



Lumbar Traction in Low Back Pain: The Experience of Lithuanian Physiotherapists

Laura Žalienė* , Arnas Kurlavičius

Klaipėdos valstybinė kolegija / Higher Education Institution, Klaipėda, Lithuania

* Correspondence: l.zaliene@kvk.lt; +370 674 99 009

Abstract

Background. Lumbar traction is widely discussed in international literature; however, little is known about its use among physiotherapists in Lithuania. This study aimed to evaluate the prevalence, application practices, and influencing factors associated with lumbar traction use among Lithuanian physiotherapists.

Aim. To evaluate the prevalence, application practices, and influencing factors associated with lumbar traction use among Lithuanian physiotherapists.

Methods. A mixed-methods approach was used, including an analysis of scientific literature and a quantitative questionnaire survey of practicing physiotherapists in Lithuania. Descriptive statistics were used to summarise responses, associations between categorical variables were tested using the Chi-Squared Test, and effect sizes were quantified using Cramér's V.

Results. The historical and clinical analysis confirmed that lumbar traction has evolved from primitive spinal stretching techniques into a modern therapeutic method used to reduce pain, improve spinal function, and decrease mechanical pressure on affected tissues. Survey data showed that 12% of Lithuanian physiotherapists use lumbar traction. Education exhibited the strongest association with lumbar traction use (Cramér's V = 0.316), indicating a moderate effect size. However, no statistically significant associations were identified. Lithuanian physiotherapists most frequently apply manual traction in the supine position, commonly selecting low traction forces (20–30% of body weight). Compared with international practice, lumbar traction is used less frequently in Lithuania, though similarities exist in preferred techniques and the influence of education on clinical decision-making.

Conclusions. Lumbar traction remains a recognised treatment modality for low back pain, though its clinical uptake in Lithuania is limited. Application patterns indicate a preference for manual, low-force traction, and education appears to play an important role in determining its use. Further research with larger samples is needed to clarify influencing factors and align national practice with international trends.

Keywords: Lumbar traction; physiotherapy; low back pain; spinal rehabilitation; clinical practice

1. INTRODUCTION

Lumbar traction is one of the therapeutic options used in the management of low back pain. It involves the application of a longitudinal distractive force to the lumbar spine with the aim of reducing pain, improving spinal function, and decreasing mechanical pressure on affected tissues. Previous literature suggests that effective lumbar traction often requires forces in the range of 40–60% of body weight.



Copyright © 2026 Laura Žalienė, Arnas Kurlavičius. Published by Lithuanian Sports University.

This is an Open Access article distributed under the terms of the [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/),

which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

However, the present study demonstrates that considerably lower force levels are commonly applied in clinical practice in Lithuania, potentially reflecting pragmatic adaptations, patient tolerance, equipment limitations, or cautious clinical decision-making (Colombo et al., 2020). Lumbar traction can be delivered primarily in two ways: manual traction, applied directly by the physiotherapist, and mechanical traction, delivered by specialised equipment.

Manual lumbar traction is performed when the therapist applies a controlled pulling force to the patient's spine using their hands and body mechanics, adjusting direction and magnitude according to the patient's response. Proposed benefits include improved segmental mobility, muscle relaxation, and pain reduction, as supported by recent randomised clinical trials (Studnicki et al., 2024; Vanti et al., 2021). By restoring low-amplitude motion in hypomobile segmental joints and reducing soft tissue tension, manual traction may facilitate healing and metabolic exchange within spinal structures. In clinical practice, manual traction is usually applied in short bouts, with the therapist continuously monitoring symptoms and modifying the force and angle of pull accordingly.

Mechanical traction, by contrast, uses a motorised or mechanical device to generate a standardised and often sustained or intermittent distractive force on the lumbar spine (Huang et al., 2023). Mechanical traction has been shown to reduce lumbar and radicular pain, possibly by decreasing nerve root compression and mechanical stress (Vanti et al., 2021). Mechanical traction can be administered in supine or prone positions, as well as in sitting. Recent studies suggest that prone mechanical traction may offer some advantages over supine application in certain populations, although the evidence remains limited and further research is needed to confirm positional superiority (Bilgilişoy Filiz et al., 2018).

The clinical effectiveness of lumbar traction has long been a subject of debate. Recent meta-analyses and systematic reviews indicate that mechanical traction may provide short-term pain relief in patients with low back pain, particularly when combined with exercise or other physiotherapy interventions. Wang et al. (2022) reported that mechanical traction reduced lumbar and leg pain more effectively than standard physiotherapy alone, although it did not clearly outperform standard care in improving lumbar range of motion. Similarly, Vanti et al. (2021) found that mechanical traction, used alongside conventional physiotherapy, can be effective in the short term for patients with lumbar spine pain. At the same time, studies comparing different forms of traction suggest that technique and parameters may influence outcomes. Tanabe et al. (2020), for example, observed greater pain reduction with vibratory mechanical traction than with conventional mechanical traction in patients with nonspecific low back pain.

Evidence regarding the optimal traction force also remains inconclusive. Vanti et al. (2021) compared mechanical traction with different parameter settings, combined with physiotherapy, and reported that both higher- and lower-force protocols were similarly effective in reducing pain in patients with low back pain, although the overall quality of evidence was low. Concerns regarding the strength of the evidence base have been reflected in clinical guidelines and coverage policies, which frequently classify motorised traction as having insufficient or inconsistent evidence for routine use as a stand-alone intervention for low back pain (e.g. National Institute for Health and Care Excellence (2020) Guideline NG59; Blue Cross and Blue Shield of Minnesota Medical Policy VII-18-008, which classifies spinal traction as investigational due to insufficient clinical evidence).

The evidence base for manual traction is also evolving. Some studies report promising results: for example, Studnicki et al. (2024) demonstrated that manual traction significantly reduced lumbosacral pain and improved function in the experimental group compared with controls. Other research has yielded more mixed findings. Ojoawo et al. (2023) found that, while manual traction improved health-related quality of life, prone mechanical traction produced more favourable outcomes in pain reduction, range of motion, and disability indices. Bibliometric analyses suggest growing scientific interest in manual traction, yet methodological reviews have highlighted that the majority of existing studies are of mod-

erate or low quality, underlining the need for more robust, high-quality trials (Kuligowski et al., 2021). Overall, both mechanical and manual lumbar traction remain potentially useful, but not definitively established, options for managing low back pain.

Internationally, lumbar traction is not a marginal technique. Survey studies indicate that it is widely used in countries such as the United States and the United Kingdom. Madson and Holman (2015), in a large survey of almost 4,000 U.S. physiotherapists (1,001 respondents), reported that 76.6% of respondents had used lumbar traction at some point in their practice. The majority of those who used traction applied it primarily for nerve root compression-related conditions, with manual traction reported more frequently than mechanical traction (68.3% vs. 44.9%). A similar earlier survey conducted in the United Kingdom by Harte et al. (2005), on which the U.S. questionnaire was based, found that 41% of physiotherapists used lumbar traction, most often in combination with other interventions such as exercise, patient education, and mobilisation; again, nerve root compression was the main indication. In contrast, a study from Northern Ireland reported a much lower usage rate of approximately 15% (Gracey et al., 2002). These findings suggest substantial international variability in clinical adoption of lumbar traction, despite its long history and perceived benefits.

The legal and professional regulation of lumbar traction varies across countries and the scope of physiotherapy practice is defined by regulatory frameworks that determine what interventions physiotherapists are authorised to deliver (Chartered Society of Physiotherapy, 2025; College of Physiotherapists of Ontario, n.d.; World Physiotherapy, 2023). Manual traction is typically considered a form of manual therapy; in systems where physiotherapists are authorised to perform manual therapy without additional certification, manual lumbar traction is usually permitted. In the United States and the United Kingdom, physiotherapists with standard professional qualifications are generally allowed to apply both manual and various forms of mechanical traction as part of their clinical practice. In Lithuania, national regulations define physiotherapists' competence to include the application of a broad range of physiotherapy methods, including manual therapy, soft tissue and joint mobilisation, and the use of certain gravitational and compressive devices. Although mechanical traction is not specifically named, the regulatory framework implies that physiotherapists may apply such methods within their professional scope.

Despite the long history of lumbar traction, ongoing clinical use in many countries, and an emerging but still inconclusive evidence base, there is a lack of data on how lumbar traction is used in Lithuania. In particular, little is known about its prevalence among physiotherapists, preferred type (manual vs mechanical), chosen parameters (traction force, body position), indications, and how professional characteristics (education, experience, workplace setting) may influence its use. Therefore, the present study aimed to evaluate the experience of Lithuanian physiotherapists in applying lumbar spine traction, to describe current practice patterns, and to compare these findings with international data.

2. METHODS

2.1. Study design and setting

The study employed a quantitative, survey-based design targeting physiotherapists currently practicing in Lithuania. Data were collected through an online questionnaire distributed via email to healthcare institutions providing physiotherapy services and through professional physiotherapy groups on the social media platform *Facebook*. Online surveys were chosen due to their efficiency and cost-effectiveness in reaching dispersed professional populations (Petrat, 2022).

The questionnaire was adapted from the survey instrument developed by Madson and Holman (2015), which itself was based on the earlier tool created by Harte et al. (2005). Data collection was conducted via the platform between February 21 and April 7, 2025, spanning six weeks.

Inclusion criteria: practicing physiotherapists in Lithuania. Experience with lumbar traction was not required, as one of the aims was to determine the proportion of physiotherapists who use this method. To ensure respondent eligibility, the questionnaire began with a screening question: “*Do you currently work as a physiotherapist?*” Only respondents answering “Yes” proceeded to the full instrument.

2.2. Participants

A non-probability sampling approach was used, with a planned sample size of 50 physiotherapists. The confidence level was set at 95% ($Z = 1.96$), and the estimated response distribution was assumed to be $p = 0.5$. With a sample size of $N = 50$, the margin of error (E) was calculated using the formula: $E = Z \times \sqrt{(p(1 - p)) / N}$, resulting in an estimated error of 13.86%, which is relatively large. However, given the exploratory nature of the study and its primary aim to describe current clinical practice patterns rather than to generate precise population estimates, this level of uncertainty was considered acceptable. Consequently, the findings should be interpreted as indicative trends, and their generalisability to the wider population of physiotherapists in Lithuania is limited.

2.3. Measures

The study instrument was a structured questionnaire consisting of 26 items assessing the use and perception of lumbar traction among physiotherapists. The questionnaire was modelled after Madson and Holman (2015), ensuring comparability with previous international research. Item 1 assessed whether the respondent was a practicing physiotherapist. Items 2–9 collected demographic and professional background information, including education, work experience, and area of specialisation. Item 10 asked whether the respondent used lumbar traction in clinical practice. Respondents who selected “No” were automatically directed to the end of the survey, as items 11–26 applied only to clinicians with experience using traction. Items 11–26 examined clinical practices related to lumbar traction, including preferred techniques, parameters, indications, perceived effectiveness, adverse effects, and combination with other interventions.

2.4. Ethical considerations

The study was conducted in accordance with the Declaration of Helsinki. All participants provided written informed consent prior to enrolment. Participants were informed that the survey was voluntary and anonymous. Consent was implied by completion of the questionnaire. The survey introduction also acknowledged the use of existing validated instruments (Madson and Holman, 2015).

2.5. Statistical analysis

Data analysis was performed using Microsoft Excel for initial data processing and IBM SPSS Statistics for descriptive and inferential statistical calculations. Descriptive statistics, including frequencies, means, and standard deviations, were used to summarise lumbar traction usage patterns. Associations between categorical variables were assessed using the Chi-Squared Test. Effect sizes were calculated using Cramér’s V to quantify the strength of associations. Statistical significance was set at $p < 0.05$.

3. RESULTS

3.1. Characteristics of the sample

A total of 50 respondents participated in the survey. Participants were recruited by contacting physiotherapy service providers via email and by disseminating the survey link through professional physiotherapy groups on the social media platform *Facebook*. All respondents confirmed that they were currently working as physiotherapists, thus meeting the inclusion criteria. Table 1 presents the distribution of participants by sex, age, and workplace location. The sample consisted of substantially more women ($n = 39$) than men ($n = 11$), indicating a predominance of female respondents in the profession within the study population. The largest proportion of respondents belonged to the youngest age group (20–30 years), with 21 participants (42%). Representation decreased consistently with age; only two respondents (4%) were aged 51 years or older. Thus, the youngest age group was over ten times more represented than the oldest age group. Most respondents reported working in Vilnius ($n = 18$), followed by Kaunas ($n = 7$) and Klaipėda ($n = 6$). Respondents from all other Lithuanian cities combined totalled 18 individuals. Proportionally, Vilnius and other cities each accounted for 36% of the sample, while Kaunas and Klaipėda together represented 26% (14% and 12%, respectively). One respondent did not answer this question.

Table 1. The distribution of participants by sex, age, and workplace location

Variable	Category	<i>n</i> (%)
Gender	Female	39 (78.0)
	Male	11 (22.0)
Age group (years)	20–30	21 (42.0)
	31–40	15 (30.0)
	41–50	12 (24.0)
	≥51	2 (4.0)
Workplace location	Vilnius	18 (36.0)
	Kaunas	7 (14.0)
	Klaipeda	6 (12.0)
	Other cities	18 (36.0)

3.2. Prevalence of lumbar traction use and analysis of influencing factors

The tenth survey question assessed whether respondents used lumbar traction in their clinical practice. Six out of 50 physiotherapists (12%) indicated that they applied lumbar traction. These data were subsequently analysed in relation to demographic and professional characteristics to identify factors associated with traction use. Table 2 presents the distribution of lumbar traction use according to gender, age group, and workplace city.

Table 2. Prevalence of lumbar traction use according to professional characteristics

Variable	Category	Respondents (<i>n</i>)	Using traction, <i>n</i> (%)	Cramér's <i>V</i>
Overall prevalence	—	50	6 (12.0)	—
Gender	Female	39	5 (12.8)	0.027
	Male	11	1 (9.1)	
Education level	College degree	16	1 (6.2)	0.316
	Bachelor's degree	18	1 (5.6)	
	Master's degree	14	4 (28.6)	
	Doctoral degree	1	0 (0.0)	
Work experience (years)	1–5	21	2 (9.5)	0.271
	6–10	10	1 (10.0)	
	11–15	8	0 (0.0)	
	≥16	11	3 (27.3)	
Workplace city	Vilnius	18	2 (11.1)	0.26
	Kaunas	7	1 (14.3)	
	Klaipėda	6	2 (33.3)	
	Other cities	18	1 (5.6)	
Workplace setting	Private clinic	16	4 (25.0)	0.29
	Other institutions	33	2 (6.1)	

The results indicated that workplace location was associated with lumbar traction use. In Klaipėda, 33.33% of respondents reported applying traction, whereas among respondents from other cities (excluding Vilnius and Kaunas), only 5.56% did so. Cramér's *V* statistics supported these observations: gender ($V = 0.027$) and age group ($V = 0.091$) showed very weak associations, while workplace city demonstrated a weak-to-moderate relationship with traction use ($V = 0.26$). The most experienced group showed the highest proportion of traction users. The pattern was not fully linear: respondents with 11–15 years of experience reported no traction use, while those with fewer years of experience indicated use frequencies of 9.5% and 10%.

Only one respondent held a doctoral degree and reported not using lumbar traction. The numbers of respondents with college, bachelor's, and master's degrees were similar (16, 18, and 14 respectively). Lumbar traction use was reported by 28.6% of physiotherapists with a master's degree, compared with only 6.2% of college-level graduates and 5.6% of bachelor-level graduates. The association between education level and traction use reached the highest Cramér's *V* value among all variables ($V = 0.316$), indicating a moderate relationship.

The analysis also examined workplace setting. Private clinics accounted for 16 of the 49 respondents who answered this question (32.65%), yet these clinicians represented 66.7% of all traction users (Table 2). Physiotherapists working in private institutions represented 66.7% of all lumbar traction users, despite comprising only 32.65% of respondents. This relationship was characterised as weak-to-moderate (Cramér's $V = 0.29$).

Among all analysed factors, education level showed the strongest association with lumbar traction use (Cramér's $V = 0.316$). A higher proportion of lumbar traction users was observed among physiotherapists with a master's degree. Although the *p*-value (0.09) did not reach conventional threshold for statistical significance (<0.05), it suggests a possible trend that may warrant further investigation in

larger samples. Workplace city demonstrated the weakest association (Cramér's $V = 0.26$), though still within the weak-to-moderate range. Overall, all analysed variables – education, experience, workplace location, and workplace type – fell within the weak-to-moderate association range ($V = 0.26$ – 0.316), suggesting that lumbar traction use in Lithuania may be influenced by multiple factors, with education showing the clearest trend.

3.3. Characteristics of lumbar traction application among Lithuanian physiotherapists

When asked about preferred patient positioning during lumbar traction, the majority of physiotherapists indicated that they would choose the supine position. Specifically, 66.7% selected supine as their primary choice, while none reported choosing the prone position. The remaining 33.3% responded that the position would be determined individually based on the patient's diagnosis (Table 3). Mechanical lumbar traction was rarely used by respondents. Most physiotherapists (83.3%) relied on manual traction, whereas 16.7% reported using only home-use mechanical traction devices. No respondents reported using a standard clinical mechanical traction table or autotrack devices.

Table 3. Characteristics of lumbar traction application among Lithuanian physiotherapists ($N = 6$)

Domain	Category	n (%)
Patient position	Supine position	4 (66.7)
	Prone position	0 (0.0)
	Selected individually according to diagnosis	2 (33.3)
Type of lumbar traction	Manual traction	5 (83.3)
	Mechanical traction (traction table)	0 (0.0)
	Mechanical traction (home-use device)	1 (16.7)
	Autotraction	0 (0.0)
Traction force (% body weight)	20–30%	5 (83.3)
	30–40%	1 (16.7)
	40–50%	0 (0.0)
	$\geq 50\%$	0 (0.0)
Mean traction duration (min)	Overall mean	12.1
Mean traction frequency (sessions/week)	Overall mean	1.69
Additional interventions combined with traction	Mobilisation techniques	6 (21.4)*
	Massage	5 (17.9)*
	General physiotherapy exercises	5 (17.9)*
	Patient education	3 (10.7)*
	Deep stabilising exercises	3 (10.7)*
	Manipulation techniques	2 (7.1)*
	McKenzie method	2 (7.1)*
	Neuromobilisation techniques	1 (3.6)*
	Interferential current	1 (3.6)*

Note: * – values are presented as n (%). Percentages in the “Additional interventions combined with traction” section (*) are calculated from the total number of responses, as multiple answers were allowed.

Physiotherapists frequently combined lumbar traction with other therapeutic techniques (Table 3). The most common co-interventions were: mobilisation techniques – 21.4%; massage – 17.9%; general physiotherapy exercises – 17.9%. No respondents selected electrotherapy modalities, hot packs, or other thermal interventions. Additional techniques reported included patient education (10.7%), deep stabilising exercises (10.7%), manipulation (7.1%), McKenzie method (7.1%), neuromobilisation (3.6%), and interferential current therapy (3.6%).

Most physiotherapists indicated that they apply low traction force, selecting 20–30% of body weight in 83.3% of cases. The remaining 16.7% used 30–40% of body weight, while no respondents reported using higher force categories (Table 3). Respondents reported adjusting traction duration according to the patient's diagnosis. Weighted averages were calculated for each diagnostic category. Despite diagnosis-specific adjustments, the mean duration across conditions was relatively consistent, ranging from 11.67 to 12.5 minutes, with the overall mean being 12.1 minutes.

Traction frequency also varied by diagnosis (Table 3). The highest average frequency was 2.17 sessions/week (for radicular symptoms due to disc herniation and for degenerative facet joint disease), which was approximately 2.6 times higher than the lowest reported frequency for general pain relief (0.83 sessions/week). The overall average frequency was 1.69 sessions/week. Across all evaluated parameters, distinct patterns emerged regarding lumbar traction practices among Lithuanian physiotherapists. Manual traction was reported by 83.3% of respondents. The supine position was used in 66.7% of cases, while 33.3% selected the patient position individually according to diagnosis. The most frequently applied traction force was 20–30% of body weight (83.3%), whereas 16.7% reported using 30–40%. These findings suggest a predominantly conservative approach to lumbar traction in Lithuania, with physiotherapists favouring manual techniques, low-force application, and diagnosis-dependent adjustments in duration and frequency.

4. DISCUSSION

The present study examined the use of lumbar traction among physiotherapists in Lithuania and revealed that only 12% of respondents reported applying this method in their practice. This proportion is substantially lower than that reported in countries with well-established traction practices. For instance, 76.6% of physiotherapists in the United States (Madson & Hollman, 2015) and 41% in the United Kingdom (Harte et al., 2005) reported using lumbar traction. The prevalence in Lithuania is therefore more comparable to Northern Ireland, where Gracey et al. (2002) found a usage rate of 15% (Gracey et al., 2002). These findings suggest that lumbar traction is still in an early stage of adoption within the Lithuanian physiotherapy community.

Consistent with international data, the current results show that manual traction is the dominant form of traction used in Lithuania (83.3% of those who apply traction). This parallels the findings from the United States, where manual traction was used by 68.3% of respondents (Madson & Hollman, 2015). Manual traction may be favoured across countries due to its low cost, accessibility, and ease of implementation without specialised equipment. The low prevalence of mechanical traction in the present study aligns with this interpretation and indicates limited availability or lower perceived value of mechanical systems among Lithuanian physiotherapists.

Among the factors associated with traction use, education level emerged as the strongest predictor. Physiotherapists with a master's degree were more likely to use lumbar traction (28.6%), and the association reached a moderate strength (Cramér's $V = 0.316$). This trend is consistent with international findings showing that higher educational attainment is positively associated with the use of lumbar traction and with the adoption of more specialised intervention strategies (Harte et al., 2005; Madson &

Hollman, 2015). These results indicate that advanced academic training may promote greater familiarity with and confidence in applying less commonly used therapeutic modalities.

When considering the broader evidence on traction effectiveness, the literature presents mixed conclusions. Several studies report short-term benefits: mechanical traction has shown potential in reducing lumbar and radicular pain (Wang et al., 2022; Vanti et al., 2021). Manual traction has also been associated with reductions in pain and improvements in function (Ojoawo et al., 2023; Studnicki et al., 2024). However, systematic assessments highlight that overall evidence quality remains moderate or low (Kuligowski et al., 2021), and long-term effectiveness remains uncertain. These ambiguities in the literature likely contribute to differing attitudes towards traction across countries and may partially explain its limited uptake in Lithuania. In the present study, manual traction was used more frequently than mechanical traction, which is in line with reports from other countries. Previous research has also suggested that the application of traction may be influenced by clinicians' education and training. Moreover, traction is often incorporated as part of a broader physiotherapy programme rather than applied as an isolated intervention.

Previous studies from countries such as the USA and the UK report higher rates of lumbar traction use in clinical practice. In contrast, the present findings indicate that the overall rate of traction use among Lithuanian physiotherapists is lower, suggesting differences in clinical practice patterns across healthcare systems. This discrepancy may reflect differences in training exposure, clinical preferences, or contextual factors influencing clinical decision-making; however, this interpretation is speculative and cannot be directly inferred from the present data. In summary, the study supports the trends described in the literature review but also highlights notable gaps in the adoption of lumbar traction practices in Lithuania. These findings underscore the need for enhanced professional training, clearer clinical guidelines, and further research to strengthen the evidence base for traction and promote its appropriate use in clinical practice.

Several limitations of this study should be acknowledged. First, the sample size was relatively small ($N = 50$), which limited the statistical power of the analyses and may have prevented the detection of significant associations between lumbar traction use and practitioner characteristics. The wide margin of error restricts the generalisability of the findings to the broader population of Lithuanian physiotherapists. Second, the study relied on a non-probability sampling approach and voluntary participation, which increases the risk of response bias. Physiotherapists with stronger opinions or interest in traction may have been more likely to participate, potentially influencing prevalence estimates. Third, all data were self-reported, which may introduce inaccuracies related to recall bias or social desirability bias. The survey did not objectively assess actual clinical behaviours, but rather respondents' own perceptions and reports of practice. Finally, the cross-sectional design does not allow for causal inferences. While several factors appeared to correlate with lumbar traction use, particularly education level, causality cannot be determined.

Future studies should aim to include larger and more representative samples of physiotherapists across Lithuania to increase statistical power and improve generalisability. Probability-based sampling strategies would enhance methodological rigor and reduce selection bias. Further research is needed to examine clinical outcomes associated with different types of lumbar traction in the Lithuanian population. Comparative studies assessing manual versus mechanical traction, optimal force parameters and patient-specific protocols would help clarify best practices. Longitudinal designs could provide insight into how training, professional development, and clinical guidelines influence the adoption of traction over time. Qualitative studies may also offer valuable perspectives on physiotherapists' attitudes, perceived barriers and facilitators to implementing traction. Moreover, controlled clinical trials conducted locally would help strengthen the evidence base for traction effectiveness and address existing gaps re-

garding long-term outcomes, particularly for patients with chronic or recurrent low back pain. Overall, future research should work towards establishing evidence-informed national guidelines and enhancing professional education to support safe and effective use of lumbar traction in Lithuania.

5. CONCLUSIONS AND PERSPECTIVES

The findings of this study indicate that only 12% of physiotherapists in Lithuania use lumbar traction in their clinical practice. Several factors were identified as potentially influencing the use of lumbar traction – work experience, specialisation, and type of institution – yet education level demonstrated the strongest association (Cramér's $V = 0.316$). Statistical significance was not achieved in the present sample, and the findings should be interpreted as indicative trends. Lithuanian physiotherapists most commonly apply manual lumbar traction, prefer the supine position, and typically select low traction forces (20–30% of body weight). These parameters reflect trends in lumbar traction application observed within the surveyed sample of Lithuanian physiotherapists. When compared with international data, Lithuanian physiotherapists use lumbar traction less frequently than practitioners in countries such as the United States and the United Kingdom. Nevertheless, similarities were observed: in both Lithuania and the United States, manual traction is the preferred method, and higher education levels are associated with increased traction use. Overall, the results highlight that lumbar traction remains an underutilised intervention in Lithuania, suggesting a need for further professional development and increased familiarity with traction techniques.

Author Contributions: Conceptualisation, L.Ž.; methodology, L.Ž. and A.K.; software, A.K.; formal analysis, A.K.; investigation, A.K.; resources, A.K.; data curation, A.K.; writing—original draft preparation, A.K.; writing—review and editing, L.Ž.; visualisation, L.Ž.; supervision, L.Ž.; project administration, L.Ž. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Acknowledgements: The authors would like to thank all participating physiotherapists for their valuable time and contributions to the survey. We also acknowledge the support of Klaipėda State University of Applied Sciences for facilitating the data collection process. The authors express their gratitude to colleagues who provided methodological guidance and constructive feedback during the development of this study.

Conflicts of Interest: The authors declare no conflict of interest.

References

- Bilgilişoy Filiz, M., Kiliç, Z., Uçkun, A., Çakir, T., Koldaş Doğan, Ş., & Toraman, N. F. (2018). Mechanical traction for lumbar radicular pain: Supine or prone? A randomized controlled trial. *American Journal of Physical Medicine & Rehabilitation*, 97(6), 433–439. <https://doi.org/10.1097/PHM.0000000000000892>
- Blue Cross and Blue Shield of Minnesota. *Medical policy: Traction decompression of the spine* (Policy VII-18-008). https://securecms.bluecrossmnonline.com/content/medpolicy/en/minnesota/core/all/policies/Ancillary_Services/VII-18/VII-18-008.html
- Chartered Society of Physiotherapy. (2025, April 23). *Understanding scope of practice*. <https://www.csp.org.uk/professional-clinical/professional-guidance/scope-practice/understanding-scope>

- College of Physiotherapists of Ontario. (n.d.). *Physiotherapy scope of practice*. <https://collegept.org/resource/physiotherapy-scope-of-practice/>
- Colombo, C., Salvioli, S., Gianola, S., Castellini, G., & Testa, M. (2020). Traction therapy for cervical radicular syndrome is statistically significant but not clinically relevant for pain relief. A systematic literature review with meta-analysis and trial sequential analysis. *Journal of Clinical Medicine*, 9(11), 3389. <https://doi.org/10.3390/jcm9113389>
- Gracey, J. H., McDonough, S. M., & Baxter, G. D. (2002). Physiotherapy management of low back pain: A survey of current practice in Northern Ireland. *Spine*, 27(4), 406–411. <https://doi.org/10.1097/00007632-200202150-00017>
- Harte, A. A., Gracey, J. H., & Baxter, G. D. (2005). Current use of lumbar traction in the management of low back pain: Results of a survey of physiotherapists in the United Kingdom. *Archives of Physical Medicine and Rehabilitation*, 86(6), 1164–1169. <https://doi.org/10.1016/j.apmr.2004.11.040>
- Huang, L., Li, J., Xiao, B., Tang, Y., Huang, J., Li, Y., & Fang, F. (2023). Bibliometric analysis of research trends on manual therapy for low back pain over past 2 decades. *Journal of Pain Research*, 16, 3045–3060. <https://doi.org/10.2147/JPR.S418458>
- Kuligowski, T., Skrzek, A., & Cieřlik, B. (2021). Manual therapy in cervical and lumbar radiculopathy: A systematic review of the literature. *International Journal of Environmental Research and Public Health*, 18(11), 6176. <https://doi.org/10.3390/ijerph18116176>
- Madson, T. J., & Hollman, J. H. (2015). Lumbar traction for managing low back pain: A survey of physical therapists in the United States. *The Journal of Orthopaedic and Sports Physical Therapy*, 45(8), 586–595. <https://doi.org/10.2519/jospt.2015.6036>
- National Institute for Health and Care Excellence. (2020, December 11). *Low back pain and sciatica in over 16s: Assessment and management* [NICE Guideline NG59]. <https://www.nice.org.uk/guidance/ng59>
- Ojoawo, A. O., Adedeji, O. O., Kunuji, K., Afolabi, T. O., & Awotipe, A. A. (2023). Effects of manual lumbar and prone traction on clinical variables in patients with non-specific low-back pain: A randomized control study. *Journal of Musculoskeletal Disorders and Treatment*, 9(3), 128. <https://doi.org/10.23937/2572-3243.1510128>
- Petrat, P. (2022, June 29). What is a questionnaire and how is it used in research? *Cint*. <https://www.cint.com/blog/what-is-a-questionnaire-and-how-is-it-used-in-research/>
- Studnicki, R., Szymczyk, P., Adamczewski, T., Studzińska, K., Hansdorfer-Korzon, R., Silva, A. F., & Kawczyński, A. (2024). Manual traction is effective in alleviating lumbosacral spine pain: Evidence from a randomized controlled trial. *Heliyon*, 10(10), e31013. <https://doi.org/10.1016/j.heliyon.2024.e31013>
- Tanabe, H., Akai, M., Doi, T., Arai, S., Fujino, K., Hayashi, K., & for Low back-pain Traction Therapy (LTT) Study. (2021). Immediate effect of mechanical lumbar traction in patients with chronic low back pain: A crossover, repeated measures, randomized controlled trial. *Journal of Orthopaedic Science: Official Journal of the Japanese Orthopaedic Association*, 26(6), 953–961. <https://doi.org/10.1016/j.jos.2020.09.018>

- Vanti, C., Panizzolo, A., Turone, L., Guccione, A. A., Violante, F. S., Pillastrini, P., & Bertozzi, L. (2021). Effectiveness of mechanical traction for lumbar radiculopathy: A systematic review and meta-analysis. *Physical Therapy*, 101(3), pzaa231. <https://doi.org/10.1093/ptj/pzaa231>
- Wang, W., Long, F., Wu, X., Li, S., & Lin, J. (2022). Clinical efficacy of mechanical traction as physical therapy for lumbar disc herniation: A meta-analysis. *Computational and Mathematical Methods in Medicine*, 2022, 5670303. <https://doi.org/10.1155/2022/5670303>
- World Physiotherapy. (2023). *Policy statement: Regulation of the physiotherapy profession*. <https://world.physio/policy/ps-regulation>

Received 2026 01 18

Accepted 2026 02 13