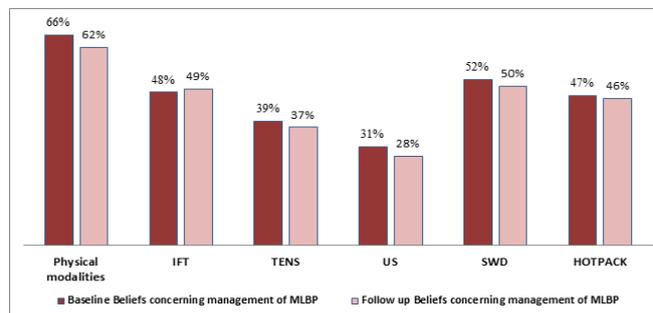


The graph shows follow up data for beliefs concerning Management of MLBP in Practice Pattern in percentile values.

Table no10.Comparison between baseline and follow up beliefs concerning management of MLBP in Practice pattern.

Questions	Baseline Beliefs concerning management of MLBP	Follow up Beliefs concerning management of MLBP
Physical modalities	66%	62%
IFT	48%	49%
TENS	39%	37%
US	31%	28%
SWD	52%	50%
HOTPACK	47%	46%

Graph no.10.Comparison between baseline and follow up beliefs concerning management of MLBP in Practice pattern.

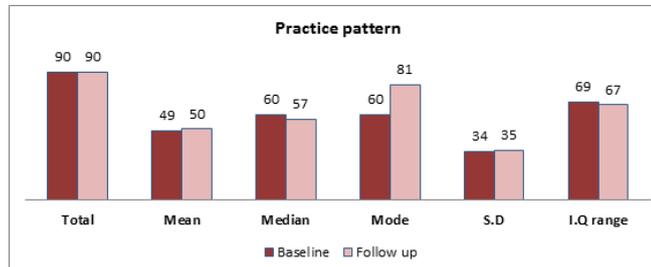


The above graph shows the comparison between baseline and follow up beliefs concerning the management of MLBP.

Table no.11 .Comparison of descriptive statistics between baseline and follow up.

Group	Total	mean	median	mode	S.D	I.Q R
Baseline	90	49	60	60	34	69
Follow up	90	50	57	81	35	67

Graph no.11. Comparison of descriptive data between baseline and follow up

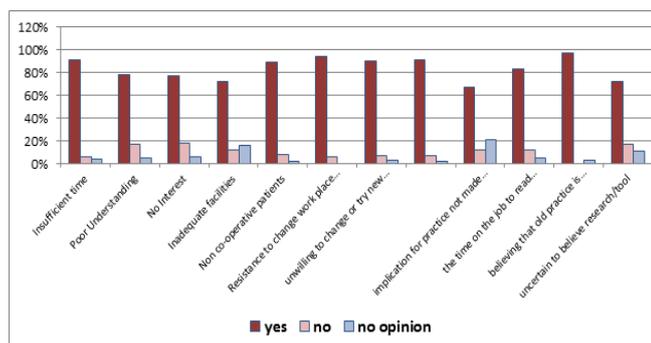


The above graph shows comparison of descriptive data between baseline and follow up with the mean value of 49 and 50 and S.D ±34 and ±35 respectively.

Table no 14.Barrier Questionnaire

Sr. no.	Barrier Questions	Yes	No	No opinion
1	Insufficient time	91%	5.50%	3.50%
2	Poor Understanding	78%	17%	5.00%
3	No Interest	77%	18%	5.50%
4	Inadequate facilities	72%	12%	16.00%
5	Non co-operative patients	89%	8%	2.00%
6	Resistance to change work place setting	94%	6.00%	0.00%
7	unwilling to change or try new practice	90%	7%	3.00%
8	administration will not allow implementing	91%	7%	2.00%
9	implication for practice not made clear	67%	12%	21.00%
10	the time on the job to read research is not sufficient	83%	12%	5.00%
11	believing that old practice is more feasible	97%	0%	3.00%
12	uncertain to believe research/tool	72%	17%	11.00%

Graph no14.Barrier Questionnaire

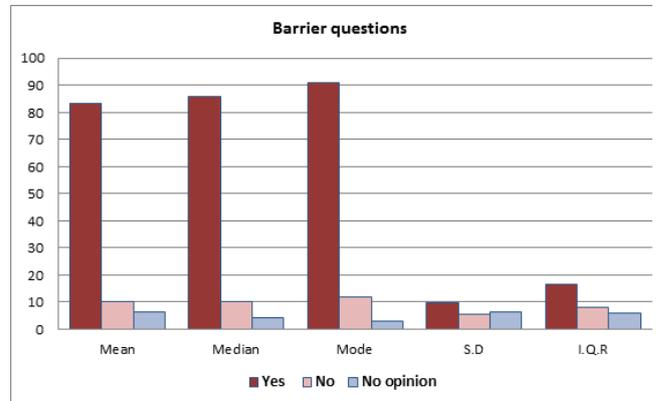


The above graph shows the barriers in the percentile values for the responses of Yes, No, and No Opinion

Table no.15.Descriptive statistics for barrier questionnaire

Barrier ques.	Mean	Median	Mode	S.D	I.Q.R
Yes	83.4	86	91	9.9	16.5
No	10.1	10	12	5.4	8
No opinion	6.4	4.25	3	6.3	5.75

Graph no.15. Descriptive statistics for barrier questionnaire



The above graph shows descriptive statistics for barrier questionnaire with the mean value of 83.4,10.1,6.4 and S.D ±9.9,±5.4,±6.3 for the responses of Yes, No and No Opinion respectively.

DISCUSSION:

This study adds to our knowledge concerning physical therapy practice in managing MLBP. Our findings suggest that even after detailed knowledge about the LBP guidelines most of the physical therapist remain reluctant to change and follow the same traditional practice. A majority of respondent reported that they were using modalities as the part of the treatment, though the guidelines suggests otherwise. The AHCPR guidelines recommend that clinician should teach self-application of heat or cold for pain control and discourage the use of modalities such as TENS, ultrasound, and biofeedback, which possess uncertain effectiveness for managing acute lumbar impairment. The selection of interventions by clinicians may be associated with a combination of clinical and nonclinical factors. In a study with 2,491 patients (50% with lumbar impairment), treated by 462 physical therapists, Jette and Jette³⁵ found that the use of heat and cold modalities was related not only to the acuity and severity of lumbar impairment, but also to the therapist's academic degree. Battie' et al.³⁶ found that 86% of the therapists in the state of Washington would include patient education for patients with acute LBP and that 71% of the therapists would include patient education for patients with sciatica. In a more recent study, Mielenz et al.³² interviewed 1,580 patients with LBP in North Carolina, found that therapeutic exercise (83%) and heat treatment (74%) were the interventions that were most commonly prescribed by physical therapists. a study by Malmivaara et al.³³ showed that patients with LBP who were assigned a 2-day bed rest recovered more slowly than those who had maintained ordinary activities. In the current study bed rest was advised by 60% of responded

for someone with localized symptoms. There were no great significant differences as the value decreased to 52% at follow up. By a study by Caroline Metcalfe GradDipPhys MCSP et.al.²⁷ their study aimed to examine the attitudes to research and the barriers to implementing evidence-based practice in four professions allied to medicine: dieticians, occupational therapists, physiotherapists, and speech and language therapists. The survey achieved a response rate of 80% (N = 572). The majority of therapists (97%) agreed that research findings are important for the development of professional practice. Only 5% had no interest in reading research findings.

CONCLUSION

Current study concluded that the therapist remains reluctant to change and follow the same old practice which they think is more feasible for the clinical routine management of the MLBP. Even after the education about the guidelines there was not much difference in the practice pattern of the therapists and there are various barriers which restrict the therapist from adopting the practice guidelines.

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