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Original Article

Frequency of Non-Specific Low Back Pain and Self-Management Protocols Among Clinical and Academician Physical Therapists: A Cross-Sectional Study

Dr Muhammad Shahroz Khan PT[1], Dr Muqaddas Noor PT[1], Dr Abdul Rahman PT[2], Dr Junaid Ali PT[1], Dr Mohsin Soomro PT[1], Dr Rutaba Shaikh PT[1]

[1] Physiotherapy House officer, Jinnah Post Graduate Medical Centre, Karachi, Pakistan
[2] Principal, MC College of Medical and Allied Health Sciences, Karachi, Pakistan

***Corresponding author: Dr Muhammad Shahroz Khan PT, dr.shehroz.khanansari138@gmail.com**

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ABSTRACT

Background: Non-specific low back pain (NSLBP) is a common musculoskeletal condition among physical therapists because of prolonged standing, sustained posture, repetitive work demands, and patient-care responsibilities. Understanding how physical therapists manage their own NSLBP may help identify practical self-care strategies within clinical and academic settings. **Objective:** To determine the current frequency of NSLBP and identify self-management protocols used by clinical and academic physical therapists in Pakistan. **Methods:** A cross-sectional observational study was conducted among 369 male and female physical therapists aged 27–45 years with body mass index below 30 kg/m² and a history of NSLBP. Participants were recruited through non-probability convenience sampling from hospitals, clinics, medical universities, and colleges across Pakistan. Data were collected using a 16-item self-administered online questionnaire covering demographics, NSLBP frequency, perceived occupational contributors, and self-management protocols. Data were analyzed using SPSS version 23.0, and categorical variables were summarized as frequencies and percentages. **Results:** Current NSLBP was reported by 285 participants (77.23%). Prolonged standing was the most common perceived contributor (62.6%), followed by prolonged working and bad posture (59.6% each), and prolonged sitting (50.94%). Physiotherapy techniques were used by 76.6% of participants, rest by 71.2%, and postural correction by 46.6%, while medication use was low (6.77%). The most frequently reported specific approaches were hot/cold packs (86.1%), myofascial release (76.6%), self-stretching (75.6%), and core strengthening (51.49%). **Conclusion:** NSLBP was commonly reported among physical therapists with prior symptoms, and self-management was predominantly non-pharmacological, relying mainly on physiotherapy-based techniques, hot/cold packs, myofascial release, self-stretching, and strengthening exercises. **Keywords:** Non-specific low back pain; Physical therapists; Self-management; Hot/cold pack; Myofascial release; TENS; Physiotherapy techniques.

INTRODUCTION

Low back pain (LBP) is one of the most common musculoskeletal health problems worldwide and remains a leading contributor to activity limitation, disability, reduced work productivity, and health-care utilization. It has been reported that a large proportion of the general population experiences LBP at least once during life, with estimates commonly ranging between 84% and 90%, highlighting its considerable public-health relevance across occupational and non-occupational populations (1,2). Beyond individual discomfort, LBP contributes substantially to the global burden of musculoskeletal disability and imposes direct and indirect economic costs through treatment expenditure, absenteeism,

presenteeism, and reduced functional capacity (3,4). Among health-care workers, the burden of LBP is particularly important because occupational responsibilities often require prolonged standing, repetitive movement, patient handling, sustained postures, and continuous clinical workload, all of which may increase vulnerability to work-related musculoskeletal disorders (5,6).

Physical therapists represent a distinctive occupational group because their professional role involves both the prevention and management of musculoskeletal disorders in patients while simultaneously exposing them to biomechanical and ergonomic stressors during clinical practice. Clinical physical therapists frequently perform manual therapy, patient transfers, therapeutic exercise supervision, bending, twisting, lifting, and prolonged standing, whereas academic physical therapists may be exposed to prolonged sitting, teaching-related postures, administrative demands, and research workload. Previous evidence has shown that musculoskeletal symptoms are common among both clinical and academic physical therapists, with low back pain frequently reported as one of the most affected anatomical regions (7). This dual professional exposure creates an important research problem: physical therapists are expected to provide evidence-based advice and rehabilitation for LBP, yet they may themselves experience recurrent or persistent symptoms related to their own work environment.

Non-specific low back pain (NSLBP) is generally defined as low back pain without an identifiable specific pathological cause, such as malignancy, fracture, infection, inflammatory disease, osteoporosis, radiculopathy, or structural spinal pathology. It is considered the most common form of LBP and is often classified according to symptom duration as acute, subacute, or chronic (8). In physical therapists, NSLBP is clinically relevant not only because of pain and functional limitation but also because it may affect professional performance, treatment delivery, physical endurance, job satisfaction, and long-term occupational sustainability. International studies have reported substantial rates of LBP among physical therapists, including high frequencies in Saudi Arabia and variable prevalence estimates across the United States, United Kingdom, and Canada (9,10). In Pakistan, available studies have reported considerable occurrence of LBP among clinical physical therapists in Islamabad, Peshawar, and Lahore, suggesting that the problem is also locally relevant (11,12). However, much of the existing Pakistani evidence has focused primarily on prevalence or work-related risk factors rather than on how physical therapists manage their own symptoms.

The mechanisms contributing to NSLBP among physical therapists are likely multifactorial. Biomechanical contributors include awkward posture, repeated trunk flexion and rotation, prolonged standing, manual handling, and sustained static positions, while individual and lifestyle-related factors may include age, sex, body mass index, physical activity, sedentary behavior, and psychosocial stressors (13,14). Clinical and academic work environments may therefore generate different patterns of exposure, but both domains can plausibly contribute to the development or persistence of NSLBP. This distinction is important because identifying only the frequency of symptoms is insufficient for occupational health planning; researchers must also understand the strategies physical therapists use to control symptoms, maintain function, and continue professional responsibilities.

Self-management is a core component of contemporary NSLBP care and commonly includes remaining active, avoiding unnecessary bed rest, using exercise-based approaches, correcting posture, applying superficial heat or cold, and using selected physiotherapy techniques or modalities when appropriate (15,16). Physical therapists may have greater technical knowledge of these strategies than the general population, but their self-management behavior may differ from how they treat patients because of time constraints, workload, access to assistance, perceived severity, or professional confidence. Studies have described preferred physiotherapy treatments for mechanical or non-specific LBP, including McKenzie-based approaches, Maitland mobilization, heat packs, TENS, therapeutic ultrasound, exercise therapy, manual therapy, and ergonomic advice (15-17). Nevertheless, evidence remains limited regarding which of these approaches physical therapists actually apply to themselves when they experience NSLBP, especially in Pakistani clinical and academic settings.

This gap is important because self-management patterns among physical therapists may provide insight into practical, acceptable, and professionally informed strategies for symptom control. The population of interest in the present study is clinical and academic physical therapists in Pakistan with a history of NSLBP; the exposure context includes professional domain and work-related physical demands; the comparative interest lies in differences between clinical and academic roles; and the outcomes are current NSLBP status and reported self-management protocols. Therefore, this study aimed to determine the current frequency of NSLBP among eligible clinical and academic physical therapists with a history of NSLBP and to identify the self-management protocols they use to manage their symptoms.

MATERIALS AND METHODS

A cross-sectional observational study was conducted to determine the current frequency of non-specific low back pain and the self-management protocols used by clinical and academic physical therapists in Pakistan. The cross-sectional design was selected because it allowed assessment of NSLBP status, perceived work-related contributors, and self-management practices at a defined point in time among eligible participants. The study was carried out over a period of six months after synopsis approval and included physical therapists working in hospitals, clinical settings, medical universities, and colleges across Pakistan.

The study population consisted of qualified physical therapists from clinical and academic domains who had experienced non-specific low back pain at any time during their professional career. Both male and female physical therapists were eligible if they were aged 27–45 years, had a body mass index below 30.0 kg/m², and fulfilled the operational definition of NSLBP. Non-specific low back pain was defined as pain or discomfort in the lower back region between the lower border of the 12th rib and the inferior gluteal folds without a specific identifiable pathological cause.

Self-management protocols were defined as independent or assisted strategies used by physical therapists to manage their own NSLBP, including exercise-based approaches, physiotherapy techniques, therapeutic modalities, postural correction, rest, and medication use. Clinical physical therapists were defined as practitioners directly involved in patient assessment, treatment, rehabilitation, and functional restoration, whereas academic physical therapists were defined as physiotherapists primarily involved in teaching, academic work, research, curriculum delivery, and student supervision.

Participants were excluded if they had specific low back pain or any diagnosed condition that could provide a distinct pathological explanation for back pain, including osteoarthritis, ankylosing spondylitis, spinal stenosis, herniated disc, nerve compression, rheumatic disease, degenerative spinal disease, systemic disease such as hypertension or diabetes, genetic disease, previous lumbar spine surgery, traumatic lumbar injury, fracture, or pregnancy. These restrictions were applied to reduce diagnostic misclassification and to ensure that the outcome reflected non-specific rather than specific low back pain.

Participants were selected using a non-probability convenience sampling technique. Eligible physical therapists were approached through an online survey distributed across relevant clinical and academic physiotherapy networks. Before participation, respondents were informed about the purpose of the study, voluntary participation, confidentiality of personal information, and their right to withdraw. Informed consent was obtained before completion of the questionnaire. Only responses from participants meeting the eligibility criteria were included in the final analysis.

Data were collected using a structured self-administered questionnaire consisting of 16 items divided into three domains: demographic characteristics, frequency and characteristics of NSLBP, and self-management protocols. The demographic section collected information on age, gender, professional domain, working hours, and BMI category. The NSLBP section assessed whether participants had current NSLBP, perceived contributing occupational activities, and whether the nature of clinical or academic

work was considered relevant to symptom occurrence. The self-management section assessed strategies used by participants, including physiotherapy techniques, rest, postural correction, medication, stretching, core strengthening, bridging exercises, McKenzie protocol, Williams flexion exercises, dry needling, cupping therapy, hot or cold packs, TENS, therapeutic ultrasound, EMS, diathermy, IFC therapy, myofascial release, Maitland mobilization, traction, muscle energy techniques, deep transverse friction massage, combined therapeutic approaches, and perceived barriers to self-management.

The sample size was calculated using the single-population proportion formula, (n = Z^2 \times P(1-P)/d^2), where (n) represents the required sample size, (Z) represents the standard normal value corresponding to a 95% confidence level, (P) represents the assumed prevalence, and (d) represents the margin of error. An assumed prevalence of 60% was used based on prior evidence on chronic non-specific low back pain, resulting in a required sample size of 369 participants (18).

To reduce bias, eligibility criteria were clearly defined before data collection, specific causes of low back pain were excluded, and the same questionnaire was administered to all participants using a uniform online format. Restriction by age and BMI was applied to reduce variability related to extreme age and obesity-related confounding. Data were reviewed for completeness and eligibility before analysis. Duplicate, incomplete, and ineligible responses were excluded from the analytic dataset. Variables were coded consistently before entry into the statistical software, and categorical responses were checked for internal consistency across demographic, NSLBP, and self-management domains.

Data were analyzed using SPSS version 23.0. Descriptive statistics were used to summarize participant characteristics, current NSLBP status, working-hour categories, perceived contributing factors, professional-domain perceptions, and self-management protocols. Frequencies and percentages were calculated for categorical variables, including gender, professional background, BMI category, current NSLBP, working hours, perceived activities contributing to NSLBP, use of physiotherapy techniques, rest, postural correction, medication, therapeutic modalities, manual therapy techniques, and combined treatment approaches.

Where group comparisons were required, categorical variables were assessed using the chi-square test or Fisher's exact test, as appropriate. Associations between current NSLBP and selected explanatory variables, including gender, age group, BMI category, working hours, and professional domain, were planned using binary logistic regression, with results expressed as odds ratios and 95% confidence intervals. A p-value of less than 0.05 was considered statistically significant.

Ethical approval was obtained from the Ethical Review Committee before data collection. All participants provided informed consent and were informed about the study objectives, voluntary participation, confidentiality, and freedom to withdraw. Personal and professional information was kept confidential and used only for research purposes. Data integrity was maintained by using a standardized online data-collection form, applying predefined eligibility criteria, coding variables systematically, screening responses before analysis, and analyzing all included responses using a reproducible statistical workflow.

RESULTS

A total of 369 physical therapists were included in the analysis. The participants were between 27 and 45 years of age and had a body mass index below 30 kg/m². Female participants represented 210 respondents (57.0%), while male participants represented 159 respondents (43.0%). Most respondents were clinical physical therapists, accounting for 253 participants (68.5%), followed by those working in both clinical and academic domains, 91 participants (24.66%), and academic physical therapists, 23 participants (6.2%). The largest age subgroup was 27 years, comprising 105 participants (28.4%), followed by 29 years with 70 participants (18.9%) and 28 years with 56 participants (15.17%). Most participants had a BMI

within the 18.5–24.9 kg/m² range, representing 328 respondents (88.88%), while 41 respondents (11.11%) had a BMI between 25.0 and 29.9 kg/m². These demographic distributions are summarized in Table 1.

Table 1. Demographic Characteristics of Physical Therapists Included in the Study

Variable	Category	Frequency (n)	Percentage (%)	95% CI (%)
Gender	Female	210	57.0	51.86–61.96
	Male	159	43.0	38.04–48.14
Professional domain	Clinical physical therapist	253	68.5	63.83–73.30
	Academic physical therapist	23	6.2	3.77–8.70
	Both clinical and academic	91	24.66	20.26–29.06
Age	27 years	105	28.4	—
	28 years	56	15.17	—
	29 years	70	18.9	—
	30 years	44	11.9	—
	31 years	24	6.5	—
	32 years	27	7.31	—
	33 years	15	4.0	—
	34 years	15	4.0	—
	35–45 years	64	17.34	—
BMI category	18.5–24.9 kg/m²	328	88.88	85.68–92.10
	25.0–29.9 kg/m²	41	11.11	7.90–14.32

Among the 369 physical therapists with a history of non-specific low back pain, 285 participants (77.23%; 95% CI: 72.96–81.51%) reported currently experiencing NSLBP, while 84 participants (22.7%; 95% CI: 18.49–27.04%) did not report current symptoms. Regarding daily working duration, the most frequent working-hour category was 6–8 hours per day, reported by 258 participants (69.9%), followed by less than 6 hours in 61 participants (16.53%), 9 hours in 30 participants (8.1%), and more than 9 hours in 20 participants (5.42%). These findings show that most respondents with current or previous NSLBP were working within a standard 6–8-hour daily schedule.

Table 2. Current NSLBP Status and Working-Hour Distribution

Variable	Category	Frequency (n)	Percentage (%)	95% CI (%)
Current NSLBP status	Yes	285	77.23	72.96–81.51
	No	84	22.7	18.49–27.04
Working hours per day	Less than 6 hours	61	16.53	12.74–20.32
	6–8 hours	258	69.9	65.24–74.60
	9 hours	30	8.1	5.34–10.92
	More than 9 hours	20	5.42	3.11–7.73

All participants reported that at least one activity or task contributed to NSLBP occurrence. Prolonged standing was the most frequently reported contributing factor, identified by 231 participants (62.6%; 95% CI: 57.66–67.54%), followed by prolonged working and bad posture, each reported by 220 participants (59.6%; 95% CI: 54.61–64.63%). Prolonged sitting was reported by 188 participants (50.94%), while weight lifting was reported by 75 participants (20.32%).

Other reported contributors included bike riding in 51 participants (13.82%) and driving in 44 participants (11.92%). In relation to professional domain, 369 participants (100%) considered the nature of clinical or academic work relevant to NSLBP occurrence, and 332 participants (89.9%) perceived a difference in NSLBP occurrence between clinical and academic physical therapists. Among perceived domain-related differences, clinical physical therapists were reported as more frequently affected by 88.0% of respondents, compared with 12.0% for academic physical therapists.

Table 3. Perceived Occupational Contributors and Domain-Related NSLBP Patterns

Variable	Category	Frequency (n)	Percentage (%)	95% CI (%)
Any activity/task contributing to NSLBP	Yes	369	100.0	100.0–100.0
	No	0	0.0	—
Contributing activities/tasks	Prolonged standing	231	62.6	57.66–67.54
	Prolonged working	220	59.6	54.61–64.63
	Bad posture	220	59.6	54.61–64.63

Variable	Category	Frequency (n)	Percentage (%)	95% CI (%)
	Prolonged sitting	188	50.94	45.85–56.05
	Weight lifting	75	20.32	16.22–24.43
	Bike riding	51	13.82	10.30–17.34
	Driving	44	11.92	8.62–15.23
Nature of work contributes to NSLBP	Yes	369	100.0	100.0–100.0
	No	0	0.0	—
Perceived difference between clinical and academic PTs	Yes	332	89.9	86.91–93.04
	No	37	10.02	6.96–13.09
Domain perceived as more affected	Clinical physical therapists	—	88.0	—
	Academic physical therapists	—	12.0	—

All 369 participants reported self-managing their NSLBP. Physiotherapy techniques were the most commonly reported broad self-management approach, used by 283 participants (76.6%; 95% CI: 72.38–81.01%), followed by rest in 263 participants (71.2%; 95% CI: 66.66–75.89%) and postural correction in 172 participants (46.6%; 95% CI: 41.52–51.70%). Medication use was reported by 25 participants (6.77%). Among specific medications, paracetamol combined with orphenadrine was the most frequently reported, used by 16 participants (4.33%), followed by diethyl ammonium gel in 5 participants (1.35%), diclofenac sodium in 2 participants (0.54%), and prednisolone with naproxen in 2 participants (0.54%).

Table 4. Broad Self-Management Approaches and Medication Use for NSLBP

Variable	Category	Frequency (n)	Percentage (%)	95% CI (%)
Self-management of NSLBP	Yes	369	100.0	100.0–100.0
	No	0	0.0	—
Broad self-management approach	Physiotherapy techniques	283	76.6	72.38–81.01
	Rest	263	71.2	66.66–75.89
	Postural correction	172	46.6	41.52–51.70
	Medicine	25	6.77	4.21–9.34
Medication use for pain management	Yes	25	6.77	4.21–9.34
	No	344	93.22	90.66–95.79
Medication type	Paracetamol + orphenadrine	16	4.33	2.26–6.41
	Diethyl ammonium gel	5	1.35	0.18–2.53
	Diclofenac sodium	2	0.54	0.00–1.29
	Prednisolone + naproxen	2	0.54	0.00–1.29

Among professional self-management strategies, self-stretching was the most frequently reported exercise-based method, used by 279 participants (75.6%; 95% CI: 71.23–79.99%). Core muscle strengthening was used by 190 participants (51.49%), bridging exercises by 155 participants (42.0%), the McKenzie protocol by 125 participants (33.87%), and Williams flexion exercises by 80 participants (21.6%).

Less frequently reported methods included cupping therapy in 4 participants (1.08%) and dry needling in 3 participants (0.8%). For therapeutic modalities, hot/cold packs were the most frequently used modality, reported by 318 participants (86.1%; 95% CI: 82.66–89.70%), followed by TENS in 172 participants (46.6%), therapeutic ultrasound in 69 participants (18.6%), EMS in 42 participants (11.38%), diathermy in 24 participants (6.5%), and IFC therapy in 19 participants (5.14%). Among physiotherapy techniques, myofascial release was the most common, reported by 283 participants (76.6%), followed by traction in 114 participants (30.8%)

Maitland mobilization in 105 participants (28.4%), muscle energy techniques in 71 participants (19.2%), and deep transverse friction massage in 66 participants (17.8%). Combination therapy was reported by 83 participants (22.4%), with the most common combination being hot/cold pack + TENS + myofascial release + traction + core muscle strengthening, reported by 51 of 83 respondents (61.44%). Specific barriers to NSLBP self-management were reported by 53 participants (14.3%), and prolonged working hours accounted for 40 of these 53 barrier responses (75.4%).

Table 5. Specific Exercise-Based Strategies, Therapeutic Modalities, Physiotherapy Techniques, Combination Therapy, and Barriers

Domain	Strategy/Response	Frequency (n)	Percentage (%)	95% CI (%)
Exercise-based self-management	Self-stretching	279	75.6	71.23–79.99
	Core muscle strengthening	190	51.49	46.39–56.59
	Bridging exercises	155	42.0	36.97–47.04
	McKenzie protocol	125	33.87	29.05–38.70
	Williams flexion exercises	80	21.6	17.48–25.88
	Dry needling	3	0.8	0.00–1.73
	Cupping therapy	4	1.08	0.03–2.14
Therapeutic modalities	Hot/cold pack	318	86.1	82.66–89.70
	TENS	172	46.6	41.52–51.70
	Therapeutic ultrasound	69	18.6	14.72–22.68
	EMS	42	11.38	8.14–14.62
	Diathermy	24	6.5	3.99–9.02
	IFC therapy	19	5.14	2.89–7.40
Physiotherapy techniques	Myofascial release	283	76.6	72.38–81.01
	Traction	114	30.8	26.18–35.61
	Maitland mobilization	105	28.4	23.85–33.06
	Muscle energy techniques	71	19.2	15.22–23.26
	Deep transverse friction massage	66	17.8	13.98–21.80
Combination therapy	Any combination used	83	22.4	18.23–26.75
	No combination used	286	77.5	73.25–81.77
Combination pattern among users of combination therapy	Hot/cold pack + TENS + MFR + traction + core strengthening	51/83	61.44	50.97–71.92
	Traction + glides	20/83	24.09	14.90–33.30
	MFR + hot pack	12/83	14.45	6.89–22.02
Barriers to self-management	Any barrier reported	53	14.3	—
	No barrier reported	316	85.63	—
Barrier type among those reporting barriers	Prolonged working hours	40/53	75.4	63.89–87.06

Overall, the results show that current NSLBP was reported by more than three-quarters of the included physical therapists, while physiotherapy-based self-management was the dominant approach. The most frequently reported individual strategies were hot/cold pack application (86.1%), myofascial release (76.6%), self-stretching (75.6%), rest (71.2%), and core muscle strengthening (51.49%). Medication use was comparatively uncommon at 6.77%, indicating that most participants relied primarily on non-pharmacological self-management approaches. Prolonged standing, prolonged working, bad posture, and prolonged sitting were the leading reported contributors, suggesting that static and sustained occupational loading patterns were central to participants' symptom experience.

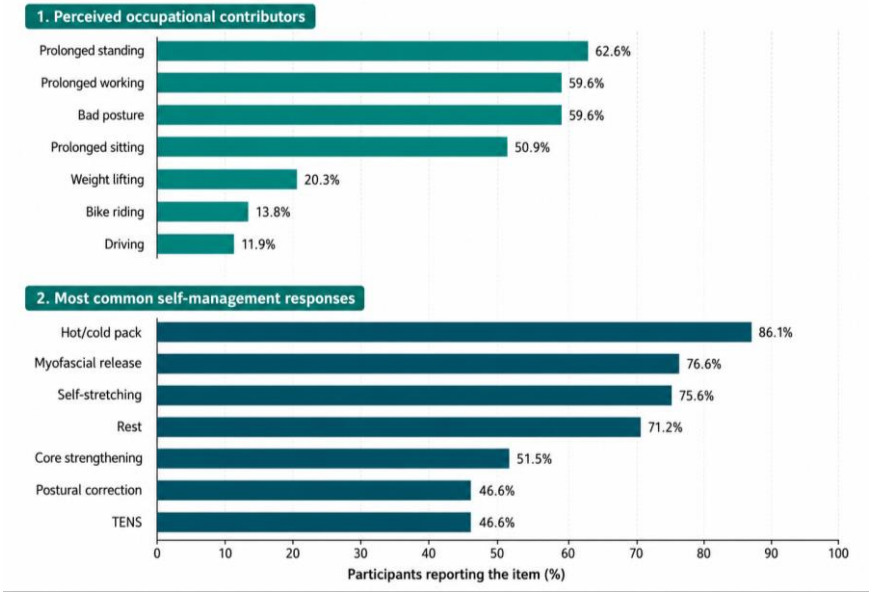

Figure 1. Perceived Occupational Contributors and Common Self-Management Responses Among Physical Therapists With Non-Specific Low Back Pain

The figure shows that perceived occupational contributors to NSLBP were dominated by sustained and posture-related exposures, with prolonged standing reported most frequently (62.6%), followed by prolonged working (59.6%), bad posture (59.6%), and prolonged sitting (50.9%), whereas weight lifting (20.3%), bike riding (13.8%), and driving (11.9%) were less commonly identified. In contrast, self-management responses were predominantly non-pharmacological and were led by hot/cold pack use (86.2%), myofascial release (76.7%), self-stretching (75.6%), and rest (71.3%), with core strengthening reported by 51.5% and both postural correction and TENS by 46.6%. This pattern suggests that although static postural load and prolonged work exposure were the principal perceived drivers of symptoms, participants relied more heavily on symptom-relieving and hands-on physiotherapeutic strategies than on corrective ergonomic or postural approaches, highlighting a clinically relevant imbalance between perceived occupational triggers and the most commonly adopted self-management responses.

DISCUSSION

The present study provides clinically relevant evidence on the current burden of non-specific low back pain and the self-management approaches used by clinical and academic physical therapists in Pakistan. Among 369 physical therapists with a previous history of NSLBP, 285 participants reported current symptoms, indicating that more than three-quarters of the included professionals were still experiencing low back pain at the time of assessment. This finding supports the occupational relevance of NSLBP in physiotherapy practice, where repeated exposure to prolonged standing, sustained postures, manual handling, patient transfers, and repetitive bending or twisting may contribute to recurrent symptoms. Similar occupational patterns have been reported in previous studies among physical therapists and other health-care workers, where low back pain has been associated with workload intensity, patient-care demands, ergonomic strain, and cumulative musculoskeletal stress (18,19).

The demographic profile showed that most participants were young professionals, with the largest proportion aged 27 years, and most respondents were within the normal BMI range. This pattern suggests that NSLBP among physical therapists may not be explained solely by older age or elevated BMI but may also reflect occupational exposure during early professional years. The female predominance in the sample is consistent with some health-care worker studies reporting higher LBP frequency among women; however, gender-based interpretation should be made cautiously in the absence of adjusted comparative analysis. The finding that 68.5% of participants were clinical physical therapists is important because clinical practice commonly requires greater physical contact with

patients, treatment-related positioning, and manual techniques than academic roles. Participants also perceived clinical physical therapists as more frequently affected than academic physical therapists, which aligns with the biomechanical demands of clinical work and with previous reports describing work-related musculoskeletal disorders as common among practicing physical therapists (20,21).

Prolonged standing was the most frequently reported perceived contributor to NSLBP, followed by prolonged working, bad posture, and prolonged sitting. These findings indicate that both dynamic clinical activity and sustained static loading may play important roles in symptom persistence. The high reporting of prolonged standing and prolonged working is consistent with the physical nature of clinical physiotherapy, where professionals may spend extended hours supervising exercises, performing manual therapy, assisting mobility, or maintaining awkward positions during patient care. Bad posture was also reported by a large proportion of participants, supporting previous evidence that trunk flexion, twisting, poor ergonomic positioning, and repeated weight transfer during patient treatment are important contributors to work-related low back pain among physical therapists (22). Prolonged sitting was also reported by approximately half of the participants, suggesting that academic and administrative duties may contribute to NSLBP through a different exposure pathway, particularly sustained sitting, computer work, lectures, documentation, and reduced movement variability.

The self-management findings show that physical therapists primarily relied on non-pharmacological strategies, with physiotherapy techniques, rest, and postural correction being the dominant broad approaches. Medication use was uncommon, reported by only a small proportion of participants, suggesting that physical therapists may prefer professional, movement-based, and modality-based strategies over pharmacological approaches for their own symptoms. This pattern is clinically meaningful because contemporary NSLBP management generally emphasizes active strategies, education, maintenance of activity, exercise, and avoidance of unnecessary medication dependence when symptoms are not associated with serious pathology (23,24). The relatively low use of medication may also reflect professional familiarity with conservative management and awareness of the recurrent nature of NSLBP.

Among exercise-based self-management methods, self-stretching was the most frequently reported strategy, followed by core muscle strengthening, bridging exercises, the McKenzie protocol, and Williams flexion exercises. The high use of stretching may reflect its accessibility, ease of independent performance, and immediate perceived relief for stiffness or muscular tightness. Core strengthening was also used by more than half of the participants, which is consistent with the role of trunk muscle endurance, lumbopelvic control, and functional stability in NSLBP rehabilitation. Previous research has shown that exercise-based interventions, including strengthening and dynamic back exercises, can improve pain, endurance, and disability in chronic NSLBP, supporting the clinical relevance of active self-management strategies among physical therapists (25). However, the lower use of structured protocols such as McKenzie and Williams flexion exercises may indicate that PTs choose individualized symptom-based strategies rather than relying on a single named protocol.

Therapeutic modalities were also widely used, particularly hot/cold packs, which were reported by the highest proportion of participants. TENS was the second most commonly used modality, while therapeutic ultrasound, EMS, diathermy, and IFC therapy were less frequently reported. The high preference for hot/cold packs may be explained by their availability, low cost, ease of self-application, and perceived usefulness for short-term symptom relief. This finding is consistent with previous studies in which heat therapy and electrophysical agents were commonly used by physiotherapists for low back pain management (18,19). Nevertheless, the lower use of ultrasound, diathermy, and IFC may reflect practical barriers, limited independent access to equipment, time constraints, or a preference for simpler modalities that can be applied without assistance.

Myofascial release was the most frequently reported physiotherapy technique, followed by traction, Maitland mobilization, muscle energy techniques, and deep transverse friction massage. The high

reporting of myofascial release suggests that participants considered soft-tissue restriction, muscular tightness, or fascial discomfort important components of their NSLBP experience. However, techniques such as myofascial release, traction, and mobilization often require assistance from another therapist, which may limit their feasibility as true independent self-management approaches. This distinction is important because the study assessed both independent and assisted self-management, and the high use of assisted techniques indicates that physical therapists may seek peer-supported care when symptoms cannot be adequately managed through stretching, exercise, or simple modalities alone.

Combination therapy was reported by 22.4% of participants, most commonly involving hot/cold packs, TENS, myofascial release, traction, and core muscle strengthening. This pattern reflects a multimodal clinical reasoning approach in which symptom modulation, manual therapy, and active stabilization are combined to address different dimensions of NSLBP. Such multimodal management is consistent with the broader physiotherapy model of care, where passive modalities may be used for short-term pain control while exercise-based strategies target function, endurance, and recurrence prevention. However, the relatively low proportion of participants using combination therapy suggests that most physical therapists may rely on selected single or limited strategies rather than a fully integrated protocol, possibly because of workload, limited time, lack of assistance, or symptom variability.

The reported barriers further strengthen this interpretation. Although only 14.3% of participants identified specific barriers to self-management, prolonged working hours accounted for most barrier responses. This finding is occupationally important because it suggests that the same work-related exposure contributing to NSLBP may also restrict recovery behaviors. Physical therapists may understand appropriate self-management strategies but may not consistently perform them due to time pressure, patient-care responsibilities, fatigue, and limited opportunities for rest or exercise during working hours. This gap between professional knowledge and self-care practice is especially relevant in rehabilitation professions, where practitioners often prioritize patient care despite experiencing musculoskeletal symptoms themselves.

The findings should be interpreted in light of the study design and sampling approach. Because the study included physical therapists who had experienced NSLBP at some point in their professional careers, the reported current NSLBP frequency reflects the burden within a previously affected group rather than the prevalence among all physical therapists. The use of convenience sampling and self-reported questionnaire data may also limit generalizability and may introduce recall or response bias. In addition, the absence of pain severity, disability scores, duration of current symptoms, psychosocial factors, and adjusted comparisons limits interpretation of risk differences between clinical and academic physical therapists. Despite these limitations, the study contributes useful descriptive evidence by focusing specifically on how physical therapists manage their own NSLBP, a topic that has received less attention than the treatment approaches used by physical therapists for patients.

Overall, the study highlights that NSLBP remains common among physical therapists with prior symptoms and that self-management is largely centered on physiotherapy-based, non-pharmacological strategies. The strongest practical message is that physical therapists appear to depend most on hot/cold packs, myofascial release, self-stretching, rest, and core strengthening, while medication use remains limited. The findings also suggest that occupational exposure and recovery barriers are closely linked: prolonged standing, prolonged working, poor posture, and prolonged sitting contribute to symptoms, while prolonged working hours may reduce opportunities for effective self-care. These results support the need for workplace-level ergonomic awareness, structured self-care routines, and preventive strategies tailored to both clinical and academic physiotherapy settings.

CONCLUSION

This study concluded that non-specific low back pain was commonly reported among clinical and academic physical therapists with a prior history of NSLBP, with 77.23% of the 369 participants

experiencing current symptoms. Participants most frequently linked NSLBP with occupational and postural demands, particularly prolonged standing, prolonged working, bad posture, and prolonged sitting. Self-management was predominantly non-pharmacological, with physical therapists most commonly using physiotherapy techniques, rest, and postural correction, while medication use was limited. Among specific strategies, hot/cold packs, myofascial release, self-stretching, and core muscle strengthening were the most frequently reported approaches, indicating that physical therapists largely rely on accessible, conservative, and profession-based methods to manage their own NSLBP. These findings highlight the importance of self-care awareness, ergonomic practice, and structured preventive strategies for physical therapists working in both clinical and academic settings.

REFERENCES

1. Pellissier B, Sarhan FR, Telliez F. Work-related, non-specific low back pain among physiotherapists in France: prevalence and biomechanical and psychosocial risk factors, as a function of practice pattern. Int J Environ Res Public Health. 2023;20:4343.

2. Kashif M, Kokab T, Rafique Z, Arshi A, Iram H. Prevalence of low back pain among physiotherapy students of Riphah College of Rehabilitation Sciences. J Liaquat Uni Med Health Sci. 2020;19(4):280-4.

3. Bento TP, dos Santos Genebra CV, Maciel NM, Cornelio GP, Simeão SF, de Vitta A. Low back pain and some associated factors: is there any difference between genders? Braz J Phys Ther. 2020;24(1):79-87.

4. Kahere M, Ngcamphalala C, Östensson E, Ginindza T. The economic burden of low back pain in KwaZulu-Natal, South Africa: a prevalence-based cost-of-illness analysis from the healthcare provider's perspective. PLoS One. 2022;17(10):e0263204.

5. Rania A, Rafiq S, Qamar S, Mushtaq M, Rania A, Rania R, Abbas A, Mohiuddin M. Frequency and risk factors of low back pain among health care professionals of Jinnah Hospital, Lahore. Pak J Health Sci. 2022;3(4):13-7.

6. Javed S, Dawood MS, Memon MW, Selod IZ, Seja A. Prevalence of low back pain among medical doctors of the teaching hospitals in Karachi, Pakistan: a cross-sectional survey. SAGE Open Med. 2023;11:1-9.

7. Hayat S, Rehman M. Comparative frequency of musculoskeletal symptoms in clinical and academician physical therapists: a cross-sectional survey. J Health Res Rev. 2021;1(1).

8. Kahere M, Ginindza T. The burden of non-specific chronic low back pain among adults in KwaZulu-Natal, South Africa: a protocol for a mixed-methods study. BMJ Open. 2020;10(9).

9. Alghadir A, Zafar H, Iqbal ZA, Al-Eisa E. Work-related low back pain among physical therapists in Riyadh, Saudi Arabia. Workplace Health Saf. 2017;65(8):337-45.

10. Karishma, Khan MS, Shaikh HA, Zaidi SWR. Prevalence of low back pain among Doctor of Physical Therapy students. Int J Physiother Occup Ther. 2021;15(4).

11. Javed A, Tariq S, Jabeen T, Khan S, Naeem M, Muhammad Khan H, Waseem M. Prevalence of low back pain among physiotherapists working in clinics and hospitals of Islamabad. Therapist. 2023;4(2):37-41.

12. Shah SZA, Jan MBA, Rahman M, Khan DA. Prevalence of work-related low back pain among clinical physical therapists in Pakistan. Ann Allied Health Sci. 2015;1(1):33-6.

13. Kola I, Kola S, Frroku E. Prevalence and management of nonspecific low back pain in physiotherapy students. J Med Clin Res Rev. 2021;5(10):1-2.

14. Abdullahi A, Aliyu K, Hassan AB, Sokunbi GO, Bello B, Saeys W, Truijen S. Prevalence of chronic non-specific low back pain among caregivers of stroke survivors in Kano, Nigeria, and factors associated with it: a cross-sectional study. Front Neurol. 2022;13:900308.

15. Maqbool R, Ali M, Iqbal SMS, Muzafferuddin D, Hussain M, Manzoor M. Use of electrophysical agents in non-specific low back pain: a cross-sectional survey on physiotherapists in Karachi, Pakistan. J Adv Sport Phys Educ. 2022;5(7):133-6.

16. Krenn C, Horvath K, Jeitler K, Zipp C, Kroitzsch SA, Semlitsch T. Management of non-specific low back pain in primary care: a systematic overview of recommendations from international evidence-based guidelines. Prim Health Care. 2020;15(2):59-40.

17. Shamsi II, Subhi S, Yamin F, Rehman A, Azim F, Kumar R, et al. A study to explore preferred method of treatment among physiotherapists for mechanical low back pain. Int J Physiother. 2016;3(1):2348-8336.

18. Sachdev S, Chughani V, Kumar M, Ali AA. Prevalence of low back pain among the dentists of Karachi, Pakistan. Open J Pain Med. 2021;5(1):20-3.

19. AlShayhan FA, Saadeddin M. Prevalence of low back pain among health sciences students. Eur J Orthop Surg Traumatol. 2018;28:165-70.

20. Kumar V, Tanveer E, Asif M, Chughtai MRB, Khalfe S, Kumari A. Prevalence of disability due to low back pain among physical therapists practicing in CP centers. Int J Sci Eng Res. 2017;8(8):2229-5518.

21. Aziz R, Niaz M, Ashraf A, Pari S, Ali R. Prevalence of work-related low back pain among clinical physical therapists. PJMHS. 2021;15(1):520.

22. Nasir A, Rehman A, Tariq R, Sarfraz N, Sadiq MU. Frequency of work-related musculoskeletal disorders and associated factors among physical therapists of Faisalabad, Pakistan. RMJ. 2020;45(2).

23. Almeida M, Saragiotto B, Richards B, Maher CG. Primary care management of non-specific low back pain: key messages from recent clinical guidelines. Med J Aust. 2018;208(6):272-5.

24. Imdad F, Ishaqu F, Yasmeen S, Lal W, Sheikh SA, Nawa U, et al. Prevalence of low back pain among the undergraduate students of Isra University Karachi campus. Int J Physiother. 2016;3(1):119-23.

25. Martins GM, Raquel DSS, Simprini PR. Prevalence and factors associated with low back pain in warehouse workers. J Back Musculoskelet Rehabil. 2023;36:823-9.