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Research Article

**TREATMENT PREFERENCES OF PHYSIOTHERAPISTS  
TOWARDS INTERVENTIONAL MANAGEMENT OF  
CHRONIC NON-SPECIFIC LOW BACK PAIN**Dr Mehwish Niaz<sup>1</sup>, Dr M Umar Sadiq<sup>2</sup>, Dr Rameeza Rashed<sup>3</sup><sup>1</sup>CMH Lahore Medical College<sup>2,3</sup>University of Health Sciences Lahore**Article Received:** December 2019    **Accepted:** January 2020    **Published:** February 2020**Abstract:**

**Objective:** The objective of this study was to observe the preferences of physiotherapists towards Interventional management of chronic non-specific low back pain and to compare the practice patterns of novice practitioners and experienced ones in Lahore, Pakistan.

**Methodology:** A cross-sectional survey was conducted and Purposive Sampling Technique was used. Physiotherapists working at public and private hospitals having experience of minimum one year were included for this study. Data was collected using questionnaire used by Pensri et al that was made to investigate practice patterns in Thailand. A total of 246 physiotherapists were included in this study with minimum experience of one year from public and private hospitals. The data was analyzed by SPSS. Qualitative variables and scores were presented as percentages and frequencies. Chi Square was applied for comparison of percentages and frequencies.  $P < 0.05$  was considered statistically significant.

**Results..** Majority of novice practitioners preferred electro modalities and therapeutic exercises as treatment technique and pain relief as treatment goal. While the more experienced physiotherapists (5-10years) showed trend towards manual therapy and therapeutic exercises. Majority of new one selected stretching and strengthening exercises with aerobic exercises while others only rely on strengthening exercises.

**Conclusion:** This survey has highlighted the similarities and differences in practice patterns of physiotherapists among novice practitioners and experienced ones. After this survey it is suggested that there should be some standard practice guidelines in the country so that all physiotherapists work according to them on single pattern.

**Key words:** Chronic, Non-specific low back pain, treatment preferences, physiotherapist

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**INTRODUCTION:**

Low back pain that is between costal margins and inferior gluteal folds applies constraints in movement is referred to as Non-specific Low Back Pain. While the pain that lasts beyond 12 weeks even after the treatment, is defined as chronic back pain. . Physical activities and posture are generally the major reasons behind this type (1) It doesn't really require the formal medical care but two treatment approaches are used. One with the simple care which is intensified if there's no impact, and the other is risk prediction (2). Non-pharmacological treatments can be used to fix the low back pain. Ranging from multidisciplinary rehabilitation, alternative therapies like spinal manipulation to psychological therapies such as cognitive behavioral, to physical techniques, for example electric nerve stimulation, ultrasound and back supports, can all contribute to positive results (3) Care and shared decision making can be vital for the patients, research has shown (4) Multiple treatment approaches physiotherapists use for interventional management of non-specific lower back pain, like electrotherapy, manual therapy and exercise therapy. What approach they prefer and within that approach, what methods they opt are the treatment preferences.(5) Physiotherapy trainings across the country lack standardization. Musculoskeletal problems are treated emphasizing on electrotherapy modalities such as ultrasound, hot and cold, transcutaneous electrical nerve stimulation (TENS) and short wave diathermy. Due to limited inclusion of manual therapy in most courses many therapists are keen to study short manual therapy courses at post-graduate level. Physiotherapy practice lack standardization in Pakistan. Aims of this study were to make a standardized system for clinical practice in physiotherapy, so that all physiotherapists work on same protocol. It is important to make clinical practice guidelines because it is one of the foundations of efforts to improve healthcare. Physiotherapists in New Zealand have used several treatment methods for the management of non-specific low back pain with joint mobilization being the most successful one (88%). This combined with massage has also resulted in positive outcomes (21%). Although these treatments are not strongly backed by the evidence-based clinical guidelines, yet they prove to be successful in reducing pain. (6). According to the American Pain society evidence showed slight improvement in pain relief with exercise than without it. (7, 8) Saragiotto suggested exercise is a modestly effective treatment for chronic nonspecific low back pain. None of the forms of exercises is superior to any other. Motor Control Exercise is one of the most popular ones. It targets the deep and global trunk muscles restoring their control and building their coordination. This

exercise then advances to even complex functional tasks for muscles activation. According to researcher, Motor Control Exercise (MCE) demonstrated comparable results to manual therapies. Low to moderate quality evidence states that the outcomes are similar to other forms of exercises. (3) Since MCE is not superior to any other, it's the patient and therapist who need to decide the choice of exercise keeping in view the preferences, costs, training, and safety.(9)The muscles that control and support the spine are targeted by the Motor Control Exercise. Their coordination, control and strength is the primary target of MCE. When compared to minimal intervention, MCE moderately reduced pain, and improved function slightly(10).

A research showed that cardiorespiratory and combined exercise programs were useless, however, coordination/stabilization and strength/resistance exercises helped in reducing chronic low back pain.(11) Even though there is evidence which proves a moderate relationship between NSCLBP and vitamin D but in order to prove a definitive association between the two, further researches are required (12).

In all gait parameters and clinical symptoms there were significant differences identified between healthy people and patients with CNSLBP. Significant improvements in gait velocity (10.6%), cadence (5%), step length (5.6%) and quality of life along with decrease in pain (13.3%) were identified in all gait parameters and clinical measures following six months of therapy.

According to evidence, Yoga results in increasing the function in both short (6 Months) and long-term (12 months). However, it resulted in reducing pain only in short term but not in the long term (10).

**Objectives**

The objective of this study was to observe the preferences of physiotherapists towards Interventional management of chronic non-specific low back pain and to compare the practice patterns of novice practitioners and experienced ones in Lahore, Pakistan.

**METHODOLOGY:**

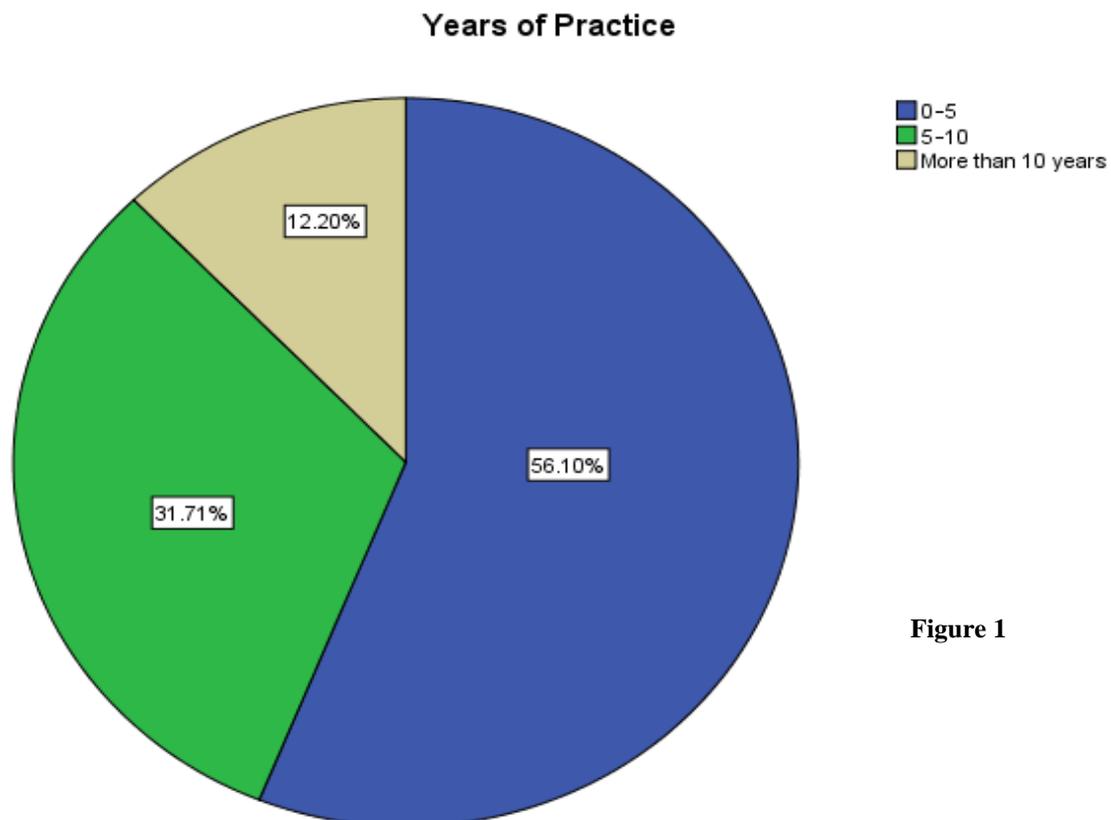
It was a cross-sectional study. Participants for this study were included from clinics, public and private hospitals of Lahore. Physiotherapists working at public and private hospitals and having minimum of one year of experience were included by using purposive sampling technique. Sample size was calculated by

$$n = \frac{z_{1-\alpha/2}^2 P(1-P)}{d^2}$$

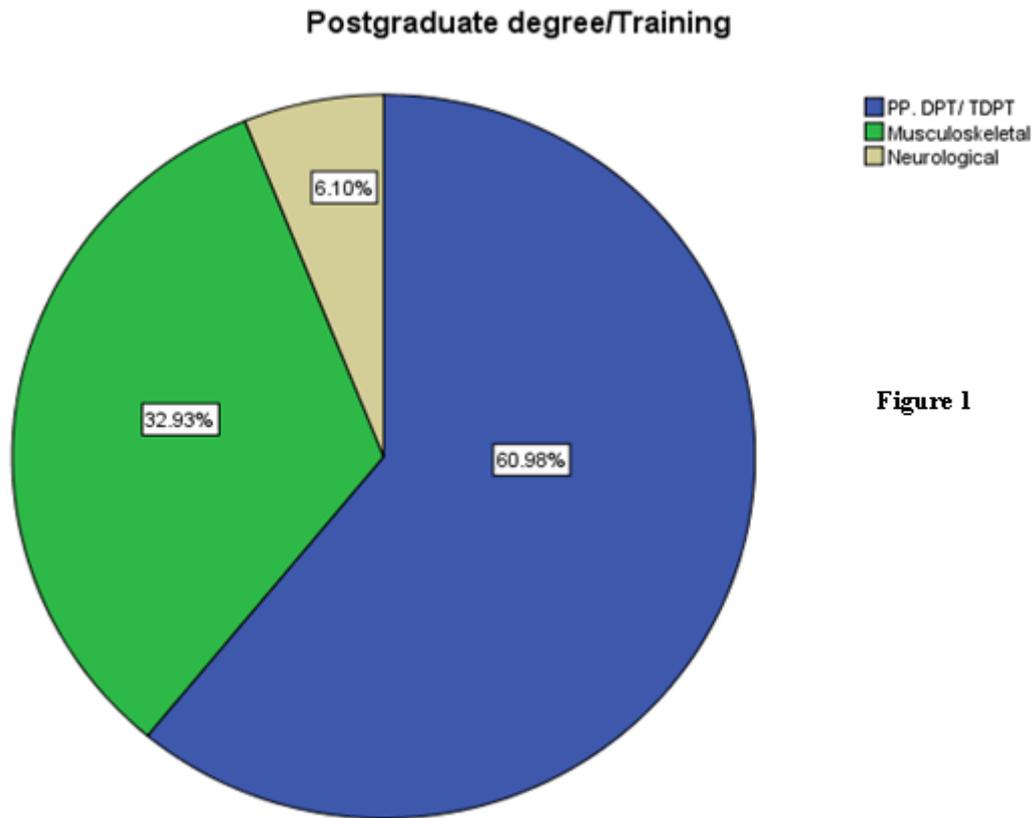
Keeping confidence level 95%, anticipated population proportion P=0.20 and Absolute precision required, sample size suggested was 246 or more. (13)The data was entered and analyzed in SPSS version 20. Qualitative variables and scores were presented as percentages and frequencies. Chi Square was applied for comparison of percentages and frequencies.  $P < 0.05$  was considered statistically significant.

### RESULTS:

According to this survey more than half percentage (56.10%) of physiotherapists are among 0-5 years' experience, while 31.71% have experience of 5-10 years. Very small percentage (12.20%) of physiotherapists has more than 10 years' experience.



**Figure 1**



**Figure 1**

**Years Of Practice \* Each Session Comprises Of**

**Crosstab**

			Each session comprises of				Total
			Electrotherapy	Manual therapy	Exercise therapy	All of the above	
Years of Practice	0-5	Count	13	0	39	86	138
		% of Total	5.3%	.0%	15.9%	35.0%	56.1%
	5-10	Count	0	2	11	65	78
		% of Total	.0%	.8%	4.5%	26.4%	31.7%
	More than 10 years	Count	0	0	0	30	30
		% of Total	.0%	.0%	.0%	12.2%	12.2%
Total		Count	13	2	50	181	246
		% of Total	5.3%	.8%	20.3%	73.6%	100.0%
Pearson Chi-Square							0.000

**Table 1**

P-value obtained by applying Pearson Chi-Square test  
 P-value ≤ 0.05 considered statistically significant

Above treatment shows that 5.3% physiotherapists all of who are novice practitioners used electrotherapy in their sessions, while physiotherapists with more experience involved both manual and exercise therapy in treatment session.

### Years Of Practice \* Follow Up

#### Crosstab

			follow up			Total
			six-month follow up	Three-month follow up	One month follow up	
Years of Practice	0-5	Count	32	106	0	138
		% of Total	13.0%	43.1%	.0%	56.1%
	5-10	Count	0	34	44	78
		% of Total	.0%	13.8%	17.9%	31.7%
	More than 10 years	Count	10	0	20	30
		% of Total	4.1%	.0%	8.1%	12.2%
Total		Count	42	140	64	246
		% of Total	17.1%	56.9%	26.0%	100.0%
Pearson Chi-Square						0.012

**Table 2**

P-value obtained by applying Pearson Chi-Square test  
P-value  $\leq 0.05$  considered statistically significant

Above table shows that novice physiotherapists prefer 3 month follow up while experienced ones are more into one month follow up protocol.

Cross tabulation among physiotherapist experience and clinical setting showed, most of the professionals, 107 (43.5%) owned their personal clinic when they treated. Chi-square test was applied (0.00). the postgraduate degree of the sample 246 candidates. 150 (61%) had the Master's degree in PP, DPT/TDPT, out of which 86 (35%) have practiced up to 5 years, and 64(26%) have experience from 5 to 10 years. All the 30(12.2%) who have experience more than 10 years have their masters in Muscoskeletal. 50(20.3%) of those who have masters in the same degree have practiced up to 5 years, and 1(0.4%) has experience of 5-10 years. 13(5.3%) with masters in Neurological have experience between 5-10 years and 2(0.8%) have practiced up to 5 years. Chi-square test was applied (0.00). Cross tabulation was done among three groups of physiotherapists (having experience 0-5 years 5-10 years and above 10 years) and their preferred goals for ma.aging NSLBP. Chi-square test was applied (0.024). Cross tabulation was done too see association between first treatment

preference and years of practice. Chi-square test was applied (0.012). Cross tabulation was done between experience of physiotherapists and number of sessions. Chi-square test was applied (0.011). Cross tabulation was done among years of practice and duration of each treatment session. Chi-square test was applied (0.053). Cross tabulation was done among years of practice of physiotherapists and use of different techniques of treatment. Chi-square test was applied (0.001). Cross tabulation was done to see association between the novice practitioners and experienced ones. Chi-square test was applied (0.001). Cross tabulation among years of practice of physiotherapists and different manual therapy techniques. Chi-square test was applied (0.009). Cross tabulation among physiotherapists experience and inclusion of postural education. Chi-square test was applied (0.00). Cross tabulation among physiotherapists years of practice and types of exercises they use in their practice. Chi-square test was applied (0.026). Cross tabulation among experience of physiotherapists and frequency of

exercises at home. Chi-square test was applied (0.015)

### DISCUSSION:

First treatment preference among physiotherapists of different years of practice showed, therapeutic exercises is first technique to be used and electrotherapy comes on second number for the novice practitioners. Physiotherapists having experience (5-10) years seemed to be interested in manual therapy with therapeutic exercises while above 10 years experienced physiotherapists selected electrotherapy as their first treatment technique. Same study in developed country showed, In United states of (Battié et al., 1994), (15) in Britain, in Northern Ireland (16) conducted researches in recent past years to figure out treatment approaches of physiotherapists in their regions. According to the work of Battie et al, (1994), McKenzie approach is preferred for managing LBP. Use of TENS and patient education about proper body mechanics was the most common treatment preferences. Gracey et al, (2002) found strengthening and stretching exercises was one of the preferred exercises.

There was no descriptive survey on physiotherapy management of nonspecific low back pain in Pakistan. The aim of this study was to investigate the professional profiles of physiotherapists and to explore the current practice patterns among novice practitioners and experienced ones.

In Lahore majority of physiotherapists have their personal clinical setups. Many other who cannot afford their personal setups are working under other physiotherapists in their setups or hospitals. Very small percentage gets opportunity to work in government hospitals. In contrast the same study performed in Thailand, most of the physiotherapists was working in hospital operated clinics. Trend of practicing in own clinics is very low in Thailand (5).

Due to the less awareness of this field in general public, most of the patients visit physiotherapist after referral from orthopedic specialists, while others get referral from general practitioners. There is very small percentage that directly accesses the physiotherapist being well aware. Similar results found in the study in Ghana (14).

The study highlighted the number of treatment sessions given by Pakistani Physiotherapists Novice practitioners and experienced ones both showed almost same trend towards selection of number of sessions. Majority of them preferred up to 4 sessions while other reported up to 8 sessions. Almost three quarters of all the physiotherapists use all three of the therapies in each session. A few

beginners miss out Manual therapy and choose the other two or one. The experienced ones sometimes skip the Electrotherapy. However, the expert therapists find all three of the therapies to be important enough to use in every session. While according to the Fidvi and his fellows majority of therapists used 8–12 sessions of treatment (17)

Exercise therapy dominates the Electrotherapy and Manual therapy by quite a margin overall. While according to the research of Fidvi and May almost all physiotherapists used therapeutic exercises, electrotherapy and gave precautionary guidelines to the patients. Half of physiotherapists used manual therapy too. (14) More than 75% of the practitioners include Postural education program most frequently. Patient education about proper body mechanics was the most common treatment preferences, some found strengthening and stretching exercises was one of the preferred exercises. (6) Spinal stabilization exercises were the most popular exercise therapy for acute and chronic LBP, followed by the McKenzie approach. (14, 18). Frequency of home exercises had a very dominant option that almost all the professionals agreed to, including every single expert with more than ten years of experience – three times a day.

### CONCLUSION:

This survey has highlighted the similarities and differences in practice patterns of physiotherapists among novice practitioners and experienced ones. After this survey it is suggested that there should be some standard practice guidelines in the country to be followed by professionals.

### Recomandations

In future a systematic review should be done to highlight the urge for standard rules and protocols of treatment practices.

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