

MULLIGAN™

REFERENCE LIST



Reference lists have been prepared concerning indexed articles focusing on the Mulligan Concept. These lists are updated regularly. The last update was in March 2026.

REFERENCE LIST

INTRODUCTION

This document contains the references pertaining to the Mulligan ConceptTM of manual therapy, most recently updated after a literature search in early 2026. There are 490 references in total. This number continues to grow year by year as more research about the Mulligan ConceptTM is completed and published.

It is organised in four ways;

- By body region, including tables showing study type of each reference in the section
- By study type
- Alphabetically according to the lead author,
- According to of year of publication.

A table of contents has been included. Clicking on these items in the table of contents will take you directly to the appropriate section of the document. Additionally, Digital Object Identifier (DOI) codes have been included for many articles with hyperlinks and will lead directly to the article as published on the internet.

The latest edition of each of the Mulligan ConceptTM textbooks have been placed in the general section. Individual book chapters within these texts covering specific body regions exist but have not been individually referenced, such as the chapter long case studies in “Mobilisation with Movement: The Art and the Science” by Vicenzino et al. Apart from these texts, all other references are published journal articles relating to the concept.

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CATEGORISED BY BODY REGION

1. General (27)

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|--------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Athanasiadis | 2022 | ✓ | | | | | | | | | | | | | |
| Baeske | 2015 | | | | | | | | | | | | ✓ | | |
| Baeske | 2020 | | | | | | | | | | | ✓ | | | |
| Baker | 2013 | | | | | | | | | | | | ✓ | | |
| Bisset | 2011 | ✓ | | | | | | | | | | | | | |
| Bisset | 2011 | ✓ | | | | | | | | | | | | | |
| Clar | 2014 | ✓ | | | | | | | | | | | | | |
| Exelby | 1995 | | | | | | | | | | | | ✓ | | |
| Exelby | 1996 | | | | | | | | | | | | ✓ | | |
| Haik | 2022 | | | | | | ✓ | | | | | | | | |
| Hall | 1998 | | | | | | | | | | | | ✓ | | |
| Hing | 2008 | | | | | | | | | | | | ✓ | | |
| Hing | 2020 | | | | | | | | | | | | | ✓ | |
| Lehman | 2018 | | | | | | | | | | | | ✓ | | |
| May | 2015 | | | | | | | | | | | ✓ | | | |
| McDowell | 2014 | | | | | | | | | | | | ✓ | | |
| McDowell | 2019 | | | | | | | | | | | | | ✓ | |
| Mulligan | 1993 | | | | | | | | | | | | ✓ | | |
| Mulligan | 2012 | | | | | | | | | | | | | ✓ | |
| Mulligan | 2021 | | | | | | | | | | | | | ✓ | |
| Neelapala | 2008 | ✓ | | | | | | | | | | | | | |
| Stathopoulos | 2008 | ✓ | | | | | | | | | | | | | |
| Stathopoulos | 2008 | ✓ | | | | | | | | | | | | | |
| Vicenzino | 2007 | | | | | | | | | | | | ✓ | | |
| Vicenzino | 2011 | | | | | | | | | | | | | ✓ | |
| Westad | 2019 | ✓ | | | | | | | | | | | | | |
| Wilson | 2001 | | | | | | | | | | | | ✓ | | |

REFERENCE LIST

1. Athanasiadis D, Dionyssiotis Y, Krumov J, Obretenov V, Panayotov K, Papathanasiou J. The cognitive-behavioral aspects of the Mulligan concept of manual therapy: A systematic review. *Eur J Transl Myol.* 2022;<http://dx.doi.org/10.4081/ejtm.2022.10504>
2. Baeske R. Mobilisation with movement: a step towards understanding the importance of peripheral mechanoreceptors. *Physical Therapy Reviews.* 2015;20(5/6):299-305. <http://dx.doi.org/10.1080/10833196.2015.1121014>
3. Baeske R, Silva MF, Hall T. The clinical decision making process in the use of mobilisation with movement - A Delphi survey. *Musculoskeletal science & practice.* 2020;49(October 2020):102212. <http://dx.doi.org/10.1016/j.msksp.2020.102212>
4. Baker RT, Nasypany A, Seegmiller JG, Baker JG, Turner T. The Mulligan Concept: Mobilizations With Movement. *International Journal of Athletic Therapy & Training.* 2013;18(1):30-34.
5. Bisset L, Hing W, Vicenzino B. The efficacy of mobilisations with movement treatment on musculoskeletal pain: a systematic review and meta-analysis. *Physiotherapy (united kingdom).* 2011;97(eS134). <http://dx.doi.org/10.1016/j.physio.2011.04.002>
6. Bisset L, Hing W, Vicenzino B. A systematic review of the efficacy of MWM. In: Vicenzino B, Hing W, Rivett D, Hall T, eds. *Mobilisation With Movement: The Art and the Science.* Chatswood, NSW: Churchill Livingstone Australia; 2011:26-64.
7. Clar C, Tsertsvadze A, Court R, Hundt GL, Clarke A, Sutcliffe P. Clinical effectiveness of manual therapy for the management of musculoskeletal and non-musculoskeletal conditions: systematic review and update of UK evidence report. *Chiropractic & manual therapies.* 2014;22(1):12. <http://dx.doi.org/10.1186/2045-709x-22-12>
8. Exelby L. Mobilisations with movement: a personal view. *Physiotherapy.* 1995;81(12):724-729.
9. Exelby L. Peripheral mobilisations with movement. *Manual Therapy.* 1996;1(3):118-126.
10. Haik MN, Evans K, Smith A, Bisset L. Investigating the effects of mobilization with movement and exercise on pain modulation processes in shoulder pain - a single cohort pilot study with short-term follow up. *The Journal of manual & manipulative therapy.* 2022;1-10. <http://dx.doi.org/10.1080/10669817.2022.2030626>
11. Hall T, Robinson K. Mobilisation with movement. *Australian Journal of Physiotherapy.* 1998;(Autumn):16-18.
12. Hing W, Bigelow R, Bremner T. Mulligan's mobilisation with movement: a review of the tenets and prescription of MWMs. *New Zealand Journal of Physiotherapy.* 2008;36(3):144-164.
13. Hing W, Hall T, Mulligan B. *The Mulligan Concept of Manual Therapy: Textbook of Techniques.* 2nd. Chatswood, NSW: Elsevier Australia; 2020.
14. Lehman GJ. The Role and Value of Symptom-Modification Approaches in Musculoskeletal Practice. *The Journal of orthopaedic and sports physical therapy.* 2018;48(6):430-435. <http://dx.doi.org/10.2519/jospt.2018.0608>
15. May J, Krzyzanowicz R, Nasypany A, Baker R, Seegmiller J. Mulligan Concept Use and Clinical Profile From the Perspective of American Certified Mulligan Practitioners. *Journal of Sport Rehabilitation.* 2015;24(4):337-341.
16. McDowell J, Mitchell T, Mulligan BR. *Self-treatments for back, neck and limbs: the Mulligan Concept approach.* Revised fourth edition. Invercagill, New Zealand: Plane View Services (2019) Ltd; 2022.
17. McDowell JM, Johnson GM, Hetherington BH. Mulligan Concept manual therapy: Standardizing annotation. *Manual Therapy.* 2014;19(5):499-503.

REFERENCE LIST

18. Mulligan BR. Manual Therapy Rounds: Mobilisations With Movement (MWM'S). *Journal of Manual & Manipulative Therapy*. 1993;1(4):154-156.
19. Mulligan BR. *Manual Therapy: NAGS, SNAGS, MWMS etc.* Revised 7th. Invercagill, New Zealand: Plane View Services 2021 Ltd; 2021.
20. Mulligan BR. *Self Treatments for Back, Neck and Limbs: A New Approach*. 3rd. Wellington, New Zealand: Plane View Services; 2012.
21. Neelapala YVR. Effectiveness of Mulligan's Mobilization with Movement techniques on pain and disability of peripheral joints: a systematic review with meta-analysis between 2008 to 2017. *Physiotherapy*. 2019;105(2):290. <http://dx.doi.org/10.1016/j.physio.2018.11.304>
22. Stathopoulos N, Dimitriadis Z, Koumantakis GA. Effectiveness of Mulligan's Mobilization with Movement techniques on pain and disability of peripheral joints: A systematic review with meta-analysis between 2008–2017. *Physiotherapy*. 2018;<http://dx.doi.org/10.1016/j.physio.2018.10.001>
23. Stathopoulos N, Dimitriadis Z, Koumantakis GA. Effectiveness of Mulligan's Mobilization With Movement Techniques on Range of Motion in Peripheral Joint Pathologies: A Systematic Review With Meta-analysis Between 2008 and 2018. *Journal of Manipulative and Physiological Therapeutics*. 2019;<http://dx.doi.org/10.1016/j.jmpt.2019.04.001>
24. Vicenzino B, Hing W, Rivett D, Hall T. *Mobilisation with Movement: The Art and the Science*. Chatswood: Elsevier Australia; 2011.
25. Vicenzino B, Paungmali A, Teys P. Mulligan's mobilization-with-movement, positional faults and pain relief: current concepts from a critical review of literature. *Man Ther*. 2007;12(2):98-108. <http://dx.doi.org/10.1016/j.math.2006.07.012>
26. Westad K, Tjoestolvsen F, Hebron C. The effectiveness of Mulligan's mobilisation with movement (MWM) on peripheral joints in musculoskeletal (MSK) conditions: A systematic review. *Musculoskeletal science & practice*. 2019;39(157-163. <http://dx.doi.org/10.1016/j.msksp.2018.12.001>
27. Wilson E. The Mulligan concept: NAGS, SNAGS and mobilizations with movement. *Journal of Bodywork & Movement Therapies*. 2001;5(2):81-89.

REFERENCE LIST

2. Cervical (97)

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|---------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Abdelgalil | 2015 | | ✓ | | | | | | | | | | | | |
| Agyenkwa | 2025 | | ✓ | | | | | | | | | | | | |
| Alansari | 2021 | | ✓ | | | | | | | | | | | | |
| Ali, A | 2014 | | ✓ | | | | | | | | | | | | |
| Alshami | 2021 | | ✓ | | | | | | | | | | | | |
| Analay | 2025 | | ✓ | | | | | | | | | | | | |
| Anandkumar | 2015 | | | | | | | | ✓ | | | | | | |
| Andrews | 2017 | | | | | | | | | | | | ✓ | | |
| Andrews | 2018 | | | | | | ✓ | | | | | | | | |
| Barbosa-Silva | 2025 | ✓ | | | | | | | | | | | | | |
| Bonnery | 2014 | | | | | | | | ✓ | | | | | | |
| Bowler | 2017 | | | | ✓ | | | | | | | | | | |
| Browning | 2011 | | | | ✓ | | | | | | | | | | |
| Buyukturan | 2018 | | ✓ | | | | | | | | | | | | |
| Cardoso | 2022 | ✓ | | | | | | | | | | | | | |
| Cevik | 2024 | | ✓ | | | | | | | | | | | | |
| Cherian | 2013 | | | | | | | | ✓ | | | | | | |
| Christian | 2017 | | ✓ | | | | | | | | | | | | |
| Copurgensli | 2017 | | ✓ | | | | | | | | | | | | |
| Devi | 2015 | | ✓ | | | | | | | | | | | | |
| Duymaz | 2018 | | ✓ | | | | | | | | | | | | |
| El-Sodany | 2014 | | ✓ | | | | | | | | | | | | |
| Elabd | 2024 | | ✓ | | | | | | | | | | | | |
| Elsayed | 2017 | | ✓ | | | | | | | | | | | | |
| Exelby | 2002 | | | | | | | | | | | | ✓ | | |
| Ganesh | 2015 | | ✓ | | | | | | | | | | | | |
| Garcia | 2016 | | | | | | | | | | | | ✓ | | |
| Gautam | 2014 | | ✓ | | | | | | | | | | | | |
| Hall | 2004 | | | | | | | | | ✓ | | | | | |
| Hall | 2007 | | ✓ | | | | | | | | | | | | |
| Hall | 2010 | | | | | | | | | ✓ | | | | | |

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|-----------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Hall | 2010 | | | | | | | | | ✓ | | | | | |
| Hall | 2010 | | | | | | | | | ✓ | | | | | |
| Hall | 2010 | | | | | | | | | ✓ | | | | | |
| Hearn | 2002 | | | | | | | | | | | | ✓ | | |
| Hidalgo | 2017 | ✓ | | | | | | | | | | | | | |
| Jin | 2023 | | ✓ | | | | | | | | | | | | |
| Kashif | 2022 | | ✓ | | | | | | | | | | | | |
| Khalil | 2019 | | ✓ | | | | | | | | | | | | |
| Khan | 2014 | | ✓ | | | | | | | | | | | | |
| Kim | 2015 | | ✓ | | | | | | | | | | | | |
| Kirthika | 2018 | | ✓ | | | | | | | | | | | | |
| Konstantinos | 2018 | | ✓ | | | | | | | | | | | | |
| Kumar | 2011 | | ✓ | | | | | | | | | | ✓ | | |
| Kumar | 2011 | | ✓ | | | | | | | | | | | | |
| Lopez-Lopez | 2015 | | ✓ | | | | | | | | | | | | |
| Lystad | 2011 | ✓ | | | | | | | | | | | | | |
| Manzoor | 2021 | | ✓ | | | | | | | | | | | | |
| McNair | 2007 | | | | | | | | ✓ | | | | | | |
| Micarelli | 2021 | | ✓ | | | | | | | | | | | | |
| Mittal | 2011 | | | | | | ✓ | | | | | | | | |
| Mohamed | 2019 | | ✓ | | | | | | | | | | | | |
| Moulson | 2006 | | | | ✓ | | | | | | | | | | |
| Mulligan | 1994 | | | | | | | | | | | | ✓ | | |
| Murtza | 2024 | | ✓ | | | | | | | | | | | | |
| Nunez-Cabaleiro | 2022 | ✓ | | | | | | | | | | | | | |
| Ogınce | 2007 | | | | | | | | | ✓ | | | | | |
| Ozlu | 2024 | | ✓ | | | | | | | | | | | | |
| P | 2014 | | ✓ | | | | | | | | | | | | |
| Pal | 2019 | | ✓ | | | | | | | | | | | | |
| Panjwani | 2016 | | | | | | | | ✓ | | | | | | |
| Paquin | 2021 | | | | | | ✓ | | | | | | | | |
| Park | 2011 | | | | | | | | ✓ | | | | | | |
| Patra | 2018 | | ✓ | | | | | | | | | | | | |
| Racicki | 2013 | ✓ | | | | | | | | | | | | | |

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| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|-------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Ranganath | 2018 | | ✓ | | | | | | | | | | | | |
| Reid | 2008 | | ✓ | | | | | | | | | | | | |
| Reid | 2012 | | | | | | | | | | | | | | ✓ |
| Reid | 2014 | | ✓ | | | | | | | | | | | | |
| Reid | 2014 | | ✓ | | | | | | | | | | | | |
| Reid | 2015 | | ✓ | | | | | | | | | | | | |
| Reid | 2015 | | ✓ | | | | | | | | | | | | |
| Rezkallah | 2018 | | ✓ | | | | | | | | | | | | |
| Richardson | 2009 | | | | | | | | ✓ | | | | | | |
| Said | 2017 | | ✓ | | | | | | | | | | | | |
| Saptale | 2025 | | ✓ | | | | | | | | | | | | |
| Satpute | 2019 | | | | | | | | | ✓ | | | | | |
| Satpute | 2020 | | | | | | | | ✓ | | | | | | |
| Satpute | 2020 | | | | | | | | | ✓ | | | | | |
| Satpute | 2021 | | | | | | | | | | | | | | ✓ |
| Satpute | 2024 | | ✓ | | | | | | | | | | | | |
| Satpute | 2025 | | ✓ | | | | | | | | | | | | |
| Schafer | 2018 | | | | | | | | | ✓ | | | | | |
| Sekeroz | 2025 | | ✓ | | | | | | | | | | | | |
| Seo | 2015 | | | | ✓ | | | | | | | | | | |
| Shafique | 2019 | | ✓ | | | | | | | | | | | | |
| Shelke | 2023 | | ✓ | | | | | | | | | | | | |
| Shin | 2014 | | ✓ | | | | | | | | | | | | |
| Takasaki | 2009 | | | | ✓ | | | | | | | | | | |
| Takasaki | 2011 | | | | ✓ | | | | | | | | | | |
| Tank | 2018 | | ✓ | | | | | | | | | | | | |
| Tatsios | 2025 | | ✓ | | | | | | | | | | | | |
| Thomaidou | 2023 | | ✓ | | | | | | | | | | | | |
| Wade | 2015 | | ✓ | | | | | | | | | | | | |
| Xu | 2025 | ✓ | | | | | | | | | | | | | |
| Yaseen | 2018 | ✓ | | | | | | | | | | | | | |
| Yoshikawa | 2011 | | | | ✓ | | | | | | | | | | |

REFERENCE LIST

1. Abdelgalil AA, Balbaa AA, Elazizi HM, Abdelaal AAM. High Velocity Low Amplitude Manipulation versus Sustained Apophyseal Glides on Pain and Range of Motion in Patients with Mechanical Neck Pain: An Immediate Effect. *International Journal of Advanced Research*. 2015;3(June):503-514.
2. Agyenkwa SK, Mustafaoglu R, Yeldan I. Therapeutic Effects of Kinesiology Taping Versus Self-Mobilization on Neck Pain, Proprioception, Muscle Activity, and Respiratory Muscle Strength Among Prolonged Electronic Device Users. A Randomized Controlled Trial. *Physiotherapy Research International*. 2025;30(2):e70061. <http://dx.doi.org/https://doi.org/10.1002/pri.70061>
3. Alansari SM, Youssef EF, Shanb AA. Efficacy of manual therapy on psychological status and pain in patients with neck pain. A randomized clinical trial. *Saudi Med J*. 2021;42(1):82-90. <http://dx.doi.org/10.15537/smj.2021.1.25589>
4. Ali A, Shakil-ur-Rehman S, Sibtain F. The efficacy of sustained natural apophyseal glides with and without isometric exercise training in non-specific neck pain. *Pakistan journal of medical sciences*. 2014;30(4):<http://dx.doi.org/10.12669/pjms.304.5148>
5. Alshami AM, AISadiq AI. Outcomes of scapulothoracic mobilisation in patients with neck pain and scapular dyskinesia: A randomised clinical trial. *J Taibah Univ Med Sci*. 2021;16(4):540-549. <http://dx.doi.org/10.1016/j.jtumed.2021.03.006>
6. Analay Akbaba Y, Özdemir AE, Bali K, Yalçın E. Immediate Effects of Mobilization With Movement Technique on Cervical Muscle Stiffness, Pain, and Range of Motion in Individuals With Mechanical Neck Pain: A Double-Blind Randomized Controlled Trial. *Physiotherapy theory and practice*. 2025;41(9):1783-1794. <http://dx.doi.org/10.1080/09593985.2025.2473471>
7. Anandkumar S. The effect of sustained natural apophyseal glide (SNAG) combined with neurodynamics in the management of a patient with cervical radiculopathy: a case report. *Physiotherapy Theory & Practice*. 2015;31(2):140-145. <http://dx.doi.org/10.3109/09593985.2014.971922>
8. Andrews D. Utilizing Manual Therapy within a Regional Interdependence Model for the Treatment of Cervicothoracic Dysfunction: A Dissertation of Clinical Practice Improvement. *Utilizing Manual Therapy within a Regional Interdependence Model for the Treatment of Cervicothoracic Dysfunction: A Dissertation of Clinical Practice Improvement*. 2017;1-1.
9. Andrews DP, Odland-Wolf KB, May J, Baker R, Nasypany A, Dinkins EM. Immediate and short-term effects of mulligan concept positional sustained natural apophyseal glides on an athletic young-adult population classified with mechanical neck pain: an exploratory investigation. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2018;26(4):203-211. <http://dx.doi.org/10.1080/10669817.2018.1460965>
10. Barbosa-Silva J, Luc A, Sobral de Oliveira-Souza AI, et al. The Effectiveness of Mulligan's Techniques in Non-Specific Neck Pain: A Systematic Review and Meta-Analysis. *Physiotherapy research international : the journal for researchers and clinicians in physical therapy*. 2025;30(3):e70045. <http://dx.doi.org/10.1002/pri.70045>
11. Bonnery K. Manipulation of the cervico-thoracic junction accompanied by mobilisation with movement and exercise in a patient with medial epicondylalgia. *Manuelle Therapie*. 2014;18(1):29-37. <http://dx.doi.org/10.1055/s-0034-1368804>
12. Bowler N, Browning P, Lascurain-Aguirrebena I. The effects of cervical sustained natural apophyseal glides on neck range of movement and sympathetic nervous system activity. *International journal of osteopathic*

REFERENCE LIST

- medicine. (no pagination), 2017.* 2017;Date of Publication: June 04(<http://dx.doi.org/10.1016/j.ijosm.2017.02.003>)
13. Browning P, Gangwal K. The effect of a cervical rotational snag on median nerve extensibility in an asymptomatic population, a within subjects randomised design. *Physiotherapy (united kingdom)*. 2011;97(eS162 - eS163). <http://dx.doi.org/10.1016/j.physio.2011.04.002>
 14. Buyukturan O, Buyukturan B, Sas S, Kararti C, Ceylan I. The Effect of Mulligan Mobilization Technique in Older Adults with Neck Pain: A Randomized Controlled, Double-Blind Study. *Pain Res Manag*. 2018;2018(2856375). <http://dx.doi.org/10.1155/2018/2856375>
 15. Cardoso R, Seixas A, Rodrigues S, et al. The effectiveness of Sustained Natural Apophyseal Glide on Flexion Rotation Test, pain intensity, and functionality in subjects with Cervicogenic Headache: A Systematic Review of Randomized Trials. *Arch Physiother*. 2022;12(1):20. <http://dx.doi.org/10.1186/s40945-022-00144-3>
 16. Cevik R, Pala OO. Effects of upper thoracic Mulligan mobilization on pain, range of motion and function in patients with mechanical neck pain: A randomized placebo-controlled trial. *PLoS One*. 2024;19(10):e0311206. <http://dx.doi.org/10.1371/journal.pone.0311206>
 17. Cherian K, Cherian N, Cook C, Kaltenbach JA. Improving tinnitus with mechanical treatment of the cervical spine and jaw. *J Am Acad Audiol*. 2013;24(7):544-555. <http://dx.doi.org/10.3766/jaaa.24.7.3>
 18. Christian N. Comparative Study to Find the Effect of Mulligans SNAG Technique (C1-C2) Versus Maitlands Technique (C1-C2) in Cervicogenic Headache Among Information Technology Professionals. *International Journal of Physiotherapy*. 2017;4(3):178-183. <http://dx.doi.org/10.15621/ijphy/2017/v4i3/149071>
 19. Copurgensli C, Gur G, Tunay VB. A comparison of the effects of Mulligan's mobilization and Kinesio taping on pain, range of motion, muscle strength, and neck disability in patients with Cervical Spondylosis: a randomized controlled study. *Journal of back and musculoskeletal rehabilitation*. 2017;30(1):51 - 62. <http://dx.doi.org/10.3233/BMR-160713>
 20. Devi NG, Dutta A. A comparative study on the effect of self SNAGs versus dynamic isometric exercises in desk job people with chronic neck pain. *International Journal of Physiotherapy*. 2015;2(5):<http://dx.doi.org/10.15621/ijphy/2015/v2i5/78232>
 21. Duymaz T, Yagci N. Effectiveness of the mulligan mobilization technique in mechanical neck pain. *Journal of clinical and analytical medicine*. 2018;9(4):304 - 309. <http://dx.doi.org/10.4328/JCAM.5715>
 22. El-Sodany AM, Alayat MSM, Zafer AMI. Sustained natural apophyseal glides mobilization versus manipulation in the treatment of cervical spine disorders: a randomized controlled trial. *International journal of advanced research*. 2014;2(6):274 - 280.
 23. Elabd OM, Etoom M, Jahan AM, Elabd AM, Khedr AM, Elgohary HM. The Efficacy of Muscle Energy and Mulligan Mobilization Techniques for the Upper Extremities and Posture after Breast Cancer Surgery with Axillary Dissection: A Randomized Controlled Trial. *Journal of Clinical Medicine*. 2024;13(4):<http://dx.doi.org/10.3390/jcm13040980>
 24. Elsayed WH, Mohamed AF, El-Monem GA, Ahmed HH. Effect of SNAGS Mulligan Technique on Chronic Cervical Radiculopathy : A Randomized Clinical Trial. 2017.
 25. Exelby L. The Mulligan concept: its application in the management of spinal conditions. *Manual Therapy*. 2002;7(2):64-70.

REFERENCE LIST

26. Ganesh GS, Mohanty P, Pattnaik M, Mishra C. Effectiveness of mobilization therapy and exercises in mechanical neck pain. *Physiotherapy theory and practice*. 2015;31(2):99 - 106.
<http://dx.doi.org/10.3109/09593985.2014.963904>
27. Garcia JD, Arnold S, Tetley K, Voight K, Frank RA. Mobilization and Manipulation of the Cervical Spine in Patients with Cervicogenic Headache: Any Scientific Evidence? *Front Neurol*. 2016;7(40).
<http://dx.doi.org/10.3389/fneur.2016.00040>
28. Gautam R, Dhamija JK, Puri A. Comparison of Maitland and Mulligan Mobilization in Improving Neck Pain, ROM and Disability. *International journal of physiotherapy and research*. 2014;2(482-487).
29. Hall T, Briffa K, Hopper D. The influence of lower cervical joint pain on range of motion and interpretation of the flexion-rotation test. *The Journal of manual & manipulative therapy*. 2010;18(3):126-131.
<http://dx.doi.org/10.1179/106698110X12640740712293>
30. Hall T, Briffa K, Hopper D, Robinson K. Long-Term Stability and Minimal Detectable Change of the Cervical Flexion-Rotation Test. *Journal of Orthopaedic & Sports Physical Therapy*. 2010;40(4):225-229.
<http://dx.doi.org/10.2519/jospt.2010.3100>
31. Hall T, Chan HT, Christensen L, Odenthal B, Wells C, Robinson K. Efficacy of a C1-C2 self-sustained natural apophyseal glide (SNAG) in the management of cervicogenic headache. *Journal of orthopaedic and sports physical therapy*. 2007;37(3):100 - 107. <http://dx.doi.org/10.2519/jospt.2007.2379>
32. Hall T, Robinson K. The flexion-rotation test and active cervical mobility--a comparative measurement study in cervicogenic headache. *Man Ther*. 2004;9(4):197-202. <http://dx.doi.org/10.1016/j.math.2004.04.004>
33. Hall TM, Briffa K, Hopper D, Robinson K. Comparative analysis and diagnostic accuracy of the cervical flexion-rotation test. *The journal of headache and pain*. 2010;11(5):391-397.
<http://dx.doi.org/10.1007/s10194-010-0222-3>
34. Hall TM, Briffa K, Hopper D, Robinson KW. The relationship between cervicogenic headache and impairment determined by the flexion-rotation test. *Journal of manipulative and physiological therapeutics*. 2010;33(9):666-671. <http://dx.doi.org/10.1016/j.jmpt.2010.09.002>
35. Hearn A, Rivett DA. Cervical SNAGs: a biomechanical analysis. *Manual Therapy*. 2002;7(2):71-79.
36. Hidalgo B, Hall T, Bossert J, Dugeny A, Cagnie B, Pitance L. The efficacy of manual therapy and exercise for treating non-specific neck pain: A systematic review. *Journal of Back & Musculoskeletal Rehabilitation*. 2017;30(6):1149-1169.
37. Jin X, Du H-G, Kong N, Shen J-L, Chen W-J. Clinical efficacy of the mulligan maneuver for cervicogenic headache: a randomized controlled trial. *Scientific Reports*. 2023;13(1):<http://dx.doi.org/10.1038/s41598-023-48864-1>
38. Kashif M, Manzoor N, Safdar R, Khan H, Farooq M, Wassi A. Effectiveness of sustained natural apophyseal glides in females with cervicogenic headache: A randomized controlled trial. *Journal of back and musculoskeletal rehabilitation*. 2022;35(3):597-603. <http://dx.doi.org/10.3233/bmr-210018>
39. Khalil MA, Alkhozamy H, Fadle S, Hefny AM, Ismail M. Effect of Mulligan upper cervical manual traction in the treatment of cervicogenic headache: a randomized controlled trial. 2019;
40. Khan M, Ali SS, Soomro RR. Efficacy of C 1-C 2 Sustained Natural Apophyseal Glide (SNAG) Versus Posterior Anterior Vertebral Mobilization (PAVMs) in the Management of Cervicogenic Headache. *Journal of Basic & Applied Sciences*. 2014;10(226-230).

REFERENCE LIST

41. Kim S-Y, Kim N-S, Kim LJ. Effects of cervical sustained natural apophyseal glide on forward head posture and respiratory function. *Journal of physical therapy science*. 2015;27(6):1851-1854.
<http://dx.doi.org/10.1589/jpts.27.1851>
42. Kirthika S V, K P, Sudhakar S, Kumar M V. Is Mulligan's Sustained Natural Apophyseal Glides (SNAGS) or Muscle Energy Technique is effective in the non-surgical management of cervicogenic headache? A two-group pretest-posttest randomized controlled trial. *Asian Journal of Pharmaceutical and Clinical Research*. 2018;11(9):230-233. <http://dx.doi.org/10.22159/ajpcr.2018.v11i9.26808>
43. Konstantinos Z. The short and mid-term effects of Mulligan concept in patients with chronic mechanical neck pain. *Journal of Novel Physiotherapy and Rehabilitation*. 2018;022-035.
<http://dx.doi.org/10.29328/journal.jnpr.1001018>
44. Kumar D. *A Study on the Efficacy of Mulligan Concept in Cervical Spine pain and Stiffness*. Amritsar, India: <http://hdl.handle.net/10603/10445>; 2011.
45. Kumar D, Sandhu JS, Broota A. Efficacy of Mulligan concept (NAGs) on pain at available end range in cervical spine: a randomised controlled trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2011;5(1):154-158.
46. Lopez-Lopez A, Alonso Perez JL, González Gutierrez JL, et al. Mobilization versus manipulations versus sustain apophyseal natural glide techniques and interaction with psychological factors for patients with chronic neck pain: randomized controlled trial. *European journal of physical and rehabilitation medicine*. 2015;51(2):121 - 132.
47. Lystad RP, Bell G, Bonnevie-Svendsen M, Carter CV. Manual therapy with and without vestibular rehabilitation for cervicogenic dizziness: a systematic review. *Chiropractic & manual therapies*. 2011;19(1):21. <http://dx.doi.org/10.1186/2045-709x-19-21>
48. Manzoor A, Anwar N, Khalid K, Haider R, Saghir M, Javed MA. Comparison of effectiveness of muscle energy technique with Mulligan mobilization in patients with non-specific neck pain. *J Pak Med Assoc*. 2021;71(6):1532-1524. <http://dx.doi.org/10.47391/JPMA.981>
49. McNair PJ, Portero P, Chiquet C, Mawston G, Lavaste F. Acute neck pain: Cervical spine range of motion and position sense prior to and after joint mobilization. *Manual Therapy*. 2007;12(4):390-394.
50. Micarelli A, Viziano A, Granito I, et al. Postural and clinical outcomes of sustained natural apophyseal glides treatment in cervicogenic dizziness patients: A randomised controlled trial. *Clin Rehabil*. 2021;35(11):1566-1576. <http://dx.doi.org/10.1177/02692155211012413>
51. Mittal M, Hameed UA, Chaudhary A, Ruchika. Mulligan's Manual Therapy Treatment Dosing for Subacute Mechanical Neck Pain - A Comparison between Loading and Movement Disorders of Cervical Spine. *Indian Journal of Physiotherapy & Occupational Therapy*. 2011;5(2):89-96.
52. Mohamed AA, Shendy WS, Semary M, et al. Combined use of cervical headache snag and cervical snag half rotation techniques in the treatment of cervicogenic headache. *Journal of physical therapy science*. 2019;31(4):376-381. <http://dx.doi.org/10.1589/jpts.31.376>
53. Moulson A, Watson T. A preliminary investigation into the relationship between cervical snags and sympathetic nervous system activity in the upper limbs of an asymptomatic population. *Man Ther*. 2006;11(3):214-224. <http://dx.doi.org/10.1016/j.math.2006.04.003>
54. Mulligan BR. Spinal mobilisations with arm movement (further mobilisations with movement). *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 1994;2(2):75-77.

REFERENCE LIST

55. Murtza S, Noor R, Bashir MS, Ikram M. Effects of sustained natural apophyseal glides versus rocabado 6 × 6 program in subjects with cervicogenic headache. *BMC musculoskeletal disorders*. 2024;25(1):169. <http://dx.doi.org/10.1186/s12891-024-07290-8>
56. Nunez-Cabaleiro P, Leiros-Rodriguez R. Effectiveness of manual therapy in the treatment of cervicogenic headache: A systematic review. *Headache*. 2022;62(3):271-283. <http://dx.doi.org/10.1111/head.14278>
57. Ogince M, Hall T, Robinson K, Blackmore AM. The diagnostic validity of the cervical flexion-rotation test in C1/2-related cervicogenic headache. *Man Ther*. 2007;12(3):256-262. <http://dx.doi.org/10.1016/j.math.2006.06.016>
58. Ozlu O, Sahin M. The effect of mulligan mobilization technique application in addition to conventional physiotherapy on pain and joint range of motion in people with neck pain. *Journal of bodywork and movement therapies*. 2024;39(225-230). <http://dx.doi.org/10.1016/j.jbmt.2024.02.009>
59. Pal A, Misra A. Effectiveness of Snag Mobilization on Computer Professionals with Mechanical Neck Pain and Mobility Deficit. *International Journal of Physiotherapy and Research*. 2019;7(2):3022-3027. <http://dx.doi.org/10.16965/ijpr.2019.104>
60. Panjwani KD. To Compare the Effect of MWM v/s MWM along with Neural Tissue Mobilization in Case of Cervical Radiculopathy. *Indian Journal of Physiotherapy & Occupational Therapy*. 2016;10(1):42-46. <http://dx.doi.org/10.5958/0973-5674.2016.00010.1>
61. Paquin JP, Tousignant-Laflamme Y, Dumas JP. Effects of SNAG mobilization combined with a self-SNAG home-exercise for the treatment of cervicogenic headache: a pilot study. *The Journal of manual & manipulative therapy*. 2021;29(4):244-254. <http://dx.doi.org/10.1080/10669817.2020.1864960>
62. Park JT. Evaluation and treatment of cervicogenic headache: a case study using interventions of soft tissue, joint mobilization, and stabilization exercises. *Orthopaedic Physical Therapy Practice*. 2011;23(4):190-196.
63. Patra RC, Mohanty P, Gautam AP. Effectiveness of C1-C2 sustained natural apophyseal glide combined with dry needling on pressure point threshold and headache disability in cervicogenic headache. *Asian journal of pharmaceutical and clinical research*. 2018;11(1):171 - 174. <http://dx.doi.org/10.22159/ajpcr.2018.v11i1.22349>
64. Pérez HI, Perez JLA, Martinez AG, et al. Is one better than another?: a randomized clinical trial of manual therapy for patients with chronic neck pain. *Manual therapy*. 2014;19(3):215 - 221. <http://dx.doi.org/10.1016/j.math.2013.12.002>
65. Racicki S, Gerwin S, DiClaudio S, Reinmann S, Donaldson M. Conservative physical therapy management for the treatment of cervicogenic headache: a systematic review. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2013;21(2):113-124.
66. Ranganath PNU, Dowle P, Chandrasekhar P. Effectiveness of MWM, Neurodynamics and Conventional Therapy Versus Neurodynamics and Conventional Therapy in Unilateral Cervical Radiculopathy: A Randomized Control Trial. *Indian Journal of Physiotherapy and Occupational Therapy - An International Journal*. 2018;12(3):<http://dx.doi.org/10.5958/0973-5674.2018.00066.7>
67. Reid S, Callister R, Snodgrass S, Katekar M, Rivett D. Long-term outcomes of Mulligan sustained natural apophyseal glides and maitland passive joint mobilisations for chronic cervicogenic dizziness: a randomised trial. *Physiotherapy (united kingdom)*. 2015;101(eS1270 - eS1271). <http://dx.doi.org/10.1016/j.physio.2015.03.1180>
68. Reid SA, Callister R, Katekar MG, Rivett DA. Effects of cervical spine manual therapy on range of motion, head repositioning, and balance in participants with cervicogenic dizziness: a randomized controlled trial.

REFERENCE LIST

- Archives of physical medicine and rehabilitation*. 2014;95(9):1603 - 1612.
<http://dx.doi.org/10.1016/j.apmr.2014.04.009>
69. Reid SA, Callister R, Snodgrass SJ, Katekar MG, Rivett DA. Manual therapy for cervicogenic dizziness: long-term outcomes of a randomised trial. *Manual therapy*. 2015;20(1):148 - 156.
<http://dx.doi.org/10.1016/j.math.2014.08.003>
70. Reid SA, Rivett DA, Katekar MG, Callister R. Comparison of mulligan sustained natural apophyseal glides and maitland mobilizations for treatment of cervicogenic dizziness: a randomized controlled trial. *Physical therapy*. 2014;94(4):466 - 476. <http://dx.doi.org/10.2522/ptj.20120483>
71. Reid SA, Rivett DA, Katekar MG, Callister R. Efficacy of manual therapy treatments for people with cervicogenic dizziness and pain: protocol of a randomised controlled trial. *BMC musculoskeletal disorders*. 2012;13(201). <http://dx.doi.org/10.1186/1471-2474-13-201>
72. Reid SA, Rivett DA, Katekar MG, Callister R. Sustained natural apophyseal glides (SNAGs) are an effective treatment for cervicogenic dizziness. *Manual therapy*. 2008;13(4):357 - 366.
<http://dx.doi.org/10.1016/j.math.2007.03.006>
73. Rezkallah SS, Abdullah GA. Comparison between sustained natural apophyseal glides (SNAG's) and myofascial release techniques combined with exercises in non specific neck pain. *Physiotherapy Practice & Research*. 2018;39(2):135-145. <http://dx.doi.org/10.3233/PPR-180116>
74. Richardson CJ. Treatment of cervicogenic headaches using Mulligan 'SNAGS' and postural reeducation: a case report. *Orthopaedic Physical Therapy Practice*. 2009;21(1):33-38.
75. Said S, Ali OI, Elazm SNA, Abdelraoof NA. Mulligan Self Mobilization Versus Mulligan Snags on Cervical Position Sense. *International Journal of Physiotherapy*. 2017;4(2):93-100.
76. Saptale A, Patrekar S, Aphale S, Shinde S. Effects of Positional Traction Integrated With Mobilization With Movement on Cervical Facet Joint Syndrome. *Cureus*. 2025;17(7):e88276.
<http://dx.doi.org/10.7759/cureus.88276>
77. Satpute K, Bedekar N, Hall T. Effect of Mulligan manual therapy and exercise on headache frequency, intensity, disability, and upper cervical joint hypomobility in people with episodic tension-type headache: a randomized clinical trial. *Physiotherapy theory and practice*. 2025;41(11):2271-2287.
<http://dx.doi.org/10.1080/09593985.2025.2516765>
78. Satpute K, Bedekar N, Hall T. Effectiveness of Mulligan manual therapy over exercise on headache frequency, intensity and disability for patients with migraine, tension-type headache and cervicogenic headache - a protocol of a pragmatic randomized controlled trial. *BMC musculoskeletal disorders*. 2021;22(1):243. <http://dx.doi.org/10.1186/s12891-021-04105-y>
79. Satpute K, Bedekar N, Hall T. Headache symptom modification: the relevance of appropriate manual therapy assessment and management of a patient with features of migraine and cervicogenic headache - a case report. *The Journal of manual & manipulative therapy*. 2020;28(3):181-188.
<http://dx.doi.org/10.1080/10669817.2019.1662637>
80. Satpute K, Bedekar N, Hall T. Mulligan manual therapy added to exercise improves headache frequency, intensity and disability more than exercise alone in people with cervicogenic headache: a randomised trial. *J Physiother*. 2024;<http://dx.doi.org/10.1016/j.jphys.2024.06.002>
81. Satpute K, Nalband S, Hall T. The C0-C2 axial rotation test: normal values, intra- and inter-rater reliability and correlation with the flexion rotation test in normal subjects. *The Journal of manual & manipulative therapy*. 2019;27(2):92-98. <http://dx.doi.org/10.1080/10669817.2018.1533195>

REFERENCE LIST

82. Satpute KH, Parekh K, Hall TM. The C0–C2 axial rotation test – Reliability and correlation with the flexion rotation test in people with cervicogenic headache and migraine. *Musculoskeletal Science and Practice*. 2020;102286. <http://dx.doi.org/10.1016/j.msksp.2020.102286>
83. Schäfer A, Lüdtke K, Breuel F, et al. Validity of eyeball estimation for range of motion during the cervical flexion rotation test compared to an ultrasound-based movement analysis system. *Physiotherapy theory and practice*. 2018;34(8):622-628. <http://dx.doi.org/10.1080/09593985.2017.1423523>
84. Sekeroz S, Telci EA, Buke M, Akkaya N. Comparison of effectiveness of Mulligan mobilization technique and cervical stabilization training in patients with chronic neck pain: a single-blinded randomized controlled trial. *Rehabilitation (Stuttg)*. 2025;64(06):334-343. <http://dx.doi.org/10.1055/a-2618-6281>
85. Seo Y, Lee J, Han D. The effects of spinal mobilization with arm movements on shoulder muscle strengthening. *Journal of physical therapy science*. 2015;27(1):11-13. <http://dx.doi.org/10.1589/jpts.27.11>
86. Shafique S, Ahmad S, Shakil-Ur-Rehman S. Effect of Mulligan spinal mobilization with arm movement along with neurodynamics and manual traction in cervical radiculopathy patients: A randomized controlled trial. *J Pak Med Assoc*. 2019;69(11):1601-1604. <http://dx.doi.org/10.5455/JPMA.297956>.
87. Shelke A, B AP, M GB, Kumaran SD, G PR. Immediate effect of craniocervical flexion exercise and Mulligan mobilisation in patients with mechanical neck pain — A randomised clinical trial. *Hong Kong Physiotherapy Journal*. 2023;43(02):137-147. <http://dx.doi.org/10.1142/s1013702523500154>
88. Shin EJ, Lee BH. The effect of sustained natural apophyseal glides on headache, duration and cervical function in women with cervicogenic headache. *Journal of exercise rehabilitation*. 2014;10(2):131-135. <http://dx.doi.org/10.12965/jer.140098>
89. Takasaki H, Hall T, Kaneko S, Iizawa T, Ikemoto Y. Cervical segmental motion induced by shoulder abduction assessed by magnetic resonance imaging. *Spine*. 2009;34(3):E122-126. <http://dx.doi.org/10.1097/BRS.0b013e31818a26d9>
90. Takasaki H, Hall T, Oshiro S, Kaneko S, Ikemoto Y, Jull G. Normal kinematics of the upper cervical spine during the Flexion-Rotation Test - In vivo measurements using magnetic resonance imaging. *Man Ther*. 2011;16(2):167-171. <http://dx.doi.org/10.1016/j.math.2010.10.002>
91. Tank KD, Choks P, Makwana P. To Study the Effect of Muscle Energy Technique Versus Mulligan Snags on Pain, Range of Motion and Functional Disability for Individuals with Mechanical Neck Pain”. – a Comparative Study. *International Journal of Physiotherapy and Research*. 2018;6(1):2582-2587. <http://dx.doi.org/10.16965/ijpr.2017.253>
92. Tatsios PI, Grammatopoulou E, Dimitriadis Z, Koumantakis GA. The Effectiveness of Manual Therapy in the Cervical Spine and Diaphragm, in Combination with Breathing Re-Education Exercises, on the Range of Motion and Forward Head Posture in Patients with Non-Specific Chronic Neck Pain: A Randomized Controlled Trial. *Healthcare (Basel)*. 2025;13(14):<http://dx.doi.org/10.3390/healthcare13141765>
93. Thomaidou E, McCarthy CJ, Tsepis E, Fousekis K, Billis E. Manual Therapy versus Localisation (Tactile, Sensory Training) in Patients with Non-Specific Neck Pain: A Randomised Clinical Pilot Trial. *Healthcare (Basel)*. 2023;11(10):<http://dx.doi.org/10.3390/healthcare11101385>
94. Wade PG, Franklin CVJ. The Effect of Mobilisation and Core Muscle Strengthening For Cervical Spine in Relieving Cervicogenic Headache. *IOSR Journal of Nursing and Health Science*. 2015;4(5):13-16.
95. Xu X, Ling Y. Comparative safety and efficacy of manual therapy interventions for cervicogenic headache: a systematic review and network meta-analysis. *Front Neurol*. 2025;16(1566764). <http://dx.doi.org/10.3389/fneur.2025.1566764>

REFERENCE LIST

96. Yaseen K, Hendrick P, Ismail A, Felemban M, Alshehri MA. The effectiveness of manual therapy in treating cervicogenic dizziness: a systematic review. *Journal of physical therapy science*. 2018;30(1):96-102. <http://dx.doi.org/10.1589/jpts.30.96>
97. Yoshikawa A, Ogata Y, Yanagihashi R, Fujiwara T, Abe K. Analysis of a Manual Technique for Cervical Rotation using a Small Three Dimensional Strain Meter. *Rigakuryoho Kagaku*. 2011;26(4):507-510.

3. TMJ (1)

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|-------------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| González-Iglesias | 2013 | | | | | | ✓ | | | | | | | | |

1. González-Iglesias J, Cleland JA, Neto F, Hall T, Fernández-de-las-Peñas C. Mobilization with movement, thoracic spine manipulation, and dry needling for the management of temporomandibular disorder: A prospective case series. *Physiotherapy Theory & Practice*. 2013;29(8):586-595. <http://dx.doi.org/10.3109/09593985.2013.783895>

4. Shoulder (79)

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
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| Abu El Kasem | 2024 | | ✓ | | | | | | | | | | | | |
| Alshami | 2021 | | ✓ | | | | | | | | | | | | |
| Amjad | 2025 | | ✓ | | | | | | | | | | | | |
| Andrews | 2018 | | | | | | ✓ | | | | | | | | |
| Arshad | 2015 | | ✓ | | | | | | | | | | | | |
| Baeske | 2020 | | | | | | | | | | | | | | ✓ |

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| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|------------------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Baeske | 2024 | | ✓ | | | | | | | | | | | | |
| Boruah | 2015 | | ✓ | | | | | | | | | | | | |
| Buonopane | 2015 | | | | | | | | ✓ | | | | | | |
| Carson | 1999 | | | | | | | | ✓ | | | | | | |
| Celik | 2025 | | ✓ | | | | | | | | | | | | |
| Çelik | 2024 | ✓ | | | | | | | | | | | | | |
| Dalvi | 2024 | | ✓ | | | | | | | | | | | | |
| Delgado-Gil | 2015 | | ✓ | | | | | | | | | | | | |
| Deniz | 2025 | | ✓ | | | | | | | | | | | | |
| Desai | 2016 | | ✓ | | | | | | | | | | | | |
| Desantis | 2006 | | | | | | | | ✓ | | | | | | |
| Desjardins-Charbonneau | 2015 | ✓ | | | | | | | | | | | | | |
| Dias | 2023 | ✓ | | | | | | | | | | | | | |
| Djordjevic | 2012 | | ✓ | | | | | | | | | | | | |
| Doner | 2013 | | ✓ | | | | | | | | | | | | |
| Doweir | 2025 | | ✓ | | | | | | | | | | | | |
| Elabd | 2024 | | ✓ | | | | | | | | | | | | |
| Foster | 2010 | | | | | | | | | | | | ✓ | | |
| Fujinawa | 2010 | | | | | | | | ✓ | | | | | | |
| Gebhardt | 2006 | | | | | | | | ✓ | | | | | | |
| Guimaraes | 2016 | | ✓ | | | | | | | | | | | | |
| Haik | 2022 | | | | | | ✓ | | | | | | | | |
| Haik | 2016 | ✓ | | | | | | | | | | | | | |
| Ho | 2009 | ✓ | | | | | | | | | | | | | |
| Ho | 2009 | | | | | | | | | | ✓ | | | | |
| Hudson | 2017 | | | | | | | | ✓ | | | | | | |
| Jain | 2014 | ✓ | | | | | | | | | | | | | |
| Jie | 2015 | | | ✓ | | | | | | | | | | | |
| Kachingwe | 2008 | | ✓ | | | | | | | | | | | | |
| Kelley | 2009 | | | | | | | | | | | | ✓ | | |
| Khaki | 2025 | | ✓ | | | | | | | | | | | | |
| Khalil | 2022 | | ✓ | | | | | | | | | | | | |
| Khandaloo | 2025 | | ✓ | | | | | | | | | | | | |

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| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CAT's | Textbooks and Book Chapters | Trial Protocols |
|-------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|---------------------------|-----------------------------|-----------------|
| Khyathi | 2015 | | ✓ | | | | | | | | | | | | |
| Kirkaya | 2025 | | ✓ | | | | | | | | | | | | |
| Kubuk | 2023 | ✓ | | | | | | | | | | | | | |
| Lenker | 2012 | | | | | | | | ✓ | | | | | | |
| Lirio | 2015 | | ✓ | | | | | | | | | | | | |
| Machado | 2017 | ✓ | | | | | | | | | | | | | |
| Menek | 2019 | | ✓ | | | | | | | | | | | | |
| Menek | 2025 | | ✓ | | | | | | | | | | | | |
| Mulligan | 2003 | | | | | | | | | | | | ✓ | | |
| Nathani | 2024 | | | | | | | | ✓ | | | | | | |
| Neelapala | 2016 | | ✓ | | | | | | | | | | | | |
| Noten | 2016 | ✓ | | | | | | | | | | | | | |
| Page | 2014 | ✓ | | | | | | | | | | | | | |
| Page | 2016 | ✓ | | | | | | | | | | | | | |
| Park | 2014 | | ✓ | | | | | | | | | | | | |
| Popescu | 2021 | | | | | | | | ✓ | | | | | | |
| Pragassame | 2014 | | ✓ | | | | | | | | | | | | |
| Ranjana | 2016 | | ✓ | | | | | | | | | | | | |
| Razzaq | 2022 | | ✓ | | | | | | | | | | | | |
| Rhinehart | 2016 | | | | | | | | ✓ | | | | | | |
| Ribeiro | 2016 | | | | ✓ | | | | | | | | | | |
| Ribeiro | 2017 | | | | ✓ | | | | | | | | | | |
| Romero | 2015 | | ✓ | | | | | | | | | | | | |
| Sai | 2015 | | ✓ | | | | | | | | | | | | |
| Satpute | 2015 | | ✓ | | | | | | | | | | | | |
| Satpute | 2022 | ✓ | | | | | | | | | | | | | |
| Seo | 2015 | | | | ✓ | | | | | | | | | | |
| Shrivastava | 2011 | | ✓ | | | | | | | | | | | | |
| Silva | 2013 | | | | | | | | | | | | ✓ | | |
| Srivastava | 2017 | | ✓ | | | | | | | | | | | | |
| Srivastava | 2018 | | ✓ | | | | | | | | | | | | |
| Teys | 2008 | | ✓ | | | | | | | | | | | | |
| Teys | 2013 | | ✓ | | | | | | | | | | | | |
| Wang | 2018 | | ✓ | | | | | | | | | | | | |

REFERENCE LIST

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols | |
|-------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|---|
| Wang | 2023 | | | | | | | | | | | | | | | ✓ |
| Wang | 2024 | | ✓ | | | | | | | | | | | | | |
| Wong | 2018 | | | | | | ✓ | | | | | | | | | |
| Yang | 2007 | | ✓ | | | | | | | | | | | | | |
| Youssef | 2015 | | ✓ | | | | | | | | | | | | | |
| Zanjani | 2024 | | ✓ | | | | | | | | | | | | | |

1. Abu El Kasem ST, Alaa FAA, Abd El-Raouf NA, Abd-Elazeim AS. Efficacy of Mulligan thoracic sustained natural apophyseal glides on sub-acromial pain in patients with sub-acromial impingement syndrome: a single-blinded randomized controlled trial. *Journal of Manual & Manipulative Therapy*. 2024;April):1-10. <http://dx.doi.org/10.1080/10669817.2024.2341453>
2. Alshami AM, AISadiq AI. Outcomes of scapulothoracic mobilisation in patients with neck pain and scapular dyskinesia: A randomised clinical trial. *J Taibah Univ Med Sci*. 2021;16(4):540-549. <http://dx.doi.org/10.1016/j.jtumed.2021.03.006>
3. Amjad F, Asghar H. Comparative effects of gong's mobilization and mobilization with movement in patients with adhesive capsulitis: a randomized clinical trial. *Sci Rep*. 2025;15(1):4272. <http://dx.doi.org/10.1038/s41598-025-88422-5>
4. Andrews DP, Odland-Wolf KB, May J, Baker R, Nasypany A. The Utilization of Mulligan Concept Thoracic Sustained Natural Apophyseal Glides on Patients Classified with Secondary Impingement Syndrome: A Multi-Site Case Series. *International Journal of Sports Physical Therapy*. 2018;13(1):121-130.
5. Arshad HS, Shah IH, Nasir RH. Comparison of Mulligan Mobilization with Movement and End-Range Mobilization Following Maitland Techniques in Patients with Frozen Shoulder in Improving Range of Motion. *International Journal of Science and Research (IJSR)*. 2015;4(4):2761-2767.
6. Baeske R, Hall T, Dall'Olmo RR, Silva MF. In people with shoulder pain, mobilisation with movement and exercise improves function and pain more than sham mobilisation with movement and exercise: a randomised trial. *J Physiother*. 2024;70(4):288-293. <http://dx.doi.org/10.1016/j.jphys.2024.08.009>
7. Baeske R, Hall T, Silva MF. The inclusion of mobilisation with movement to a standard exercise programme for patients with rotator cuff related pain: a randomised, placebo-controlled protocol trial. *BMC musculoskeletal disorders*. 2020;21(1):744. <http://dx.doi.org/10.1186/s12891-020-03765-6>
8. Boruah L, Dutta A, Deka P, Roy J. To Study the Effect of Scapular Mobilization Versus Mobilization With Movement to Reduce Pain and Improve Gleno-humeral Range of Motion in Adhesive Capsulitis of Shoulder:

REFERENCE LIST

- A Comparative Study. *International Journal of Physiotherapy*. 2015;2(5):<http://dx.doi.org/10.15621/ijphy/2015/v2i5/78239>
9. Buonopane MP. Case Study: A Nontraditional Treatment Approach to Acute Acromioclavicular Joint Injury Care. *International Journal of Athletic Therapy & Training*. 2015;20(5):6-10. <http://dx.doi.org/https://doi.org/10.1123/ijatt.2014-0108>
 10. Carson PA. The rehabilitation of a competitive swimmer with an asymmetrical breaststroke movement pattern. *Manual Therapy*. 1999;4(2):100-106.
 11. Çelik D, Van Der Veer P, Tiryaki P. The Clinical Significance of Mulligan's Mobilization with Movement in Shoulder Pathologies: A Systematic Review and Meta-Analysis. *Journal of Integrative and Complementary Medicine*. 2024;31(2):134-142. <http://dx.doi.org/10.1089/jicm.2024.0200>
 12. Celik T, Menek B. The effect of Mulligan and Maitland techniques on pain, functionality, proprioception, and quality of life in individuals with rotator cuff lesions. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2025;38(3):574-583. <http://dx.doi.org/10.1016/j.jht.2024.12.018>
 13. Dalvi S, Shinde S, Mishra SD. Effect of Mobilization With Movement on the Glenohumeral Joint Positional Fault in Subacromial Impingement. *Cureus*. 2024;16(6):e62576. <http://dx.doi.org/10.7759/cureus.62576>
 14. Delgado-Gil JA, Prado-Robles E, Rodrigues-de-Souza DP, Cleland JA, Fernández-de-las-Peñas C, Alburquerque-Sendín F. Effects of mobilization with movement on pain and range of motion in patients with unilateral shoulder impingement syndrome: a randomized controlled trial. *Journal of manipulative and physiological therapeutics*. 2015;38(4):245 - 252. <http://dx.doi.org/10.1016/j.jmpt.2014.12.008>
 15. Deniz V, Kelle B. Mobilization with movement plus exercise versus exercise alone for patients with central sensitization associated with chronic subacromial pain syndrome: a sham-controlled randomized clinical trial. *BMC Complement Med Ther*. 2025;25(1):289. <http://dx.doi.org/10.1186/s12906-025-05028-0>
 16. Desai P, Vinodkumar A. A Comparative Study between Efficacy of Low Level Laser Therapy (LLLT) with Mulligan's Mobilization (MWM) Over Ultrasound Therapy with Mulligan's Mobilization (MWM) in Patients with Acute Supraspinatus Tendinitis. *Indian Journal of Physiotherapy & Occupational Therapy*. 2016;10(3):75-81. <http://dx.doi.org/10.5958/0973-5674.2016.00085.X>
 17. Desantis L, Hasson SM. Use of Mobilization with Movement in the Treatment of a Patient with Subacromial Impingement: A Case Report. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2006;14(2):77-87.
 18. Desjardins-Charbonneau A, Roy JS, Dionne CE, Fremont P, MacDermid JC, Desmeules F. The efficacy of manual therapy for rotator cuff tendinopathy: a systematic review and meta-analysis. *The Journal of orthopaedic and sports physical therapy*. 2015;45(5):330-350. <http://dx.doi.org/10.2519/jospt.2015.5455>
 19. Dias D, Neto MG, Sales S, et al. Effect of Mobilization with Movement on Pain, Disability, and Range of Motion in Patients with Shoulder Pain and Movement Impairment: A Systematic Review and Meta-Analysis. *J Clin Med*. 2023;12(23):<http://dx.doi.org/10.3390/jcm12237416>
 20. Djordjevic OC, Vukicevic D, Katunac L, Jovic S. Mobilization with movement and kinesiotaping compared with a supervised exercise program for painful shoulder: results of a clinical trial. *Journal of manipulative and physiological therapeutics*. 2012;35(6):454 - 463. <http://dx.doi.org/10.1016/j.jmpt.2012.07.006>
 21. Doner G, Guven Z, Atalay A, Celiker R. Evaluation of Mulligan's technique for adhesive capsulitis of the shoulder. *Journal of rehabilitation medicine*. 2013;45(1):87 - 91. <http://dx.doi.org/10.2340/16501977-1064>

REFERENCE LIST

22. Doweir AM, Mashaal A, Basha SAZ, et al. Effect of modified mobilization with movement and motor learning on volleyball females players with shoulder impingement syndrome. *J Educ Health Promot.* 2025;14(200). http://dx.doi.org/10.4103/jehp.jehp_1834_24
23. Elabd OM, Etoom M, Jahan AM, Elabd AM, Khedr AM, Elgohary HM. The Efficacy of Muscle Energy and Mulligan Mobilization Techniques for the Upper Extremities and Posture after Breast Cancer Surgery with Axillary Dissection: A Randomized Controlled Trial. *Journal of Clinical Medicine.* 2024;13(4):<http://dx.doi.org/10.3390/jcm13040980>
24. Foster RL, O'Driscoll M. Current concepts in the conservative management of the frozen shoulder. *Physical Therapy Reviews.* 2010;15(5):399-404. <http://dx.doi.org/10.1179/174328810X12786297204710>
25. Fujinawa O, Kondo Y, Tachikawa K, Jigami H, Hirose K, Matsunaga H. Athletic Rehabilitation of a Platform Diver for Return to Competition after a Shoulder Dislocation. *XIth International Symposium for Biomechanics & Medicine in Swimming.* 2010;11):362-364.
26. Gebhardt TL, Whitman JM, Smith MB. Mobilization with movement as part of a comprehensive physical therapy program for a patient with shoulder impingement: a case report. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy).* 2006;14(3):176-176.
27. Guimaraes JF, Salvini TF, Siqueira AL, Ribeiro IL, Camargo PR, Albuquerque-Sendin F. Immediate Effects of Mobilization With Movement vs Sham Technique on Range of Motion, Strength, and Function in Patients With Shoulder Impingement Syndrome: randomized Clinical Trial. *Journal of manipulative and physiological therapeutics.* 2016;39(9):605 - 615. <http://dx.doi.org/10.1016/j.jmpt.2016.08.001>
28. Haik MN, Albuquerque-Sendin F, Moreira RF, Pires ED, Camargo PR. Effectiveness of physical therapy treatment of clearly defined subacromial pain: a systematic review of randomised controlled trials. *British journal of sports medicine.* 2016;50(18):1124-1134. <http://dx.doi.org/10.1136/bjsports-2015-095771>
29. Haik MN, Evans K, Smith A, Bisset L. Investigating the effects of mobilization with movement and exercise on pain modulation processes in shoulder pain - a single cohort pilot study with short-term follow up. *The Journal of manual & manipulative therapy.* 2022;1-10. <http://dx.doi.org/10.1080/10669817.2022.2030626>
30. Ho C-YC, Sole G, Munn J. The effectiveness of manual therapy in the management of musculoskeletal disorders of the shoulder: A systematic review. *Manual Therapy.* 2009;14(5):463-474.
31. Ho K-Y, Hsu A-T. Displacement of the head of humerus while performing "mobilization with movements" in glenohumeral joint: A cadaver study. *Manual Therapy.* 2009;14(2):160-166. <http://dx.doi.org/https://doi.org/10.1016/j.math.2008.01.008>
32. Hudson RA, Baker RT, Nasypany A, Reordan D. Treatment of Anterior Shoulder Subluxation Using the Mulligan Concept and Reflex Neuromuscular Stabilization: A Case Report. *International Journal of Sports Physical Therapy.* 2017;12(1):155-162.
33. Jain TK, Sharma NK. The effectiveness of physiotherapeutic interventions in treatment of frozen shoulder/adhesive capsulitis: A systematic review. *Journal of Back & Musculoskeletal Rehabilitation.* 2014;27(3):247-273. <http://dx.doi.org/10.3233/BMR-130443>
34. Jie H, Lingfeng X, Xiaoling H, Xiaohua H. Effects of mulligan's mobilization with movement combined with stretching therapy in the management of frozen shoulder. *Physiotherapy (united kingdom).* 2015;101(eS683 - eS684). <http://dx.doi.org/10.1016/j.physio.2015.03.3528>
35. Kachingwe AF, Phillips B, Sletten E, Plunkett SW. Comparison of manual therapy techniques with therapeutic exercise in the treatment of shoulder impingement: a randomized controlled pilot clinical trial.

REFERENCE LIST

- The Journal of manual & manipulative therapy.* 2008;16(4):238-247.
<http://dx.doi.org/10.1179/106698108790818314>
36. Kelley MJ, McClure PW, Leggin BG. Frozen shoulder: evidence and a proposed model guiding rehabilitation. *The Journal of orthopaedic and sports physical therapy.* 2009;39(2):135-148.
<http://dx.doi.org/10.2519/jospt.2009.2916>
37. Khaki S, Ravanbod R, Ashtiani MN. Mechanical correction in kinesiology and mulligan taping: A comparative study on scapular dyskinesis in computer users. *Journal of back and musculoskeletal rehabilitation.* 2025;38(5):981-994. <http://dx.doi.org/10.1177/10538127251323952>
38. Khalil R, Tanveer F, Hanif A, Ahmad A. Comparison of Mulligan technique versus muscle energy technique in patients with adhesive capsulitis. *J Pak Med Assoc.* 2022;72(2):211-215.
<http://dx.doi.org/10.47391/jpma.1678>
39. Khandaloo A, Taghizadeh Delkhoush C, Paknazar F, Ehsani F, Shokrian Z. A comparison of two mobilization approaches on the acromiohumeral distance in overhead athletes with primary subacromial impingement syndrome: a randomized clinical study. *Journal of Manual & Manipulative Therapy.* 2025;1-14.
<http://dx.doi.org/10.1080/10669817.2025.2544288>
40. Khyathi P, Vinod Babu K, Sai Kumar N, Asha D. Comparative Effect of Spencer Technique Versus Mulligan's Technique for Subjects with Frozen Shoulder-A Single Blind Study. *International Journal of Physiotherapy.* 2015;2(2):448. <http://dx.doi.org/10.15621/ijphy/2015/v2i2/65255>
41. Kirkaya AC, Atici E, Aydin G, Surenkok O. Comparing the Effectiveness of Mulligan Movement with Mobilization and Proprioceptive Neuromuscular Facilitation Techniques in Rehabilitation of Rotator Cuff Syndrome: A Randomized Controlled Trial. *Indian Journal of Orthopaedics.* 2025;59(11):1969-1978.
<http://dx.doi.org/10.1007/s43465-025-01435-0>
42. Kubuk BS, Carrasco-Uribarren A, Cabanillas-Barea S, Ceballos-Laita L, Jimenez-Del-Barrio S, Perez-Guillen S. The effects of end-range interventions in the management of primary adhesive capsulitis of the shoulder: a systematic review and meta-analysis. *Disabil Rehabil.* 2023;1-15.
<http://dx.doi.org/10.1080/09638288.2023.2243826>
43. Lenker C, Larocca N, Lee J, Tucker P. The Use of Thoracic Mobilization With Movement to Treat Shoulder Impingement in Older Adults: A Case Study. *Topics in Geriatric Rehabilitation.* 2012;28(3):195-200.
<http://dx.doi.org/10.1097/TGR.0b013e31825d3834>
44. Lirio Romero C, Torres Lacomba M, Castilla Montoro Y, et al. Mobilization With Movement for Shoulder Dysfunction in Older Adults: A Pilot Trial. *Journal of chiropractic medicine.* 2015;14(4):249-258.
<http://dx.doi.org/10.1016/j.jcm.2015.03.001>
45. Machado M. The Effects of Mobilizations With Movement Versus Maitland Mobilizations on Range of Motion and Shoulder Function in Patients With Adhesive Capsulitis: A Meta-Analysis. *Effects of Mobilizations With Movement Versus Maitland Mobilizations on Range of Motion & Shoulder Function in Patients With Adhesive Capsulitis: A Meta-Analysis.* 2017;1-1.
46. Menek B, Menek MY. The efficacy of Mulligan mobilization and corticosteroid injection on pain, functionality, and proprioception in rotator cuff tears: A randomized controlled trial. *Journal of hand therapy : official journal of the American Society of Hand Therapists.* 2025;38(3):410-417.
<http://dx.doi.org/10.1016/j.jht.2024.12.016>

REFERENCE LIST

47. Menek B, Tarakci D, Algun ZC. The effect of Mulligan mobilization on pain and life quality of patients with Rotator cuff syndrome: A randomized controlled trial. *Journal of back and musculoskeletal rehabilitation*. 2019;32(1):171-178. <http://dx.doi.org/10.3233/bmr-181230>
48. Mulligan BR. The painful dysfunctional shoulder. A new treatment approach using 'Mobilisation with Movement'. *New Zealand Journal of Physiotherapy*. 2003;31(3):140-142.
49. Nathani HR, Ramteke SU, Jaiswal PR. Physiotherapeutic Management for Acromioclavicular Joint Sprain With Volar Intercalated Segment Instability at the Wrist: A Case Report. *Cureus*. 2024;16(4):e58399. <http://dx.doi.org/10.7759/cureus.58399>
50. Neelapala YVR, Reddy YRS, Danait R. Effect of Mulligan's posterolateral glide on shoulder rotator strength, scapular upward rotation in shoulder pain subjects - A randomized controlled trial. *Journal of musculoskeletal research*. 2016;19(3):1650014. <http://dx.doi.org/10.1142/S0218957716500147>
51. Noten S, Meeus M, Stassijns G, Van Glabbeek F, Verborgt O, Struyf F. Efficacy of Different Types of Mobilization Techniques in Patients With Primary Adhesive Capsulitis of the Shoulder: A Systematic Review. *Archives of Physical Medicine & Rehabilitation*. 2016;97(5):815-825.
52. Page MJ, Green S, Kramer S, et al. Manual therapy and exercise for adhesive capsulitis (frozen shoulder). *Cochrane Database of Systematic Reviews*. 2014;8):<http://dx.doi.org/10.1002/14651858.CD011275>
53. Page MJ, Green S, McBain B, et al. Manual therapy and exercise for rotator cuff disease. *Cochrane Database of Systematic Reviews*. 2016;6):<http://dx.doi.org/10.1002/14651858.CD012224>
54. Park SW, Lee HS, Kim JH. The Effectiveness of Intensive Mobilization Techniques Combined with Capsular Distension for Adhesive Capsulitis of the Shoulder. *Journal of physical therapy science*. 2014;26(11):1767-1770. <http://dx.doi.org/10.1589/jpts.26.1767>
55. Popescu FG, Vaida MA, Mackay GJK, et al. Successful management of a professional viola player with a complex playing related musculoskeletal disorder. *Romanian Journal of Occupational Medicine*. 2021;72(1):59-65. <http://dx.doi.org/10.2478/rjom-2021-0009>
56. Pragassame AS, Kurup MVK. Efficacy of Limited Treatment Frequency of Mulligan's Mobilization with Movement for Frozen Shoulder. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(2):218-223. <http://dx.doi.org/10.5958/j.0973-5674.8.2.089>
57. Ranjana, Sahay P, Banerjee D, Bhushan V, Equebal A. Long Term Efficacy of Maitland Mobilization Versus Mulligan Mobilization in Idiopathic Adhesive Capsulitis of Shoulder: A Randomized Controlled Trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2016;10(4):91-97. <http://dx.doi.org/10.5958/0973-5674.2016.00126.X>
58. Razaq A, Nadeem RD, Akhtar M, Ghazanfar M, Aslam N, Nawaz S. Comparing the effects of muscle energy technique and mulligan mobilization with movements on pain, range of motion, and disability in adhesive capsulitis. *J Pak Med Assoc*. 2022;72(1):13-16. <http://dx.doi.org/10.47391/JPMA.1360>
59. Rhinehart A, Buonopane M. Use of the Mulligan Concept and Positional Release Therapy in the Treatment of a Moderate Grade Acromioclavicular Injury. *Athletic Training & Sports Health Care: The Journal for the Practicing Clinician*. 2016;8(2):82-88.
60. Ribeiro DC, de Castro MP, Sole G, Vicenzino B. The initial effects of a sustained glenohumeral posterolateral glide during elevation on shoulder muscle activity: A repeated measures study on asymptomatic shoulders. *Man Ther*. 2016;22(101-108. <http://dx.doi.org/10.1016/j.math.2015.10.014>
61. Ribeiro DC, Sole G, Venkat R, Shemmell J. Differences between clinician- and self-administered shoulder sustained mobilization on scapular and shoulder muscle activity during shoulder abduction: A repeated-

REFERENCE LIST

- measures study on asymptomatic individuals. *Musculoskeletal science & practice*. 2017;30(25-33).
<http://dx.doi.org/10.1016/j.msksp.2017.04.010>
62. Romero CL, Torres Lacomba M, Montoro YC, et al. Mobilization With Movement for Shoulder Dysfunction in Older Adults: A Pilot Trial. *Journal of Chiropractic Medicine*. 2015;14(4):249-258.
<http://dx.doi.org/10.1016/j.jcm.2015.03.001>
63. Sai KV, Kumar JNS. Effects of Mulligan's Mobilisation with Movement on Pain and Range of Motion in Diabetic Frozen Shoulder a Randomized Clinical Trail. *Indian Journal of Physiotherapy & Occupational Therapy*. 2015;9(4):187-193. <http://dx.doi.org/10.5958/0973-5674.2015.00170.7>
64. Satpute K, Reid S, Mitchell T, Mackay G, Hall T. Efficacy of mobilization with movement (MWM) for shoulder conditions: a systematic review and meta-analysis. *The Journal of manual & manipulative therapy*. 2022;30(1):13-32. <http://dx.doi.org/10.1080/10669817.2021.1955181>
65. Satpute KH, Bhandari P, Hall T. Efficacy of Hand Behind Back Mobilization With Movement for Acute Shoulder Pain and Movement Impairment: a Randomized Controlled Trial. *Journal of manipulative and physiological therapeutics*. 2015;38(5):324 - 334. <http://dx.doi.org/10.1016/j.jmpt.2015.04.003>
66. Seo Y, Lee J, Han D. The effects of spinal mobilization with arm movements on shoulder muscle strengthening. *Journal of physical therapy science*. 2015;27(1):11-13. <http://dx.doi.org/10.1589/jpts.27.11>
67. Shrivastava A, Shyam AK, Sabnis S, Sancheti P. Randomised controlled study of Mulligan's Vs. Maitland's mobilization technique in adhesive capsulitis of shoulder joint. *Indian Journal of Physiotherapy & Occupational Therapy*. 2011;5(4):12-15.
68. Silva JG, Torres DdFM, Chagas CA, Guimarães F. Anatomical Considerations of The Acromioclavicular Joint for the Application of Mobilization-With-Movement: A Narrative Review. *Journal of Physical Therapy*. 2013;6(2):59-66.
69. Srivastava N, Joshi S. Comparison between the Effectiveness of Mobilization with Movement and End Range Mobilization along with Conventional Therapy for Management of Frozen Shoulder. *Indian Journal of Physiotherapy & Occupational Therapy*. 2017;11(4):176-179. <http://dx.doi.org/10.5958/0973-5674.2017.00141.1>
70. Srivastava S, Eapen C, Mittal H. Comparison of Mobilisation with Movement and Cryotherapy in Shoulder Impingement Syndrome-A Randomised Clinical Trial. *Journal of Clinical and Diagnostic Research*. 2018;<http://dx.doi.org/10.7860/jcdr/2018/34624.12091>
71. Teys P, Bisset L, Collins N, Coombes B, Vicenzino B. One-week time course of the effects of Mulligan's Mobilisation with Movement and taping in painful shoulders. *Manual therapy*. 2013;18(5):372 - 377.
<http://dx.doi.org/10.1016/j.math.2013.01.001>
72. Teys P, Bisset L, Vicenzino B. The initial effects of a Mulligan's mobilization with movement technique on range of movement and pressure pain threshold in pain-limited shoulders. *Manual therapy*. 2008;13(1):37 - 42. <http://dx.doi.org/10.1016/j.math.2006.07.011>
73. Wang S, Zeng J, Chapple CM, Mani R, Ribeiro DC. Initial effect of high-volume mobilisation with movement on shoulder range of motion and pain in patients with rotator cuff-related shoulder pain: protocol for a randomised controlled trial (Evolution Trial). *BMJ Open*. 2023;13(8):e069919.
<http://dx.doi.org/10.1136/bmjopen-2022-069919>
74. Wang S, Zeng J, Mani R, Chapple CM, Ribeiro DC. The immediate effects of mobilization with movement on shoulder range of motion and pain in patients with rotator cuff-related shoulder pain: A randomized

REFERENCE LIST

- controlled trial (Evolution Trial). *Braz J Phys Ther.* 2024;28(6):101145.
<http://dx.doi.org/10.1016/j.bjpt.2024.101145>
75. Wang Y, Wang C, Chen H, Ye X. [Shoulder joint pain of rotator cuff injury treated with electroacupuncture and Mulligan's mobilization: a randomized controlled trial]. *Zhongguo zhen jiu = Chinese acupuncture & moxibustion.* 2018;38(1):17-21. <http://dx.doi.org/10.13703/j.0255-2930.2018.01.004>
76. Wong CK, Strang BL, Schram GA, Mercer EA, Kesting RS, Deo KS. A pragmatic regional interdependence approach to primary frozen shoulder: a retrospective case series*. *Journal of Manual & Manipulative Therapy (Maney Publishing).* 2018;26(2):109-118.
77. Yang JL, Chang CW, Chen SY, Wang SF, Lin JJ. Mobilization techniques in subjects with frozen shoulder syndrome: randomized multiple-treatment trial. *Physical therapy.* 2007;87(10):1307 - 1315.
<http://dx.doi.org/10.2522/ptj.20060295>
78. Youssef AR. Mulligan Mobilization Is More Effective in Treating Diabetic Frozen Shoulder Than the Maitland Technique. *International Journal of Physiotherapy.* 2015;2(5):<http://dx.doi.org/10.15621/ijphy/2015/v2i5/78238>
79. Zanjani B, Shojaedin SS, Abbasi H. "Investigating the combined effects of scapular-focused training and Mulligan mobilization on shoulder impingement syndrome" a three-arm pilot randomized controlled trial. *BMC musculoskeletal disorders.* 2024;25(1):897. <http://dx.doi.org/10.1186/s12891-024-07966-1>

5. Elbow (45)

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|-------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Bonnery | 2014 | | | | | | | | ✓ | | | | | | |
| Abbott | 2001 | | | | ✓ | | | | | | | | | | |
| Abbott | 2001 | | | | ✓ | | | | | | | | | | |
| Afzal | 2016 | | ✓ | | | | | | | | | | | | |
| Ahmed | 2021 | | ✓ | | | | | | | | | | | | |
| Ahuja | 2010 | | | | | | | | | | | | ✓ | | |
| Amro | 2010 | | | ✓ | | | | | | | | | | | |
| Bagcaci | 2023 | | ✓ | | | | | | | | | | | | |
| Bhardwaj | 2011 | | ✓ | | | | | | | | | | | | |
| Bisset | 2006 | | ✓ | | | | | | | | | | | | |
| Coombes | 2013 | | ✓ | | | | | | | | | | | | |
| Coombes | 2015 | | | | | | | | | | | | ✓ | | |

REFERENCE LIST

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|------------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Coombes | 2025 | | ✓ | | | | | | | | | | | | |
| Fern | 2009 | | | | | | | | ✓ | | | | | | |
| Ghosh | 2012 | | | ✓ | | | | | | | | | | | |
| Gonz | 2011 | | | | | | ✓ | | | | | | | | |
| Herd | 2008 | ✓ | | | | | | | | | | | | | |
| Hoogvliet | 2013 | ✓ | | | | | | | | | | | | | |
| Kakati | 2015 | | ✓ | | | | | | | | | | | | |
| Kim | 2012 | | ✓ | | | | | | | | | | | | |
| Kochar | 2002 | | ✓ | | | | | | | | | | | | |
| Lucado | 2018 | ✓ | | | | | | | | | | | | | |
| Malo-Urri | 2014 | | | | | | | | ✓ | | | | | | |
| Manchanda | 2008 | | ✓ | | | | | | | | | | | | |
| Marcolino | 2016 | | | | | | ✓ | | | | | | | | |
| Martinez-Cervera | 2017 | | ✓ | | | | | | | | | | | | |
| Matocha | 2015 | | | | | | | | ✓ | | | | | | |
| McLean | 2002 | | | | ✓ | | | | | | | | | | |
| Pagorek | 2009 | | | | | | | | | | | | ✓ | | |
| Paungmali | 2003 | | | | ✓ | | | | | | | | | | |
| Paungmali | 2003 | | | | ✓ | | | | | | | | | | |
| Paungmali | 2004 | | | | ✓ | | | | | | | | | | |
| Rahman | 2016 | | ✓ | | | | | | | | | | | | |
| Reyhan | 2020 | | ✓ | | | | | | | | | | | | |
| Sevik | 2023 | | ✓ | | | | | | | | | | | | |
| Sivakumar | 2025 | | | | | | | | ✓ | | | | | | |
| Slater | 2006 | | | | ✓ | | | | | | | | | | |
| Syed | 2024 | | | ✓ | | | | | | | | | | | |
| Tat | 2021 | | ✓ | | | | | | | | | | | | |
| Taylor | 2021 | | | | | | | | | | | | ✓ | | |
| Trudel | 2004 | ✓ | | | | | | | | | | | | | |
| Uttamchandani | 2024 | | ✓ | | | | | | | | | | | | |
| Vasseljen | 2007 | | ✓ | | | | | | | | | | | | |
| Vicenzino | 2007 | | | | | | | | | | | | ✓ | | |
| Vicenzino | 2009 | | | | | | | | | | | ✓ | | | |

REFERENCE LIST

1. Abbott JH. Mobilization with movement applied to the elbow affects shoulder range of movement in subjects with lateral epicondylalgia. *Manual therapy*. 2001;6(3):170 - 177.
<http://dx.doi.org/10.1054/math.2001.0407>
2. Abbott JH, Patla CE, Jensen RH. The initial effects of an elbow mobilization with movement technique on grip strength in subjects with lateral epicondylalgia. *Manual therapy*. 2001;6(3):163 - 169.
<http://dx.doi.org/10.1054/math.2001.0408>
3. Afzal MW, Ahmad A, Waqas MS, Ahmad U. Effectiveness of Therapeutic Ultrasound With and Without Mulligan Mobilization In Lateral Epicondylitis. *Annals of King Edward Medical University*. 2016;22(1):47.
<http://dx.doi.org/10.21649/akemu.v22i1.798>
4. Ahmed A, Ibrar M, Arsh A, Wali S, Hayat S, Abass S. Comparing the effectiveness of Mulligan mobilization versus Cyriax approach in the management of patients with subacute lateral epicondylitis. *J Pak Med Assoc*. 2021;71(1(a)):12-15. <http://dx.doi.org/10.47391/jpma.186>
5. Ahuja D. Efficacy of mobilization with movement (MWM) in lateral epicondylalgia: role of pain mechanisms- a narrative review. *Journal of Physical Therapy*. 2010;2(1):19-34.
6. Amro A, Diener I, Bdair WO, Hamed IM, Shalabi AI, Ilyyan DI. The effects of Mulligan mobilisation with movement and taping techniques on pain, grip strength, and function in patients with lateral epicondylitis. *Hong kong physiotherapy journal*. 2010;28(1):19 - 23. <http://dx.doi.org/10.1016/j.hkpj.2010.11.004>
7. Bagcaci S, Unuvar BS, Gercek H, Ugurlu I, Sert OA, Yilmaz K. A randomized controlled trial on pain, grip strength, and functionality in lateral elbow pain: Mulligan vs muscle energy techniques. *Journal of back and musculoskeletal rehabilitation*. 2023;36(2):419-427. <http://dx.doi.org/10.3233/BMR-220061>
8. Bhardwaj P, Dhawan A. The relative efficacy of mobilization with movement versus Cyriax physiotherapy in the treatment of lateral epicondylitis. *Indian Journal of Physiotherapy & Occupational Therapy*. 2011;5(1):142-146.
9. Bisset L, Beller E, Jull G, Brooks P, Darnell R, Vicenzino B. Mobilisation with movement and exercise, corticosteroid injection, or wait and see for tennis elbow: randomised trial. *BMJ (clinical research ed.)*. 2006;333(7575):939. <http://dx.doi.org/10.1136/bmj.38961.584653.AE>
10. Bonnery K. Manipulation of the cervico-thoracic junction accompanied by mobilisation with movement and exercise in a patient with medial epicondylalgia. *Manuelle Therapie*. 2014;18(1):29-37.
<http://dx.doi.org/10.1055/s-0034-1368804>
11. Coombes BK, Bisset L, Brooks P, Khan A, Vicenzino B. Effect of corticosteroid injection, physiotherapy, or both on clinical outcomes in patients with unilateral lateral epicondylalgia: a randomized controlled trial. *Jama*. 2013;309(5):461-469. <http://dx.doi.org/10.1001/jama.2013.129>
12. Coombes BK, Bisset L, Vicenzino B. Management of Lateral Elbow Tendinopathy: One Size Does Not Fit All. *The Journal of orthopaedic and sports physical therapy*. 2015;45(11):938-949.
<http://dx.doi.org/10.2519/jospt.2015.5841>
13. Coombes BK, Hams A, Tenbrink R, Love A, Bisset LM. Mobilisation-with-movement induces analgesia during exercise but exercise alone is not analgesic in people with lateral elbow tendinopathy: An assessor blinded, randomised crossover trial. *Musculoskeletal science & practice*. 2025;80(103421).
<http://dx.doi.org/10.1016/j.msksp.2025.103421>

REFERENCE LIST

14. Fernández-Carnero J, Fernández-de-las-Peñas C, Cleland JA. Mulligan's Mobilization with Movement and Muscle Trigger Point Dry Needling for the Management of Chronic Lateral Epicondylalgia: A Case Report. *Journal of Musculoskeletal Pain*. 2009;17(4):409-415.
15. Ghosh Dasm P. Comparative Analysis of Cyriax Approach Versus Mobilization with Movement Approach in the Treatment of Patients with Lateral Epicondylitis. *Indian Journal of Physiotherapy & Occupational Therapy*. 2012;6(1):96-102.
16. González-Iglesias J, Cleland JA, del Rosario Gutierrez-Vega M, Fernández-de-las-Peñas C. Multimodal management of lateral epicondylalgia in rock climbers: a prospective case series. *Journal of manipulative and physiological therapeutics*. 2011;34(9):635-642. <http://dx.doi.org/10.1016/j.jmpt.2011.09.003>
17. Herd CR, Meserve BB. A Systematic Review of the Effectiveness of Manipulative Therapy in Treating Lateral Epicondylalgia. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2008;16(4):225-237.
18. Hoogvliet P, Randsdorp MS, Dingemanse R, Koes BW, Huisstede BMA. Does effectiveness of exercise therapy and mobilisation techniques offer guidance for the treatment of lateral and medial epicondylitis? A systematic review. *British Journal of Sports Medicine*. 2013;47(17):1112-1119. <http://dx.doi.org/10.1136/bjsports-2012-091990>
19. Kakati T, Dutta A. A Comparative Study to Find Out Immediate Effectiveness of Movement With Mobilization Versus Elbow Orthosis on Pain and Grip Strength in Lateral Epicondylitis in Housewives. *International Journal of Physiotherapy*. 2015;2(6):<http://dx.doi.org/10.15621/ijphy/2015/v2i6/80772>
20. Kim LJ, Choi H, Moon D. Improvement of Pain and Functional Activities in Patients with Lateral Epicondylitis of the Elbow by Mobilization with Movement: a Randomized, Placebo-Controlled Pilot Study. *Journal of physical therapy science*. 2012;24(9):787-790.
21. Kochar M, Dogra A. Effectiveness of a specific physiotherapy regimen on patients with tennis elbow: clinical study. *Physiotherapy*. 2002;88(6):333 - 341.
22. Lucado AM, Dale RB, Vincent J, Day JM. Do joint mobilizations assist in the recovery of lateral elbow tendinopathy? A systematic review and meta-analysis. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2018;<http://dx.doi.org/10.1016/j.jht.2018.01.010>
23. Malo-Urriés M, Hidalgo-García C, Bueno-Gracia E, Estébanez-de-Miguel E, Lucha-López O, Tricás-Moreno JM. Clinical and ultrasonographic evidence of a proximal positional fault of the radius. A case report. *Manual Therapy*. 2014;19(3):264-269.
24. Manchanda G, Grover D. Effectiveness of movement with mobilization compared with manipulation of wrist in case of lateral epicondylitis. *Indian journal of physiotherapy and occupational therapy*. 2008;2(1):16-21.
25. Marcolino AM, das Neves LM, Oliveira BG, et al. Multimodal approach to rehabilitation of the patients with lateral epicondylitis: a case series. *SpringerPlus*. 2016;5(1):1718. <http://dx.doi.org/10.1186/s40064-016-3375-y>
26. Martinez-Cervera FV, Olteanu TE, Gil-Martinez A, Diaz-Pulido B, Ferrer-Pena R. Influence of expectations plus mobilization with movement in patient with lateral epicondylalgia: a pilot randomized controlled trial. *Journal of exercise rehabilitation*. 2017;13(1):101-109. <http://dx.doi.org/10.12965/jer.1732848.424>
27. Matocha MA, Baker RT, Nasypany AM, Seegmiller JG. Effects of Neuromobilization on Tendinopathy: Part II. *International Journal of Athletic Therapy & Training*. 2015;20(2):41-47.
28. McLean S, Naish R, Reed L, Urry S, Vicenzino B. A pilot study of the manual force levels required to produce manipulation induced hypoalgesia. *Clinical biomechanics (Bristol, Avon)*. 2002;17(4):304-308.

REFERENCE LIST

29. Pagorek S. Effect of Manual Mobilization with Movement on Pain and Strength in Adults with Chronic Lateral Epicondylitis. *Journal of Sport Rehabilitation*. 2009;18(3):448-457.
<http://dx.doi.org/10.1123/jsr.18.3.448>
30. Paungmali A, O'Leary S, Souvlis T, Vicenzino B. Hypoalgesic and sympathoexcitatory effects of mobilization with movement for lateral epicondylalgia. *Physical Therapy*. 2003;83(4):374-383.
31. Paungmali A, O'Leary S, Souvlis T, Vicenzino B. Naloxone fails to antagonize initial hypoalgesic effect of a manual therapy treatment for lateral epicondylalgia. *Journal of manipulative and physiological therapeutics*. 2004;27(3):180-185. <http://dx.doi.org/10.1016/j.jmpt.2003.12.022>
32. Paungmali A, Vicenzino B, Smith M. Hypoalgesia induced by elbow manipulation in lateral epicondylalgia does not exhibit tolerance. *Journal of Pain*. 2003;4(8):448-454.
33. Rahman H, Charturvedi PA, Apparao P, Srithulasi PR. Effectiveness of Mulligan Mobilisation with Movement Compared to Supervised Exercise Program in Subjects with Lateral Epicondylitis. *International Journal of Physiotherapy and Research*. 2016;4(2):1394-1400. <http://dx.doi.org/10.16965/ijpr.2016.104>
34. Reyhan AC, Sindel D, Dereli EE. The effects of Mulligan's mobilization with movement technique in patients with lateral epicondylitis. *Journal of back and musculoskeletal rehabilitation*. 2020;33(1):99-107.
<http://dx.doi.org/10.3233/BMR-181135>
35. Sevik Kacmaz K, Unver B. Immediate Effects of Mulligan Mobilization on Elbow Proprioception in Healthy Individuals: A Randomized Placebo-Controlled Single-Blind Study. *Journal of manipulative and physiological therapeutics*. 2023;46(1):59-64. <http://dx.doi.org/10.1016/j.jmpt.2023.05.001>
36. Sivakumar S, Reddy CR, Jayabalan P. Combining the Effects of Mobilization With Movement and Cyriax Physiotherapy in Lateral Epicondylitis: A Case Report. *Cureus*. 2025;17(7):e87093.
<http://dx.doi.org/10.7759/cureus.87093>
37. Slater H, Arendt-Nielsen L, Wright A, Graven-Nielsen T. Effects of a manual therapy technique in experimental lateral epicondylalgia. *Manual therapy*. 2006;11(2):107 - 117.
<http://dx.doi.org/10.1016/j.math.2005.04.005>
38. Syed AU, Haider D, Rana M. The effects of the addition of Mulligan mobilization with movement to exercise on elbow pain and function associated with lateral elbow tendinopathy. *Journal of Bodywork and Movement Therapies*. 2024;<http://dx.doi.org/https://doi.org/10.1016/j.jbmt.2024.06.007>
39. Tat AM, Can F, Tat NM, Sasmaz HI, Antmen AB. The effects of manual therapy and exercises on pain, muscle strength, joint health, functionality and quality of life in haemophilic arthropathy of the elbow joint: A randomized controlled pilot study. *Haemophilia*. 2021;27(3):e376-e384.
<http://dx.doi.org/https://doi.org/10.1111/hae.14281>
40. Taylor A, Wolff AL. The forgotten radial nerve: A conceptual framework for treatment of lateral elbow pain. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2021;34(2):323-329.
<http://dx.doi.org/10.1016/j.jht.2021.05.009>
41. Trudel D, Duley J, Zastrow I, Kerr EW, Davidson R, MacDermid JC. Rehabilitation for patients with lateral epicondylitis: a systematic review. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2004;17(2):243-266. <http://dx.doi.org/10.1197/j.jht.2004.02.011>
42. Uttamchandani SR, Phansopkar P. Efficacy of PowerBall Versus Mulligan Mobilization With Movement on Pain and Function in Patients With Lateral Epicondylitis: A Randomized Clinical Trial. *Cureus*. 2024;16(3):e56444. <http://dx.doi.org/10.7759/cureus.56444>

REFERENCE LIST

43. Vasseljen O. Physiotherapy interventions improve tennis elbow with superior long-term outcomes to corticosteroid injections. *Australian Journal of Physiotherapy*. 2007;53(1):61-61.
44. Vicenzino B, Cleland JA, Bisset L. Joint manipulation in the management of lateral epicondylalgia: a clinical commentary. *The Journal of manual & manipulative therapy*. 2007;15(1):50-56.
<http://dx.doi.org/10.1179/106698107791090132>
45. Vicenzino B, Smith D, Cleland J, Bisset L. Development of a clinical prediction rule to identify initial responders to mobilisation with movement and exercise for lateral epicondylalgia. *Manual Therapy*. 2009;14(5):550-554.

6. Wrist & Hand (23)

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|-------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Nathani | 2024 | | | | | | | | ✓ | | | | | | |
| Backstrom | 2002 | | | | | | | | ✓ | | | | | | |
| Carrasco | 2011 | | | | | | | | ✓ | | | | | | |
| Ceylan | 2023 | | ✓ | | | | | | | | | | | | |
| Choung | 2013 | | | | | | ✓ | | | | | | | | |
| Drapeza | 2022 | ✓ | | | | | | | | | | | | | |
| Folk | 2001 | | | | | | | | ✓ | | | | | | |
| Guti | 2022 | ✓ | | | | | | | | | | | | | |
| Heiser | 2013 | ✓ | | | | | | | | | | | | | |
| Heiser | 2014 | | | | | | | | | | | | ✓ | | |
| Horoz | 2024 | | ✓ | | | | | | | | | | | | |
| Hsieh | 2002 | | | | | | | | ✓ | | | | | | |
| Javaid | 2022 | | | ✓ | | | | | | | | | | | |
| Kaneko | 2011 | | | | | | ✓ | | | | | | | | |
| Naik | 2007 | | ✓ | | | | | | | | | | | | |
| Qadir | 2025 | | ✓ | | | | | | | | | | | | |
| Rabin | 2015 | | | | | | ✓ | | | | | | | | |
| Reid | 2020 | | ✓ | | | | | | | | | | | | |
| Tomruk | 2020 | | ✓ | | | | | | | | | | | | |
| Unknown | 2025 | | ✓ | | | | | | | | | | | | |
| Villafa | 2015 | | | | | | | | | | | | ✓ | | |
| Villafane | 2013 | | | | | | | | ✓ | | | | | | |
| Young | 2022 | | | | | | ✓ | | | | | | | | |

REFERENCE LIST

1. Backstrom KM. Mobilization with movement as an adjunct intervention in a patient with complicated De Quervain's tenosynovitis: a case report...including commentary by LaStayo P with author response. *Journal of Orthopaedic & Sports Physical Therapy*. 2002;32(3):86-97.
2. Carrasco NM, Bergas MJT, Sánchez CO, Blanco MVV. Effects of Mulligan's technique on a burn patient. A case report. *Revista Iberoamericana de Fisioterapia y Kinesiología*. 2011;14(2):90-93.
3. Ceylan İ, Büyükturan Ö, Aykanat Ö, Büyükturan B, Şaş S, Ceylan MF. The effectiveness of mobilization with movement on patients with mild and moderate carpal tunnel syndrome: A single-blinded, randomized controlled study. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2023;36(4):773-785. <http://dx.doi.org/10.1016/j.jht.2023.02.004>
4. Choung S-D, Kwon O-Y, Park K-N, Kim S-H, Cynn H-S. Short-term effects of self-mobilization with a strap on pain and range of motion of the wrist joint in patients with dorsal wrist pain when weight bearing through the hand: A case series. *Manual Therapy*. 2013;18(6):568-572.
5. Drapeza RC, Jr., Navasca SB, Dones V, 3rd, Rimando CR. The effects of taping on de Quervain's disease: A systematic review and meta-analysis. *Journal of bodywork and movement therapies*. 2022;32(218-227). <http://dx.doi.org/10.1016/j.jbmt.2022.05.004>
6. Folk B. Traumatic thumb injury management using mobilization with movement. *Manual Therapy*. 2001;6(3):178-182.
7. Gutiérrez-Espinoza H, Araya-Quintanilla F, Olguín-Huerta C, Valenzuela-Fuenzalida J, Gutiérrez-Monclus R, Moncada-Ramírez V. Effectiveness of manual therapy in patients with distal radius fracture: a systematic review and meta-analysis. *The Journal of manual & manipulative therapy*. 2022;30(1):33-45. <http://dx.doi.org/10.1080/10669817.2021.1992090>
8. Heiser R, O'Brien VH, Schwartz DA. The use of joint mobilization to improve clinical outcomes in hand therapy: A systematic review of the literature. *Journal of Hand Therapy*. 2013;26(4):297-310. <http://dx.doi.org/10.1016/j.jht.2013.07.004>
9. Heiser RD, O'Brien V, Schwartz DA. Joint Mobilization in the Distal Upper Extremity -- Putting Evidence into Practice. *Journal of Hand Therapy*. 2014;27(3):e5-e5.
10. Horoz L, Cigdem-Karacay B, Ceylan I, Alkan H. Effectiveness of mobilization with movement in patients operated for distal radius fracture: a single-blinded, randomized controlled study. *Revista da Associação Médica Brasileira*. 2024;70(11):<http://dx.doi.org/10.1590/1806-9282.20241190>
11. Hsieh CY, Vicenzino B, Yang CH, Hu MH, Yang C. Mulligan's mobilization with movement for the thumb: a single case report using magnetic resonance imaging to evaluate the positional fault hypothesis. *Man Ther*. 2002;7(1):44-49. <http://dx.doi.org/10.1054/math.2001.0434>
12. Javaid M, Anwar S, Uzair Asghar M, et al. Comparison of Maitland Mobilization and Mulligan Mobilization with movement on pain and hand function in patients having post Colle's Fracture Stiffness. *Pakistan Journal of Medical and Health Sciences*. 2022;16(1):169-171. <http://dx.doi.org/10.53350/pjmhs22161169>
13. Kaneko S, Takasaki H. Forearm pain, diagnosed as intersection syndrome, managed by taping: a case series. *The Journal of orthopaedic and sports physical therapy*. 2011;41(7):514-519. <http://dx.doi.org/10.2519/jospt.2011.3569>

REFERENCE LIST

14. Naik VC, Chitra J, Khatri S. Effectiveness of maitland versus mulligan mobilization technique following post surgical management of colles' - fracture - rct. *Indian journal of physiotherapy and occupational therapy*. 2007;1(4):
15. Nathani HR, Ramteke SU, Jaiswal PR. Physiotherapeutic Management for Acromioclavicular Joint Sprain With Volar Intercalated Segment Instability at the Wrist: A Case Report. *Cureus*. 2024;16(4):e58399. <http://dx.doi.org/10.7759/cureus.58399>
16. Özçelep ÖF, Tunali N, Turhan A, et al. The effect of mobilization with movement on pain, joint distance, effusion area, and inflammation in rheumatoid arthritis: a double-blind randomized controlled clinical trial. *Journal of Orthopaedic Surgery and Research*. 2025;20(1):<http://dx.doi.org/10.1186/s13018-025-06121-3>
17. Qadir W, Waheed A, Niazi R, Mahmood T, Awan IZ. Comparative short-term effects of oscillatory mobilization and mulligan MWM on pain, disability, and range of motion among De Quervain's tenosynovitis patients- a randomized clinical trial. *The Journal of manual & manipulative therapy*. 2025;1-9. <http://dx.doi.org/10.1080/10669817.2025.2557951>
18. Rabin A, Israeli T, Kozol Z. Physiotherapy Management of People Diagnosed with de Quervain's Disease: A Case Series. *Physiotherapy Canada. Physiotherapie Canada*. 2015;67(3):263-267. <http://dx.doi.org/10.3138/ptc.2014-47>
19. Reid SA, Andersen JM, Vicenzino B. Adding mobilisation with movement to exercise and advice hastens the improvement in range, pain and function after non-operative cast immobilisation for distal radius fracture: a multicentre, randomised trial. *Journal of Physiotherapy*. 2020;<http://dx.doi.org/10.1016/j.jphys.2020.03.010>
20. Tomruk M, Gelecek N, Basçi O, Özkan MH. Effects of early manual therapy on functional outcomes after volar plating of distal radius fractures: A randomized controlled trial. *Hand surgery & rehabilitation*. 2020;39(3):178-185. <http://dx.doi.org/10.1016/j.hansur.2019.12.002>
21. Villafane JH, Langford D, Alguacil-Diego IM, Fernandez-Carnero J. Management of trapeziometacarpal osteoarthritis pain and dysfunction using mobilization with movement technique in combination with kinesiology tape: a case report. *Journal of chiropractic medicine*. 2013;12(2):79-86. <http://dx.doi.org/10.1016/j.jcm.2013.06.001>
22. Villafañe JH, Valdes K. Mobilization with movement and elastic tape application for the conservative management of carpometacarpal joint osteoarthritis. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2015;28(1):82-84; quiz 85. <http://dx.doi.org/10.1016/j.jht.2014.08.001>
23. Young SW, Young TW, MacDonald CW. Conservative management of De Quervain's tendinopathy with an orthopedic manual physical therapy approach emphasizing first CMC manipulation: a retrospective case series. *Physiotherapy theory and practice*. 2022;38(4):587-596. <http://dx.doi.org/10.1080/09593985.2020.1771800>

REFERENCE LIST

7. Thoracic Spine and Ribs (12)

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|--------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Abu El Kasem | 2024 | | ✓ | | | | | | | | | | | | |
| Andrews | 2018 | | | | | | ✓ | | | | | | | | |
| Lenker | 2012 | | | | | | | | ✓ | | | | | | |
| Andrews | 2017 | | | | | | | | | | | | ✓ | | |
| Cevik | 2024 | | ✓ | | | | | | | | | | | | |
| Exelby | 2002 | | | | | | | | | | | | ✓ | | |
| Aiken | 2013 | | | | | | | | ✓ | | | | | | |
| Channak | 2016 | | ✓ | | | | | | | | | | | | |
| El Gendy | 2023 | | ✓ | | | | | | | | | | | | |
| Horton | 2002 | | | | | | | | ✓ | | | | | | |
| Kim | 2024 | | ✓ | | | | | | | | | | | | |
| Lewis | 2014 | | | | | | ✓ | | | | | | | | |

1. Abu El Kasem ST, Alaa FAA, Abd El-Raouf NA, Abd-Elazeim AS. Efficacy of Mulligan thoracic sustained natural apophyseal glides on sub-acromial pain in patients with sub-acromial impingement syndrome: a single-blinded randomized controlled trial. *Journal of Manual & Manipulative Therapy*. 2024;April):1-10. <http://dx.doi.org/10.1080/10669817.2024.2341453>
2. Aiken DL, Vaughn D. The use of functional and traditional mobilization interventions in a patient with chronic thoracic pain: a case report. *The Journal of manual & manipulative therapy*. 2013;21(3):134-141. <http://dx.doi.org/10.1179/2042618612y.0000000024>
3. Andrews D. Utilizing Manual Therapy within a Regional Interdependence Model for the Treatment of Cervicothoracic Dysfunction: A Dissertation of Clinical Practice Improvement. *Utilizing Manual Therapy within a Regional Interdependence Model for the Treatment of Cervicothoracic Dysfunction: A Dissertation of Clinical Practice Improvement*. 2017;1-1.
4. Andrews DP, Odland-Wolf KB, May J, Baker R, Nasypany A. The Utilization of Mulligan Concept Thoracic Sustained Natural Apophyseal Glides on Patients Classified with Secondary Impingement Syndrome: A Multi-Site Case Series. *International Journal of Sports Physical Therapy*. 2018;13(1):121-130.
5. Cevik R, Pala OO. Effects of upper thoracic Mulligan mobilization on pain, range of motion and function in patients with mechanical neck pain: A randomized placebo-controlled trial. *PLoS One*. 2024;19(10):e0311206. <http://dx.doi.org/10.1371/journal.pone.0311206>

REFERENCE LIST

6. Channak S, Saelee W, Narongrittikai N, et al. The effects of the T6 sustained natural apophyseal glide (SNAG) with rotation in mechanical chronic thoracic spine pain: a randomized controlled trial. *Journal of medical technology*. 2016;28(80-91).
7. El Gendy MH, Mohamed SR, Taman SE, Hussein HM, Abu El Kasem ST. Short term effect of spinal mobilization with movement (MWM) on pulmonary functions in nonsmokers with thoracic hyperkyphosis: a randomized single-blinded controlled trial. *The Journal of manual & manipulative therapy*. 2023;31(2):64-71. <http://dx.doi.org/10.1080/10669817.2022.2075203>
8. Exelby L. The Mulligan concept: its application in the management of spinal conditions. *Manual Therapy*. 2002;7(2):64-70.
9. Horton SJ. Acute locked thoracic spine: treatment with a modified SNAG. *Manual Therapy*. 2002;7(2):103-107.
10. Kim J, Cho J. Effectiveness of mid thoracic spine mobilization on postural balance and gait ability in subacute stroke patients: A randomized clinical trial. *Journal of back and musculoskeletal rehabilitation*. 2024;37(1):233-240. <http://dx.doi.org/10.3233/BMR-230144>
11. Lenker C, Larocca N, Lee J, Tucker P. The Use of Thoracic Mobilization With Movement to Treat Shoulder Impingement in Older Adults: A Case Study. *Topics in Geriatric Rehabilitation*. 2012;28(3):195-200. <http://dx.doi.org/10.1097/TGR.0b013e31825d3834>
12. Lewis C, Diaz R, Lopez G, Marki N, Olivio B. A preliminary study to evaluate postural improvement in subjects with scoliosis: active therapeutic movement version 2 device and home exercises using the Mulligan's mobilization-with-movement concept. *Journal of Manipulative & Physiological Therapeutics*. 2014;37(7):502-509. <http://dx.doi.org/10.1016/j.jmpt.2014.07.005>

8. Lumbar Spine (46)

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|--------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Adnan | 2022 | | ✓ | | | | | | | | | | | | |
| Ali, M | 2019 | | ✓ | | | | | | | | | | | | |
| Athanasiadis | 2022 | ✓ | | | | | | | | | | | | | |
| Bello | 2019 | | ✓ | | | | | | | | | | | | |
| Bhat | 2021 | | | ✓ | | | | | | | | | | | |
| Buran | 2021 | | ✓ | | | | | | | | | | | | |
| Cankaya | 2024 | | ✓ | | | | | | | | | | | | |
| Chitale | 2022 | | ✓ | | | | | | | | | | | | |

REFERENCE LIST

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|--------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Chitale | 2022 | | | | | | | | | | | | ✓ | | |
| da Rocha | 2006 | | | | | | | | ✓ | | | | | | |
| Danazumi | 2021 | | ✓ | | | | | | | | | | | | |
| Das | 2018 | | ✓ | | | | | | | | | | | | |
| Dinkins | 2013 | | | | | | ✓ | | | | | | | | |
| Elrazik | 2016 | | ✓ | | | | | | | | | | | | |
| Erol | 2025 | | ✓ | | | | | | | | | | | | |
| Eusea | 2015 | | | | | | | | ✓ | | | | | | |
| Exelby | 2002 | | | | | | | | | | | | ✓ | | |
| Exelby | 2001 | | | | | | | | ✓ | | | | | | |
| Hall | 2001 | | | | ✓ | | | | | | | | | | |
| Hall | 2006 | | ✓ | | | | | | | | | | | | |
| Hall | 2006 | | | | | | ✓ | | | | | | | | |
| Hidalgo | 2015 | | ✓ | | | | | | | | | | | | |
| Hussein | 2021 | | ✓ | | | | | | | | | | | | |
| Hussein | 2025 | ✓ | | | | | | | | | | | | | |
| Hussien | 2017 | | ✓ | | | | | | | | | | | | |
| Konstantinou | 2002 | | | | | | | | | | | ✓ | | | |
| Konstantinou | 2007 | | ✓ | | | | | | | | | | | | |
| Lewis | 2005 | | ✓ | | | | | | | | | | | | |
| Mane | 2025 | | | | ✓ | | | | | | | | | | |
| Martinez | 2025 | | ✓ | | | | | | | | | | | | |
| Mhatre | 2013 | | ✓ | | | | | | | | | | | | |
| Moutzouri | 2008 | | | | ✓ | | | | | | | | | | |
| Moutzouri | 2012 | | | | ✓ | | | | | | | | | | |
| Mulligan | 1995 | | | | | | | | | | | | ✓ | | |
| Mulligan | 1997 | | | | | | | | | | | | ✓ | | |
| Pourahmadi | 2018 | ✓ | | | | | | | | | | | | | |
| Salik | 2022 | | ✓ | | | | | | | | | | | | |
| Samir | 2016 | | ✓ | | | | | | | | | | | | |
| Satpute | 2019 | | ✓ | | | | | | | | | | | | |
| Seo | 2020 | | ✓ | | | | | | | | | | | | |
| Simsek | 2023 | | ✓ | | | | | | | | | | | | |

REFERENCE LIST

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|-------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Tambekar | 2016 | | ✓ | | | | | | | | | | | | |
| Tikhile | 2024 | | | | | | | | ✓ | | | | | | |
| Tul Ain | 2019 | | ✓ | | | | | | | | | | | | |
| Waqqar | 2016 | | ✓ | | | | | | | | | | | | |
| Yadav | 2014 | | ✓ | | | | | | | | | | | | |

- Adnan M, Arsh A, Ali B, Ahmad S. Effectiveness of bent leg raise technique and neurodynamics in patients with radiating low back pain. *Pak J Med Sci.* 2022;38(1):47-51. <http://dx.doi.org/10.12669/pjms.38.1.4010>
- Ali MN, Sethi K, Noohu MM. Comparison of two mobilization techniques in management of chronic non-specific low back pain. *Journal of bodywork and movement therapies.* 2019;23(4):918-923. <http://dx.doi.org/10.1016/j.jbmt.2019.02.020>
- Athanasiadis D, Dionyssiotis Y, Krumov J, Obretenov V, Panayotov K, Papathanasiou J. The cognitive-behavioral aspects of the Mulligan concept of manual therapy: A systematic review. *Eur J Transl Myol.* 2022;<http://dx.doi.org/10.4081/ejtm.2022.10504>
- Bello B, Danazumi MS, Kaka B. Comparative Effectiveness of 2 Manual Therapy Techniques in the Management of Lumbar Radiculopathy: A Randomized Clinical Trial. *Journal of chiropractic medicine.* 2019;18(4):253-260. <http://dx.doi.org/10.1016/j.jcm.2019.10.006>
- Bhat PV, Patel VD, Eapen C, Shenoy M, Milanese S. Myofascial release versus Mulligan sustained natural apophyseal glides' immediate and short-term effects on pain, function, and mobility in non-specific low back pain. *PeerJ.* 2021;9(e10706). <http://dx.doi.org/10.7717/peerj.10706>
- Buran Çirak Y, Yurdaşık I, Elbaşı ND, Tütüneken YE, Köçe K, Çınar B. Effect of Sustained Natural Apophyseal Glides on Stiffness of Lumbar Stabilizer Muscles in Patients With Nonspecific Low Back Pain: Randomized Controlled Trial. *Journal of Manipulative and Physiological Therapeutics.* 2021;44(6):445-454. <http://dx.doi.org/https://doi.org/10.1016/j.jmpt.2021.06.005>
- Cankaya MS, Pala OO. Outcomes of Mulligan Concept Applications in Obese Individuals with Chronic Mechanical Low Back Pain: A Randomized Controlled Trial. *Life (Basel).* 2024;14(6):<http://dx.doi.org/10.3390/life14060754>
- Chitale N, Jr., Patil DS, Phansopkar P. Integrated Neuromuscular Inhibition Technique Versus Mulligan Mobilization on Functional Disability in Subjects With Nonspecific Low Back Pain: A Comparative Study. *Cureus.* 2022;14(10):e30253. <http://dx.doi.org/10.7759/cureus.30253>

REFERENCE LIST

9. Chitale N, Jr., Patil DS, Phansopkar P, Joshi A. A Review on Treatment Approaches for Chronic Low Back Pain via Mulligans Movement With Mobilization and Physical Therapy. *Cureus*. 2022;14(8):e28127. <http://dx.doi.org/10.7759/cureus.28127>
10. da Rocha RCG, Nee R, Hall T, Chopard R. Treatment of persistent knee pain associated with lumbar dysfunction: a case report. *New Zealand Journal of Physiotherapy*. 2006;34(1):31-35.
11. Danazumi MS, Bello B, Yakasai AM, Kaka B. Two manual therapy techniques for management of lumbar radiculopathy: a randomized clinical trial. *J Osteopath Med*. 2021;121(4):391-400. <http://dx.doi.org/10.1515/jom-2020-0261>
12. Das MSS, Dowle P, Iyengar R. Effect of spinal mobilization with leg movement as an adjunct to neural mobilization and conventional therapy in patients with lumbar radiculopathy: Randomized controlled trial. *Journal of Medical and Scientific Research*. 2018;6(1):11-19. <http://dx.doi.org/10.17727/jmsr.2018/6-3>
13. Dinkins EM, Stevens-Lapsley J. Management of symptoms of Restless Legs Syndrome with use of a traction straight leg raise: a preliminary case series. *Man Ther*. 2013;18(4):299-302. <http://dx.doi.org/10.1016/j.math.2012.11.002>
14. Elrazik RKA, Samir SM, Zaki LA, Koura GA. Mobilisation with movement versus postero-anterior mobilisation in chronic non specific low back pain. *International journal of pharmtech research*. 2016;9(6):(pp 9 - 16), 2016. Date of Publication: 2016.):
15. Erol E, Burak M, Elbasan B. Effects of instrument-assisted manipulation and mobilization with movement in chronic non-specific low back pain: A randomized controlled trial. *Journal of back and musculoskeletal rehabilitation*. 2025;38(3):640-650. <http://dx.doi.org/10.1177/10538127241309343>
16. Eusea J, Nasypany A, Seegmiller J, Baker R. Utilizing Mulligan Sustained Natural Apophyseal Glides Within a Clinical Prediction Rule for Treatment of Low Back Pain in a Secondary School Football Player. *International Journal of Athletic Therapy & Training*. 2015;20(1):18-24.
17. Exelby L. The locked lumbar facet joint: intervention using mobilizations with movement. *Manual Therapy*. 2001;6(2):116-121.
18. Exelby L. The Mulligan concept: its application in the management of spinal conditions. *Manual Therapy*. 2002;7(2):64-70.
19. Hall T, Beyerlein C, Hansson U, Lim HT, Odermark M, Sainsbury D. Mulligan Traction Straight Leg Raise: A Pilot Study to Investigate Effects on Range of Motion in Patients with Low Back Pain. *Journal of Manual & Manipulative Therapy*. 2006;14(2):95-100. <http://dx.doi.org/10.1179/106698106790820782>
20. Hall T, Cacho A, McNee C, Riches J, Walsh J. Effects of the Mulligan Traction Straight Leg Raise Technique on Range of Movement. *Journal of Manual & Manipulative Therapy*. 2001;9(3):128-133. <http://dx.doi.org/10.1179/jmt.2001.9.3.128>
21. Hall T, Hardt S, Schafer A, Wallin L. Mulligan bent leg raise technique--a preliminary randomized trial of immediate effects after a single intervention. *Man Ther*. 2006;11(2):130-135. <http://dx.doi.org/10.1016/j.math.2005.04.009>
22. Hidalgo B, Pitance L, Hall T, Detrembleur C, Nielens H. Short-term effects of Mulligan mobilization with movement on pain, disability, and kinematic spinal movements in patients with nonspecific low back pain: a randomized placebo-controlled trial. *Journal of manipulative and physiological therapeutics*. 2015;38(6):365 - 374. <http://dx.doi.org/10.1016/j.jmpt.2015.06.013>

REFERENCE LIST

23. Hussein H, Atteya M, Ansari A, Kamel E. A Systematic Review and Meta-Analysis of the Effectiveness of Mulligan Mobilization with Movement on Pain, Range of Motion, Function, and Flexibility in Patients with Sciatica. *NeuroRehabilitation*. 2025;56(2):83-96. <http://dx.doi.org/10.1177/10538135241301693>
24. Hussein HM, Morsi AA, Abdelraoof NA. The immediate effect of sustained natural apophyseal glide on postural stability and pain in individuals presenting with flexion-dominant chronic low back pain: A randomized single-blinded placebo-controlled trial. *Journal of back and musculoskeletal rehabilitation*. 2021;34(6):1079-1086. <http://dx.doi.org/10.3233/bmr-200217>
25. Hussien HM, Abdel-Raouf NA, Kattabei OM, Ahmed HH. Effect of Mulligan Concept Lumbar SNAG on Chronic Nonspecific Low Back Pain. *Journal of chiropractic medicine*. 2017;16(2):94 - 102.
26. Konstantinou K, Foster N, Rushton A, Baxter D. The use and reported effects of mobilization with movement techniques in low back pain management; a cross-sectional descriptive survey of physiotherapists in Britain. *Manual Therapy*. 2002;7(4):206-214.
27. Konstantinou K, Foster N, Rushton A, Baxter D, Wright C, Breen A. Flexion mobilizations with movement techniques: the immediate effects on range of movement and pain in subjects with low back pain. *Journal of manipulative and physiological therapeutics*. 2007;30(3):178 - 185. <http://dx.doi.org/10.1016/j.jmpt.2007.01.015>
28. Lewis JS, Hewitt JS, Billington L, Cole S, Byng J, Karayiannis S. A randomized clinical trial comparing two physiotherapy interventions for chronic low back pain. *Spine*. 2005;30(7):711 - 721.
29. Mane AS, Yadav T. The Short-Term Efficacy of Mulligan Traction Straight Leg Raise on Low Back Pain Associated With Hamstring Tightness in Young Adults. *Cureus*. 2025;17(3):e80215. <http://dx.doi.org/10.7759/cureus.80215>
30. Martinez Pozas O, Cuenca-Zaldivar JN, Gonzalez-Alvarez ME, et al. Effectiveness of mobilization with movement on conditioned pain modulation, mechanical hyperalgesia, and pain intensity in adults with chronic low back pain: A randomized controlled trial. *Musculoskeletal science & practice*. 2025;75(103220). <http://dx.doi.org/10.1016/j.msksp.2024.103220>
31. Mhatre BS, Singh YL, Tembhekar JY, Mehta A. Which is the better method to improve “perceived hamstrings tightness” – Exercises targeting neural tissue mobility or exercises targeting hamstrings muscle extensibility? *International Journal of Osteopathic Medicine*. 2013;16(3):153-162. <http://dx.doi.org/10.1016/j.ijosm.2013.06.002>
32. Moutzouri M, Billis E, Strimpakos N, Kottika P, Oldham JA. The effects of the Mulligan Sustained Natural Apophyseal Glide (SNAG) mobilisation in the lumbar flexion range of asymptomatic subjects as measured by the Zebris CMS20 3-D motion analysis system. *BMC musculoskeletal disorders*. 2008;9(131). <http://dx.doi.org/10.1186/1471-2474-9-131>
33. Moutzouri M, Perry J, Joanna P, Billis E, Eudokia B. Investigation of the effects of a centrally applied lumbar sustained natural apophyseal glide mobilization on lower limb sympathetic nervous system activity in asymptomatic subjects. *Journal of manipulative and physiological therapeutics*. 2012;35(4):286 - 294. <http://dx.doi.org/10.1016/j.jmpt.2012.04.016>
34. Mulligan BR. Manual therapy rounds. Spiral mobilizations with leg movement (further mobilizations with movement). *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 1995;3(1):25-27.
35. Mulligan BR. Manual therapy rounds. Update on spinal mobilisations with leg movement. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 1997;5(4):184-187.

REFERENCE LIST

36. Pourahmadi MR, Mohsenifar H, Dariush M, Aftabi A, Amiri A. Effectiveness of mobilization with movement (Mulligan concept techniques) on low back pain: a systematic review. *Clin Rehabil.* 2018;32(10):1289-1298. <http://dx.doi.org/10.1177/0269215518778321>
37. Salik S, Rani S, Hayat R, Manzoor S, Malik AU, Maqbool S. Comparison between Mulligan Sustained natural apophyseal glides (snags) VS McKenzie exercises in Chronic Mechanical Low back pain. *Pakistan Journal of Medical and Health Sciences.* 2022;16(10):141-143. <http://dx.doi.org/10.53350/pjmhs221610141>
38. Samir S, Zak L, Soliman M. Mulligan versus maitland mobilizations in patients with chronic low back dysfunction. *International journal of pharmtech research.* 9 (6) (pp 92-99), 2016. Date of publication: 2016. 2016;
39. Satpute K, Hall T, Bisen R, Lokhande P. The Effect of Spinal Mobilization With Leg Movement in Patients With Lumbar Radiculopathy-A Double-Blind Randomized Controlled Trial. *Archives of physical medicine and rehabilitation.* 2019;100(5):828-836. <http://dx.doi.org/10.1016/j.apmr.2018.11.004>
40. Seo UH, Kim JH, Lee BH. Effects of Mulligan Mobilization and Low-Level Laser Therapy on Physical Disability, Pain, and Range of Motion in Patients with Chronic Low Back Pain: A Pilot Randomized Controlled Trial. *Healthcare (Basel).* 2020;8(3):<http://dx.doi.org/10.3390/healthcare8030237>
41. Simsek S, Yagci N, Korkmaz MB. Mid-term Effect of Lumbar Sustained Natural Apophyseal Glides in Patients with Non-specific Chronic Low Back Pain: A Randomized Clinical Trial. *Eurasian J Med.* 2023;55(2):152-157. <http://dx.doi.org/10.5152/eurasianjmed.2023.0202>
42. Tambekar N, Sabnis S, Phadke A, Bedekar N. Effect of Butler's neural tissue mobilization and Mulligan's bent leg raise on pain and straight leg raise in patients of low back ache. *Journal of bodywork and movement therapies.* 2016;20(2):280 - 285. <http://dx.doi.org/10.1016/j.jbmt.2015.08.003>
43. Tikhile P, Patil DS, Jaiswal PR. Management of Low Back Pain With Concurrent Hamstring Tightness: A Case Report Highlighting the Efficacy of Proprioceptive Neuromuscular Facilitation, Mulligan's Two-Leg Rotation Technique, and Exercise Regimen. *Cureus.* 2024;16(4):e58705. <http://dx.doi.org/10.7759/cureus.58705>
44. Tul Ain SQ, Shakil Ur Rehman S, Maryam M, Kiani SK. Effects of Sustained Natural Apophyseal Glides with and without thoracic posture correction techniques on mechanical back pain: a randomized control trial. *J Pak Med Assoc.* 2019;69(11):1584-1587. <http://dx.doi.org/10.5455/jpma.274875>.
45. Waqqar S, Shakil-ur-Rehman S, Ahmad S. Mckenzie treatment versus mulligan sustained natural apophyseal glides for chronic mechanical low back pain. *Pakistan journal of medical sciences.* 2016;32(2):476 - 479. <http://dx.doi.org/10.12669/pjms.322.9127>
46. Yadav S, Nijhawan MA, Panda P. Effectiveness of Spinal Mobilization With Leg Movement (SMWLM) in Patients With Lumbar Radiculopathy (L5 / S1 Nerve Root) in Lumbar Disc Herniation. *International Journal of Physiotherapy and Research.* 2014;2(5):712-718.

REFERENCE LIST

9. SIJ & Pelvis (12)

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|---------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Akram | 2024 | | ✓ | | | | | | | | | | | | |
| Alkady | 2017 | | ✓ | | | | | | | | | | | | |
| Baglan-Yentur | 2019 | | | | | | | | ✓ | | | | | | |
| Bindra | 2014 | | | | | | | | ✓ | | | | | | |
| Farooq | 2021 | | | ✓ | | | | | | | | | | | |
| Ghafoor | 2023 | | ✓ | | | | | | | | | | | | |
| Jeong-Hyun | 2014 | | ✓ | | | | | | | | | | | | |
| Krzyzanowicz | 2015 | | | | | | ✓ | | | | | | | | |
| Shedge | 2024 | | | | | | | | ✓ | | | | | | |
| Shinde | 2018 | | ✓ | | | | | | | | | | | | |
| Son | 2014 | | ✓ | | | | | | | | | | | | |
| Yan | 2024 | | ✓ | | | | | | | | | | | | |

1. Akram H, Bashir MS, Zia A, Noor R, Shakeel A. Comparison of muscle energy technique and mobilization with movement to reduce pain and improve functional status in subjects with anterior innominate ilio-sacral dysfunction. *Journal of bodywork and movement therapies*. 2024;40(1336-1341). <http://dx.doi.org/10.1016/j.jbmt.2022.11.003>
2. Alkady SME, Kamel RM, AbuTaleb E, Lasheen Y, Alshaarawy FA. Efficacy of Mulligan Mobilization Versus Muscle Energy Technique in Chronic Sacroiliac Joint Dysfunction. *International Journal of Physiotherapy*. 2017;4(5):<http://dx.doi.org/10.15621/ijphy/2017/v4i5/159427>
3. Baglan-Yentur S, Mete O, Tuna Z, Tufan A, Oskay D. The effects of the Mulligan concept in ankylosing spondylitis: a report of two cases. *International Journal of Therapy & Rehabilitation*. 2019;26(5):1-10. <http://dx.doi.org/10.12968/ijtr.2018.0068>
4. Bindra S. Hip Rotation MWM for Sacroiliac Joint Dysfunction: A Case Report. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(3):8-11. <http://dx.doi.org/10.5958/0973-5674.2014.00346.3>
5. Farooq S, Zahid S, Hafeez S, Hassan D. Effectiveness of Mulligan mobilization and Kinesio-taping technique on the anterior innominate dysfunction in females. *J Pak Med Assoc*. 2021;71(7):1716-1719. <http://dx.doi.org/10.47391/JPMA.828>
6. Ghafoor F, Ahmad Z, Irfan A, Munawar A, Sabir I, Zulqernain F. Comparison of Mulligan Mobilization Technique versus Mckenzie Exercises among Patient with Sacroiliac Joint Dysfunction: A Randomized

REFERENCE LIST

- Clinical Trial. *Journal of Orthopaedics and Sports Medicine*. 2023;05(01):<http://dx.doi.org/10.26502/josm.511500093>
7. Jeong-Hyun S, Gi Duck P, Hoo Sung P. The Effect of Sacroiliac Joint Mobilization on Pelvic Deformation and the Static Balance Ability of Female University Students with SI Joint Dysfunction. *Journal of physical therapy science*. 2014;26(6):845-848. <http://dx.doi.org/10.1589/jpts.26.845>
 8. Krzyzanowicz R, Baker R, Nasypany A, Gargano F, Seegmiller J. Patient Outcomes Utilizing the Selective Functional Movement Assessment and Mulligan Mobilizations With Movement on Recreational Dancers With Sacroiliac Joint Pain: A Case Series. *International Journal of Athletic Therapy & Training*. 2015;20(3):31-37.
 9. Shedge SS, Ramteke SU, Samal S. Integrated Rehabilitation Approach Utilizing Swiss Ball Training, Mulligan Taping, and Mobilization With Movement for Simultaneous Management of Sacroiliac Joint Dysfunction and Lateral Ankle Sprain in a Badminton Athlete: A Case Study. *Cureus*. 2024;16(3):e56942. <http://dx.doi.org/10.7759/cureus.56942>
 10. Shinde M, Jagtap V. Effect of muscle energy technique and mulligan mobilization in sacroiliac joint dysfunction. *Global Journal for Research Analysis*. 2018;7(3 - March 2018):79-91.
 11. Son J-H, Park GD, Park HS. The effect of sacroiliac joint mobilization on pelvic deformation and the static balance ability of female university students with si joint dysfunction. *Journal of physical therapy science*. 2014;26(6):845-848. <http://dx.doi.org/10.1589/jpts.26.845>
 12. Yan H, Zhao P, Guo X, Zhou X. The effects of Core Stability Exercises and Mulligan's mobilization with movement techniques on sacroiliac joint dysfunction. *Front Physiol*. 2024;15(1337754). <http://dx.doi.org/10.3389/fphys.2024.1337754>

10. Hip (20)

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|-------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Bindra | 2014 | | | | | | | | ✓ | | | | | | |
| Albertin | 2019 | | | | | | | | | | | | ✓ | | |
| Arabzadeh | 2023 | | ✓ | | | | | | | | | | | | |
| Beselga | 2016 | | ✓ | | | | | | | | | | | | |
| Carpenter | 2008 | | | | | | | | ✓ | | | | | | |
| Dabholkar | 2014 | | | ✓ | | | | | | | | | | | |
| Haney | 2022 | | ✓ | | | | | | | | | | | | |
| Karanjkar | 2023 | | | | | | | | ✓ | | | | | | |

REFERENCE LIST

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|-------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Metgud | 2022 | | ✓ | | | | | | | | | | | | |
| Mitchell | 2022 | | | | | | | | | | | | | | ✓ |
| Mulligan | 1996 | | | | | | | | | | | | ✓ | | |
| Nunes | 2019 | | ✓ | | | | | | | | | | | | |
| Runge | 2022 | | | | | | | | | | | | | | ✓ |
| Shepherd | 2022 | ✓ | | | | | | | | | | | | | |
| Smith | 2018 | | | | ✓ | | | | | | | | | | |
| Solanki | 2012 | | ✓ | | | | | | | | | | | | |
| Torres | 2021 | | ✓ | | | | | | | | | | | | |
| Walsh | 2016 | | ✓ | | | | | | | | | | | | |
| Yıldırım | 2016 | | ✓ | | | | | | | | | | | | |
| Zemadani | 2017 | | ✓ | | | | | | | | | | | | |

1. Albertin ES, Miley EN, May J, Baker RT, Reordan D. The Effects of Hip Mobilizations on Patient Outcomes: A Critically Appraised Topic. *Journal of sport rehabilitation*. 2019;28(4):390-394.
<http://dx.doi.org/10.1123/jsr.2016-0238>
2. Arabzadeh S, Kamali F, Bervis S, Razeghi M. The hip joint mobilization with movement technique improves muscle activity, postural stability, functional and dynamic balance in hemiplegia secondary to chronic stroke: a blinded randomized controlled trial. *BMC Neurol*. 2023;23(1):262.
<http://dx.doi.org/10.1186/s12883-023-03315-2>
3. Beselga C, Neto F, Albuquerque-Sendín F, Hall T, Oliveira-Campelo N. Immediate effects of hip mobilization with movement in patients with hip osteoarthritis: a randomised controlled trial. *Manual therapy*. 2016;22(80 - 85). <http://dx.doi.org/10.1016/j.math.2015.10.007>
4. Bindra S. Hip Rotation MWM for Sacroiliac Joint Dysfunction: A Case Report. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(3):8-11. <http://dx.doi.org/10.5958/0973-5674.2014.00346.3>
5. Carpenter G. The effects of hip mobilization and mobilization with movement in the physical therapy management of a person with lateral hip pain: a case report. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2008;16(3):170-170.
6. Dabholkar A, Kumari S, Yardi S. Comparative Study of Short Term Response between Maitland Mobilization and Mulligan's Mobilization with Movement of Hip Joint in Osteoarthritis of Knee Patients Identified as Per Clinical Prediction Rule. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(4):6-10.
<http://dx.doi.org/10.5958/0973-5674.2014.00002.1>

REFERENCE LIST

7. Hanney W. Immediate Changes in Hip Range of Motion after Mobilization with Movement Versus Static Stretching. *Archives of physical medicine and rehabilitation*. 2022;103(3):e40.
<http://dx.doi.org/10.1016/j.apmr.2022.01.111>
8. Karanjkar SM, Dhage P. "Mulligan Bent Leg Raise" Technique in Avascular Necrosis. *Cureus*. 2023;15(12):e50727. <http://dx.doi.org/10.7759/cureus.50727>
9. Metgud SC, D'Silva PV, Kamat PS. Immediate effect of MWM adductor stretch, myofascial release, and conventional stretching in asymptomatic individuals with hip adductor tightness: A randomized controlled trial. *Journal of bodywork and movement therapies*. 2022;32(213-217).
<http://dx.doi.org/10.1016/j.jbmt.2022.04.006>
10. Mitchell T, Anderson A, Sault J, Glynn P. Joint-biased interventions for hip and knee pain disorders. In: Mathew B, Courtney CA, Fernandez-de-las-Penas C, eds. *Hip and Knee Pain Disorders: Integrating manual therapy and exercise*. Edinburgh, Scotland: Handspring; 2022:
11. Mulligan BR. Manual therapy rounds. Mobilisations with movement (MWMS) for the hip joint to restore internal rotation and flexion. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 1996;4(1):35-36.
12. Nunes GS, Wolf DF, Dos Santos DA, de Noronha M, Serrão FV. Acute Effects of Hip Mobilization With Movement Technique on Pain and Biomechanics in Females With Patellofemoral Pain: A Randomized, Placebo-Controlled Trial. *Journal of sport rehabilitation*. 2019;1-9. <http://dx.doi.org/10.1123/jsr.2018-0497>
13. Runge N, Sault J, Anderson AM, Thomas. Effectiveness of manual therapy approaches for hip and knee pain disorders: an exercise-based approach. In: Mathew B, Courtney CA, Fernandez-de-las-Penas C, eds. *Hip and Knee Pain Disorders: Integrating manual therapy and exercise*. Edinburgh, Scotland: Handspring; 2022:
14. Shepherd MH, Shumway J, Salvatori RT, Rhon DI, Young JL. The influence of manual therapy dosing on outcomes in patients with hip osteoarthritis: a systematic review. *Journal of Manual & Manipulative Therapy*. 2022;1-13. <http://dx.doi.org/10.1080/10669817.2022.2037193>
15. Smith DA, Saranga J, Pritchard A, Kommatas NA, Punnoose SK, Kale ST. Effect of a lateral glide mobilisation with movement of the hip on vibration threshold in healthy volunteers. *Journal of Bodywork and Movement Therapies*. 2018;22(1):13-17. <http://dx.doi.org/https://doi.org/10.1016/j.jbmt.2016.10.001>
16. Solanki D, Kage V. A Comparative Study on Immediate effect of Adductor Stretch MWM Versus MET in Subjects with Hip Adductor Tightness - Randomized Clinical Trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2012;6(4):44-47.
17. Torres D, Hanney WJ, Velazquez L, Pabian PS, Pilkington C. The Effect of Mobilization With Movement and Passive Stretching on Hip Range of Motion: A Randomized Controlled Trial. *Orthopaedic Physical Therapy Practice*. 2021;33(3):150-154.
18. Walsh R, Kinsella S. The effects of caudal mobilisation with movement (MWM) and caudal self-mobilisation with movement (SMWM) in relation to restricted internal rotation in the hip: a randomised control pilot study. *Manual therapy*. 2016;22(9 - 15). <http://dx.doi.org/10.1016/j.math.2016.01.007>
19. Yıldırım MS, Ozyurek S, Tosun O, Uzer S, Gelecek N. Comparison of effects of static, proprioceptive neuromuscular facilitation and Mulligan stretching on hip flexion range of motion: a randomized controlled trial. *Biology of sport*. 2016;33(1):89-94. <http://dx.doi.org/10.5604/20831862.1194126>
20. Zemadanis K, Betsos T, Mandalidis D. The short and long-term effect of weight-bearing mobilization-with-movement (MWM) and automobilization-MWM techniques on pain and functional status in patients with

REFERENCE LIST

hip osteoarthritis. *International Journal of Physiotherapy*.
2017;4(3):<http://dx.doi.org/10.15621/ijphy/2017/v4i3/149068>

11. Knee (61)

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|--------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Dabholkar | 2014 | | | ✓ | | | | | | | | | | | |
| Mitchell | 2022 | | | | | | | | | | | | | ✓ | |
| Nunes | 2019 | | ✓ | | | | | | | | | | | | |
| Runge | 2022 | | | | | | | | | | | | | ✓ | |
| da Rocha | 2006 | | | | | | | | ✓ | | | | | | |
| Alkhawajah | 2019 | | ✓ | | | | | | | | | | | | |
| Alsiri | 2020 | | | | | | | | | | | | | | ✓ |
| Altmis | 2018 | | ✓ | | | | | | | | | | | | |
| Anandkumar | 2018 | | | | | | | | ✓ | | | | | | |
| Anwer | 2018 | ✓ | | | | | | | | | | | | | |
| Balasundaram | 2018 | | | | | | ✓ | | | | | | | | |
| Bhagat | 2020 | | ✓ | | | | | | | | | | | | |
| Bhosale | 2019 | | ✓ | | | | | | | | | | | | |
| Brody | 2015 | | | | | | ✓ | | | | | | | | |
| Buke | 2024 | | ✓ | | | | | | | | | | | | |
| Chaconas | 2016 | | | | | | | | ✓ | | | | | | |
| Chan-Woo | 2013 | | | ✓ | | | | | | | | | | | |
| Coelho | 2021 | | ✓ | | | | | | | | | | | | |
| Creighton | 2006 | | | | | | ✓ | | | | | | | | |
| Cui | 2024 | | ✓ | | | | | | | | | | | | |
| Demirci | 2017 | | ✓ | | | | | | | | | | | | |
| Deng | 2022 | | | | ✓ | | | | | | | | | | |
| Gomes | 2020 | | | | | | ✓ | | | | | | | | |
| Heggannavar | 2015 | | ✓ | | | | | | | | | | | | |
| Hendry | 2014 | | | | ✓ | | | | | | | | | | |
| Hickey | 2016 | | | | ✓ | | | | | | | | | | |
| Hotwani | 2010 | | ✓ | | | | | | | | | | | | |

REFERENCE LIST

3. Altmis H, Oskay D, Elbasan B, Duzgun I, Tuna Z. Mobilization with movement and kinesio taping in knee arthritis-evaluation and outcomes. *International orthopaedics*. 2018;42(12):2807-2815.
<http://dx.doi.org/10.1007/s00264-018-3938-3>
4. Anandkumar S, Miller J, J. Werstine R, Young S. Effect of mobilization with movement on lateral knee pain due to proximal tibiofibular joint hypomobility. *Physiotherapy Theory & Practice*. 2018;34(10):813-820.
<http://dx.doi.org/10.1080/09593985.2018.1424979>
5. Anwer S, Alghadir A, Zafar H, Brismée J-M. Effects of orthopaedic manual therapy in knee osteoarthritis: a systematic review and meta-analysis. *Physiotherapy*. 2018;104(3):264-276.
6. Balasundaram AP, Sreerama Rajan S. Short-term effects of mobilisation with movement in patients with post-traumatic stiffness of the knee joint. *Journal of bodywork and movement therapies*. 2018;22(2):498-501. <http://dx.doi.org/10.1016/j.jbmt.2017.06.007>
7. Bhagat M, Neelapala YVR, Gangavelli R. Immediate effects of Mulligan's techniques on pain and functional mobility in individuals with knee osteoarthritis: A randomized control trial. *Physiotherapy research international : the journal for researchers and clinicians in physical therapy*. 2020;25(1):e1812.
<http://dx.doi.org/10.1002/pri.1812>
8. Bhosale N, Kanase SB, Bathia K. Effect of Mulligan's Pain Release Phenomenon with Kinesiotaping in Chronic Patellofemoral Osteoarthritis. *Indian Journal of Public Health Research & Development*. 2019;10(4):324. <http://dx.doi.org/10.5958/0976-5506.2019.00712.5>
9. Brody K, Baker RT, Nasypany A, Seegmiller J, Piccininni JJ. Treatment of Meniscal Lesions Using the Mulligan "Squeeze" Technique: A Case Series. *International Journal of Athletic Therapy and Training*. 2015;20(6):24-31. <http://dx.doi.org/10.1123/ijatt.2014-0135>
10. Buke M, Unver F, Sekeroz S, Oztekin SNS. Effectiveness of Mulligan Mobilization Technique and Core Stabilization Exercises in Female Patients With Knee Osteoarthritis: A Randomized Controlled Single-Blind Study. *Journal of manipulative and physiological therapeutics*. 2024;47(1-4):33-44.
<http://dx.doi.org/10.1016/j.jmpt.2024.08.012>
11. Chaconas E, Gray S, Kempfert D. Mobilization with movement symptom modification procedure for a 38 year old male with patella femoral pain syndrome. *Manual Therapy*. 2016;25(e63-e64).
12. Chan-Woo N, Sang-In P, Min-Sik Y, Young-Min K. Effects of the MWM Technique Accompanied by Trunk Stabilization Exercises on Pain and Physical Dysfunctions Caused by Degenerative Osteoarthritis. *Journal of physical therapy science*. 2013;25(9):1137-1140. <http://dx.doi.org/10.1589/jpts.25.1137>
13. Coelho BAL, Rodrigues HLdN, Almeida GPL, João SMA. Immediate Effect of Ankle Mobilization on Range of Motion, Dynamic Knee Valgus, and Knee Pain in Women With Patellofemoral Pain and Ankle Dorsiflexion Restriction: A Randomized Controlled Trial With 48-Hour Follow-Up. *Journal of Sport Rehabilitation*. 2021;30(5):697-706. <http://dx.doi.org/10.1123/jsr.2020-0183>
14. Creighton D, Krauss J, Pascoe S, Patel H, Pierce J. The effects of tibio-femoral joint traction mobilization on patients with limited passive knee flexion: a case series. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2006;14(3):173-174.
15. Cui X, Zhao P, Guo X, et al. Effectiveness of multimodal active physiotherapy for chronic knee pain: a 12-month randomized controlled trial follow-up study. *Front Physiol*. 2024;15(1451345).
<http://dx.doi.org/10.3389/fphys.2024.1451345>
16. da Rocha RCG, Nee R, Hall T, Chopard R. Treatment of persistent knee pain associated with lumbar dysfunction: a case report. *New Zealand Journal of Physiotherapy*. 2006;34(1):31-35.

REFERENCE LIST

17. Dabholkar A, Kumari S, Yardi S. Comparative Study of Short Term Response between Maitland Mobilization and Mulligan's Mobilization with Movement of Hip Joint in Osteoarthritis of Knee Patients Identified as Per Clinical Prediction Rule. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(4):6-10. <http://dx.doi.org/10.5958/0973-5674.2014.00002.1>
18. Demirci S, Kinikli GI, Callaghan MJ, Tunay VB. Comparison of short-term effects of mobilization with movement and Kinesiotaping on pain, function and balance in patellofemoral pain. *Acta orthopaedica ET traumatologica turcica*. 2017;51(6):442 - 447. <http://dx.doi.org/10.1016/j.aott.2017.09.005>
19. Deng F, Adams R, Pranata A, Cui F, Han J. Tibial internal and external rotation taping for improving pain in patients with patellofemoral pain syndrome. *Journal of Science and Medicine in Sport*. 2022;<http://dx.doi.org/10.1016/j.jsams.2022.04.003>
20. Gomes MG, Primo AF, De Jesus L, Dionisio VC. Short-term Effects of Mulligan's Mobilization With Movement on Pain, Function, and Emotional Aspects in Individuals With Knee Osteoarthritis: A Prospective Case Series. *Journal of manipulative and physiological therapeutics*. 2020;43(5):437-445. <http://dx.doi.org/10.1016/j.jmpt.2019.04.011>
21. Heggannavar A, Gupta R. Quantitative effects of proprioceptive exercises and mulligan's MWM in subjects with osteoarthritis of knee-a randomized clinical trail. *Physiotherapy (united kingdom)*. 2015;101(eS555 - eS556). <http://dx.doi.org/10.1016/j.physio.2015.03.3370>
22. Hendry D, Campbell A, Ng L, Grisbrook TL, Hopper DM. Effect of Mulligan's and Kinesio knee taping on adolescent ballet dancers knee and hip biomechanics during landing. *Scand J Med Sci Sports*. 2014;<http://dx.doi.org/10.1111/sms.12302>
23. Hickey A, Hopper D, Hall T, Wild CY. The effect of the Mulligan knee taping technique on patellofemoral pain and lower limb biomechanics. *Am J Sports Med*. 2016;44(5):1179-1185. <http://dx.doi.org/10.1177/0363546516629418>
24. Hotwani R, Metgud S, Ganesh BR. Comparison of McConnell patellar taping versus mobilisation with movement in chronic knee osteoarthritis: a randomized clinical trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2010;4(4):132-136.
25. Howe A, Campbell A, Ng L, Hall T, Hopper D. Effects of two different knee tape procedures on lower-limb kinematics and kinetics in recreational runners. *Scand J Med Sci Sports*. 2015;25(4):517-524. <http://dx.doi.org/10.1111/sms.12269>
26. Huda MN, Haque MO, Urme NA, Halder P. Effectiveness of mobilisation with movement (MWM) along with usual care for knee osteoarthritis: a study protocol for a randomised clinical trial. *BMJ Open Sport Exerc Med*. 2025;11(2):e002735. <http://dx.doi.org/10.1136/bmjsem-2025-002735>
27. Hudson R, Richmond A, Sanchez B, et al. An Alternative Approach to the Treatment of Meniscal Pathologies: A Case Series Analysis of the Mulligan Concept "Squeeze" Technique. *International Journal of Sports Physical Therapy*. 2016;11(4):564-574.
28. Hudson R, Richmond A, Sanchez B, et al. Innovative treatment of clinically diagnosed meniscal tears: a randomized sham-controlled trial of the Mulligan concept 'squeeze' technique. *The Journal of manual & manipulative therapy*. 2018;1-10. <http://dx.doi.org/10.1080/10669817.2018.1456614>
29. Iqbal S, Khan IA, Khan MK, et al. Therapeutic Utility of Mulligan Traction Straight Leg Raise Stretch and Proprioceptive Exercises in Osteoarthritis Treatment. *Cureus*. 2024;<http://dx.doi.org/10.7759/cureus.74382>
30. Jaiswal PR, Ramteke SU, Samal S. Integrative Approach of Conventional Physiotherapy, Mulligan's Mobilisation With Movement, and Plyometric Training in a Young Volleyball Athlete After Anterior Cruciate

REFERENCE LIST

- Ligament (ACL) Reconstruction: A Case Report. *Cureus*. 2024;16(2):e54895.
<http://dx.doi.org/10.7759/cureus.54895>
31. Jayaseelan DJ, Scalzitti DA, Palmer G, Immerman A, Courtney CA. The effects of joint mobilization on individuals with patellofemoral pain: a systematic review. *Clinical Rehabilitation*. 2018;32(6):722-733.
 32. Kaya Mutlu E, Ercin E, Razak Ozdincler A, Ones N. A comparison of two manual physical therapy approaches and electrotherapy modalities for patients with knee osteoarthritis: A randomized three arm clinical trial. *Physiotherapy Theory & Practice*. 2018;34(8):600-612.
<http://dx.doi.org/10.1080/09593985.2018.1423591>
 33. Kaya Mutlu E, Razak Ozdincler A, Ercin E. Comparison of two different mobilization techniques in the management of osteoarthritis of the knee: a randomized clinical trial. *Osteoarthritis and cartilage*. 2015;23(A391 - A392).
 34. Komalasari DR, Vongsirinavarat M, Nilmart P. Effectiveness of manipulation with movement and muscle energy technique in elderly with knee osteoarthritis: A double-blind randomized control trial. *Journal of back and musculoskeletal rehabilitation*. 2025;38(6):1352-1361. <http://dx.doi.org/10.1177/10538127251328541>
 35. Li L-L, Hu X-J, Di Y-H, Jiao W. Effectiveness of Maitland and Mulligan mobilization methods for adults with knee osteoarthritis: A systematic review and meta-analysis. *World Journal of Clinical Cases*. 2022;10(3):954-965. <http://dx.doi.org/10.12998/wjcc.v10.i3.954>
 36. Lin LH, Lin M, Hsieh GJ, Chen HI, Sun SF, Tsai RJ. Mobilization with movement on reducing pain and disability for knee osteoarthritis: a systematic review and meta-analysis of randomized controlled trials. *The Journal of manual & manipulative therapy*. 2025;1-16. <http://dx.doi.org/10.1080/10669817.2025.2495576>
 37. Lin Y, Luo X. Therapeutic efficacy of mobilization with movement in early postoperative rehabilitation after unicompartmental knee arthroplasty: a double-blind, randomized controlled trial. *J Orthop Surg Res*. 2025;20(1):660. <http://dx.doi.org/10.1186/s13018-025-06047-w>
 38. Mackay GJK, Stearne SM, Wild CY, et al. Mulligan Knee Taping Using Both Elastic and Rigid Tape Reduces Pain and Alters Lower Limb Biomechanics in Female Patients With Patellofemoral Pain. *Orthopaedic Journal of Sports Medicine*. 2020;8(5):232596712092167. <http://dx.doi.org/10.1177/2325967120921673>
 39. Mitchell T, Anderson A, Sault J, Glynn P. Joint-biased interventions for hip and knee pain disorders. In: Mathew B, Courtney CA, Fernandez-de-las-Penas C, eds. *Hip and Knee Pain Disorders: Integrating manual therapy and exercise*. Edinburgh, Scotland: Handspring; 2022:
 40. Nam C-W, Park S-I, Yong M-S, Kim Y-M. Effects of the MWM Technique Accompanied by Trunk Stabilization Exercises on Pain and Physical Dysfunctions Caused by Degenerative Osteoarthritis. *Journal of physical therapy science*. 2013;25(9):1137-1140. <http://dx.doi.org/10.1589/jpts.25.1137>
 41. Nazir SNB, Rathore FA. Efficacy of Mulligan joint mobilizations and trunk stabilization exercises versus isometric knee strengthening in the management of knee osteoarthritis: a randomized controlled trial. *BMC Sports Sci Med Rehabil*. 2024;16(1):105. <http://dx.doi.org/10.1186/s13102-024-00893-7>
 42. Nigam A, Satpute KH, Hall TM. Long term efficacy of mobilisation with movement on pain and functional status in patients with knee osteoarthritis: a randomised clinical trial. *Clin Rehabil*. 2020;269215520946932. <http://dx.doi.org/10.1177/0269215520946932>
 43. Nunes GS, Wolf DF, Dos Santos DA, de Noronha M, Serrão FV. Acute Effects of Hip Mobilization With Movement Technique on Pain and Biomechanics in Females With Patellofemoral Pain: A Randomized, Placebo-Controlled Trial. *Journal of sport rehabilitation*. 2019;1-9. <http://dx.doi.org/10.1123/jsr.2018-0497>

REFERENCE LIST

44. Oskay D, Altmis H, Duzgun I, Elbasan B. Immediate effects of mulligan's concept mobilization with movement on knee pain and functions in patients with knee osteoarthritis. *Annals of the rheumatic diseases*. 2015;74(1315). <http://dx.doi.org/10.1136/annrheumdis-2015-eular.4743>
45. Plummer S, Leonard J. Mobilization With Movement as Therapy to Reduce Knee Pain and Increase Knee Range of Motion. *Journal of Sport Rehabilitation*. 2022;31(7):950-953. <http://dx.doi.org/10.1123/jsr.2021-0294>
46. Qamar MM, Kiran A, Ijaz MJ, Basharat A, Rasul A, Ahmed W. Comparison of efficacy of mulligan's mobilization with movement with maitland mobilization along with conventional therapy in the patients with knee osteoarthritis: A randomized clinical trial. *Libyan International Medical University Journal*. 2018;3(1):26. http://dx.doi.org/10.4103/liuj.liuj_12_18
47. Rao RV, Balhilla G, Prabhu A, Kamath A. Immediate effects of Maitland mobilization versus Mulligan Mobilization with Movement in Osteoarthritis knee- A Randomized Crossover trial. *Journal of bodywork and movement therapies*. 2017;(no pagination)(<http://dx.doi.org/10.1016/j.jbmt.2017.09.017>
48. Razeq RA, Shenouda MM. Efficacy of Mulligan's Mobilization with Movement on Pain, Disability, and Range of Motion in Patients with Knee Osteoarthritis: A Randomized Controlled Pilot Study. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(1):242-247. <http://dx.doi.org/10.5958/j.0973-5674.8.1.046>
49. Reep NC, Leverett SN, Heywood RM, Baker RT, Barnes DL, Cheatham SW. The Efficacy of the Mulligan Concept to Treat Meniscal Pathology: A Systematic Review. *Int J Sports Phys Ther*. 2022;17(7):1219-1235. <http://dx.doi.org/10.26603/001c.55540>
50. Rehman M, Riaz H. Comparison of mobilization with movement and Mulligan knee taping on Patellofemoral pain syndrome. *J Pak Med Assoc*. 2021;71(9):2119-2123. <http://dx.doi.org/10.47391/JPMA.04-658>
51. Rhinehart A. Effective Treatment of an Apparent Meniscal Injury Using the Mulligan Concept. *Journal of Sports Medicine and Allied Health Sciences: Official Journal of the Ohio Athletic Trainers Association*. 2015;1(2):<http://dx.doi.org/10.25035/jsmahs.01.02.04>
52. Runge N, Sault J, Anderson AM, Thomas. Effectiveness of manual therapy approaches for hip and knee pain disorders: an exercise-based approach. In: Mathew B, Courtney CA, Fernandez-de-las-Penas C, eds. *Hip and Knee Pain Disorders: Integrating manual therapy and exercise*. Edinburgh, Scotland: Handspring; 2022:
53. Salamh P, Cook C, Reiman MP, Sheets C. Treatment effectiveness and fidelity of manual therapy to the knee: A systematic review and meta-analysis. *Musculoskeletal care*. 2017;15(3):238-248. <http://dx.doi.org/10.1002/msc.1166>
54. Sanchez BJ, Baker RT. Conservative Management of Possible Meniscal Derangement Using the Mulligan Concept: A Case Report. *Journal of Chiropractic Medicine*. 2017;16(4):308-315. <http://dx.doi.org/10.1016/j.jcm.2017.08.005>
55. Shahid S, Ahmed A, Ahmed U. Effectiveness of Routine Physical Therapy with and Without Pain Release Phenomenon in Patello-Femoral Pain Syndrome. *International Journal of Science and Research (IJSR)*. 2016;5(7):1891-1919. <http://dx.doi.org/10.21275/v5i7.ART2016586>
56. Singh D. An Experimental Study on effects of Mulligan Mobilization Technique and Isometric Exercises in Patients with Osteoarthritis Knee. *Indian Journal of Physiotherapy & Occupational Therapy*. 2012;6(4):158-162.
57. Somaiya KJ, Samal S, Boob MA. Effectiveness of Recent Physiotherapy Techniques Along With Conventional Physiotherapy Techniques in a Patient With Knee Osteoarthritis: A Case Report. *Cureus*. 2024;16(2):e54872. <http://dx.doi.org/10.7759/cureus.54872>

REFERENCE LIST

58. Takasaki H, Hall T, Jull G. Immediate and short-term effects of Mulligan's mobilization with movement on knee pain and disability associated with knee osteoarthritis - A prospective case series. *Physiotherapy Theory & Practice*. 2013;29(2):87-95. <http://dx.doi.org/10.3109/09593985.2012.702854>
59. Ughreja RA, Shukla YU. Mulligan's Mobilisation with Movement (MWM) relieves pain and improves functional status in osteoarthritis knee. *Int J Physiother*. 2017;4(2):132-138.
60. Weleslassie GG, Temesgen MH, Alamer A, Tsegay GS, Hailemariam TT, Melese H. Effectiveness of Mobilization with Movement on the Management of Knee Osteoarthritis: A Systematic Review of Randomized Controlled Trials. *Pain Res Manag*. 2021;2021(8815682). <http://dx.doi.org/10.1155/2021/8815682>
61. Zemadanis K, Sykaras E, Athanasopoulos S, Mandalidis D. Mobilization-with-movement prior to exercise provides early pain and functionality improvements in patients with patellofemoral pain syndrome. *International Musculoskeletal Medicine*. 2015;37(3):101-107. <http://dx.doi.org/10.1179/1753615415Y.0000000009>

12. Foot and Ankle (81)

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|-----------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Coelho | 2021 | | ✓ | | | | | | | | | | | | |
| Shedge | 2024 | | | | | | | | ✓ | | | | | | |
| Abassi | 2021 | | | | | | ✓ | | | | | | | | |
| Akaras | 2020 | | ✓ | | | | | | | | | | | | |
| Alves | 2018 | | ✓ | | | | | | | | | | | | |
| Ambarish | 2008 | | ✓ | | | | | | | | | | | | |
| An | 2016 | | ✓ | | | | | | | | | | | | |
| Anandkumar | 2018 | | | | | | | | ✓ | | | | | | |
| Bianco | 2019 | | | | | | ✓ | | | | | | | | |
| Bleakley | 2008 | ✓ | | | | | | | | | | | | | |
| Boob | 2024 | | | | | | | | ✓ | | | | | | |
| Buyukturan | 2022 | | ✓ | | | | | | | | | | | | |
| Collins | 2004 | | ✓ | | | | | | | | | | | | |
| Cruz-D | 2015 | | ✓ | | | | | | | | | | | | |
| de Castro Silva | 2021 | | | | | | | | | | | | | | ✓ |
| Delahunt | 2010 | | | | ✓ | | | | | | | | | | |

REFERENCE LIST

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|---------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Delahun | 2013 | | | | ✓ | | | | | | | | | | |
| de-la-Morena | 2015 | | ✓ | | | | | | | | | | | | |
| Demirkan | 2025 | | ✓ | | | | | | | | | | | | |
| ELMeligie | 2025 | ✓ | | | | | | | | | | | | | |
| Fazeli | 2018 | | | | ✓ | | | | | | | | | | |
| Ghadi | 2013 | | ✓ | | | | | | | | | | | | |
| Gilbreath | 2014 | | | | | | ✓ | | | | | | | | |
| Gogate | 2021 | | ✓ | | | | | | | | | | | | |
| Grindstaff | 2015 | | | | ✓ | | | | | | | | | | |
| Hendley | 2021 | | | | | | | | ✓ | | | | | | |
| Hetherington | 1996 | | | | | | | | | | | | ✓ | | |
| Hidalgo | 2018 | | ✓ | | | | | | | | | | | | |
| Hoch | 2010 | | | | | | | | | | | | ✓ | | |
| Hopper | 2009 | | | | ✓ | | | | | | | | | | |
| Howe | 2017 | | | | ✓ | | | | | | | | | | |
| Hudson | 2017 | | | | | | ✓ | | | | | | | | |
| Izaola-Azkona | 2021 | | ✓ | | | | | | | | | | | | |
| Jayaseelan | 2017 | | | | | | ✓ | | | | | | | | |
| Kang | 2013 | | | | ✓ | | | | | | | | | | |
| Kang | 2015 | | ✓ | | | | | | | | | | | | |
| Kashif | 2021 | | ✓ | | | | | | | | | | | | |
| Kim | 2018 | | ✓ | | | | | | | | | | | | |
| Kim | 2024 | | ✓ | | | | | | | | | | | | |
| Kosik | 2017 | ✓ | | | | | | | | | | | | | |
| Kosik | 2018 | | | | | | | | | | | | ✓ | | |
| Lawson | 2018 | | | | | | | | ✓ | | | | | | |
| Lehr | 2022 | | ✓ | | | | | | | | | | | | |
| Loudon | 2014 | ✓ | | | | | | | | | | | | | |
| Luzenski | 2010 | | | | | | | | ✓ | | | | | | |
| Marr | 2015 | | ✓ | | | | | | | | | | | | |
| Mau | 2014 | | | | | | | | ✓ | | | | | | |
| May | 2014 | | | | | | | | | | | | ✓ | | |
| May | 2017 | | | | | | ✓ | | | | | | | | |
| Mehta | 2017 | | ✓ | | | | | | | | | | | | |

REFERENCE LIST

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|--------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Meyer | 2020 | | | | | | ✓ | | | | | | | | |
| Moiler | 2006 | | | ✓ | | | | | | | | | | | |
| Nascimento | 2025 | ✓ | | | | | | | | | | | | | |
| Nguyen | 2020 | | ✓ | | | | | | | | | | | | |
| Nguyen | 2021 | | ✓ | | | | | | | | | | | | |
| Norouzi | 2021 | | ✓ | | | | | | | | | | | | |
| O'Brien | 1998 | | | | | | | | ✓ | | | | | | |
| Painter | 2015 | | | | | | ✓ | | | | | | | | |
| Ragheb | 2024 | | ✓ | | | | | | | | | | | | |
| Reid | 2007 | | ✓ | | | | | | | | | | | | |
| Shadegani | 2023 | | | | ✓ | | | | | | | | | | |
| Shumway | 2022 | | | | | | ✓ | | | | | | | | |
| Silva | 2025 | | ✓ | | | | | | | | | | | | |
| Simsek | 2019 | | | | ✓ | | | | | | | | | | |
| Smith | 2020 | | | | ✓ | | | | | | | | | | |
| Someeh | 2015 | | | | ✓ | | | | | | | | | | |
| Stanek | 2020 | | ✓ | | | | | | | | | | | | |
| Stanek | 2021 | | ✓ | | | | | | | | | | | | |
| Taghizadeh | 2024 | | ✓ | | | | | | | | | | | | |
| Terada | 2013 | ✓ | | | | | | | | | | | | | |
| Tomruk | 2019 | | ✓ | | | | | | | | | | | | |
| Van Der Wees | 2006 | ✓ | | | | | | | | | | | | | |
| Vicenzino | 2006 | | ✓ | | | | | | | | | | | | |
| Weerasekara | 2020 | ✓ | | | | | | | | | | | | | |
| Weerasekara | 2021 | | | | | ✓ | | | | | | | | | |
| Wheeler | 2013 | | | | ✓ | | | | | | | | | | |
| Wikstrom | 2018 | | | | | | | | | | | | ✓ | | |
| Woodman | 2013 | | | | | | | | ✓ | | | | | | |
| Yoon | 2013 | | | | ✓ | | | | | | | | | | |
| Yoon | 2014 | | | | ✓ | | | | | | | | | | |
| Yoon | 2014 | | | | ✓ | | | | | | | | | | |

REFERENCE LIST

1. Abassi M, Whiteley R. Serial Within-Session Improvements in Ankle Dorsiflexion During Clinical Interventions Including Mobilization-With-Movement and A Novel Manipulation Intervention - A Case Series. *Int J Sports Phys Ther.* 2021;16(4):1158-1168. <http://dx.doi.org/10.26603/001c.25544>
2. Akaras E, Guzel NA, Kafa N, Özdemir YA. The acute effects of two different rigid taping methods in patients with hallux valgus deformity. *Journal of back and musculoskeletal rehabilitation.* 2020;33(1):91-98. <http://dx.doi.org/10.3233/bmr-181150>
3. Alves Y, Ribeiro F, Silva AG. Effect of fibular repositioning taping in adult basketball players with chronic ankle instability: a randomized, placebo-controlled, crossover trial. *The Journal of sports medicine and physical fitness.* 2018;58(10):1465-1473. <http://dx.doi.org/10.23736/s0022-4707.17.07472-2>
4. Ambarish AA, Chitra J, Subhash KM. Comparative effectiveness of Mulligan's mobilization in weight bearing and non-weight bearing in the treatment of ankle sprains- a randomized clinical trial. *Indian Journal of Physiotherapy & Occupational Therapy.* 2008;2(4):1-4.
5. An CM, Won JI. Effects of ankle joint mobilization with movement and weight-bearing exercise on knee strength, ankle range of motion, and gait velocity in patients with stroke: a pilot study. *Journal of physical therapy science.* 2016;28(2):689 - 694.
6. Anandkumar S. Effect of a novel mobilization with movement procedure on anterolateral ankle impingement - A case report. *Physiotherapy Theory & Practice.* 2018;34(7):569-577. <http://dx.doi.org/10.1080/09593985.2017.1422822>
7. Bianco L, Fermin S, Oates R, May J, Cheatham SW, Nasypany A. Use of the Mulligan concept in the treatment of lateral ankle sprains in the active population: an exploratory prospective case series. *The Journal of the Canadian Chiropractic Association.* 2019;63(3):154-161.
8. Bleakley CM, McDonough SM, MacAuley DC. Some conservative strategies are effective when added to controlled mobilisation with external support after acute ankle sprain: a systematic review. *Australian Journal of Physiotherapy.* 2008;54(1):7-20.
9. Boob MA, Phansopkar P, Somaiya KJ. The Therapeutic Efficacy of Ankle Mobilization and Advance Physiotherapy in Alleviating Heel Spur and Plantar Fasciitis: A Case Report. *Cureus.* 2024;16(4):e57524. <http://dx.doi.org/10.7759/cureus.57524>
10. Buyukturan B, Sas S, Kararti C, Ozsoy I, Habibzadeh A, Buyukturan O. Effects of Subtalar Joint Mobilization with Movement on Muscle Strength, Balance, Functional Performance, and Gait Parameters in Patients with Chronic Stroke: A Single-Blind Randomized Controlled Study. *J Am Podiatr Med Assoc.* 2022;112(1):<http://dx.doi.org/10.7547/20-275>
11. Coelho BAL, Rodrigues HLdN, Almeida GPL, João SMA. Immediate Effect of Ankle Mobilization on Range of Motion, Dynamic Knee Valgus, and Knee Pain in Women With Patellofemoral Pain and Ankle Dorsiflexion Restriction: A Randomized Controlled Trial With 48-Hour Follow-Up. *Journal of Sport Rehabilitation.* 2021;30(5):697-706. <http://dx.doi.org/10.1123/jsr.2020-0183>
12. Collins N, Teys P, Vicenzino B. The initial effects of a Mulligan's mobilization with movement technique on dorsiflexion and pain in subacute ankle sprains. *Manual therapy.* 2004;9(2):77 - 82. [http://dx.doi.org/10.1016/S1356-689X\(03\)00101-2](http://dx.doi.org/10.1016/S1356-689X(03)00101-2)
13. Cruz-Díaz D, Lomas Vega R, Osuna-Pérez MC, Hita-Contreras F, Martínez-Amat A. Effects of joint mobilization on chronic ankle instability: a randomized controlled trial. *Disability and rehabilitation.* 2015;37(7):601 - 610. <http://dx.doi.org/10.3109/09638288.2014.935877>

REFERENCE LIST

14. de-la-Morena JM, Alguacil-Diego IM, Molina-Rueda F, Ramiro-González M, Villafaña JH, Fernández-Carnero J. The Mulligan ankle taping does not affect balance performance in healthy subjects: a prospective, randomized blinded trial. *Journal of physical therapy science*. 2015;27(5):1597-1602. <http://dx.doi.org/10.1589/jpts.27.1597>
15. de Castro Silva M, de Marche Baldon R, Lins C, de Andrade GM, de Castro GBB, Felicio LR. Immediate effect of manual therapy techniques on the limitation of ankle dorsiflexion: a randomized, controlled, blind clinical trial protocol. *Trials*. 2021;22(1):886. <http://dx.doi.org/10.1186/s13063-021-05858-6>
16. Delahunt E, Cusack KIM, Wilson L, Doherty C. Joint Mobilization Acutely Improves Landing Kinematics in Chronic Ankle Instability. *Medicine & Science in Sports & Exercise*. 2013;45(3):514-519.
17. Delahunt E, McGrath A, Doran N, Coughlan GF. Effect of taping on actual and perceived dynamic postural stability in persons with chronic ankle instability. *Archives of physical medicine and rehabilitation*. 2010;91(9):1383-1389. <http://dx.doi.org/10.1016/j.apmr.2010.06.023>
18. Demirkan MY, Oral MA, Cobanoglu G, Guzel NA. Effects of two mobilization with movement techniques to the talocrural joint in individuals with dorsiflexion limitation: clinician vs self-applied. *Physiotherapy theory and practice*. 2025;41(10):2100-2111. <http://dx.doi.org/10.1080/09593985.2025.2496776>
19. ElMeligie MM, Abdeen HA, Atef H, Marques-Sule E, Karkosha RN. The effectiveness of mulligan mobilization with movement (MWM) on outcomes of patients with ankle sprain: a systematic review and meta-analysis. *BMC Sports Sci Med Rehabil*. 2025;17(1):105. <http://dx.doi.org/10.1186/s13102-025-01121-6>
20. Fazeli SH, Amiri A, Jamshidi AA, et al. Effect of ankle taping on postural control measures during grasp and release task in patients with chronic ankle instability. *Journal of back and musculoskeletal rehabilitation*. 2018;31(5):881-887. <http://dx.doi.org/10.3233/bmr-171067>
21. Ghadi P, Verma C. Study of the efficacy of the Mulligan's Movement with Mobilization and Taping Technique as an Adjunct to the Conventional Therapy for Lateral Ankle Sprain. *Indian Journal of Physiotherapy & Occupational Therapy*. 2013;7(3):167-171. <http://dx.doi.org/10.5958/j.0973-5674.7.3.086>
22. Gilbreath JP, Gaven SL, Van Lunen BL, Hoch MC. The effects of Mobilization with Movement on dorsiflexion range of motion, dynamic balance, and self-reported function in individuals with chronic ankle instability. *Manual Therapy*. 2014;19(2):152-157.
23. Gogate N, Satpute K, Hall T. The effectiveness of mobilization with movement on pain, balance and function following acute and sub acute inversion ankle sprain - A randomized, placebo controlled trial. *Phys Ther Sport*. 2021;48(91-100). <http://dx.doi.org/10.1016/j.ptsp.2020.12.016>
24. Grindstaff TL, Hanish MJ, Wheeler TJ, et al. Fibular taping does not alter lower extremity spinal reflex excitability in individuals with chronic ankle instability. *J Electromyogr Kinesiol*. 2015;25(2):253-259. <http://dx.doi.org/10.1016/j.jelekin.2015.01.009>
25. Hendley C, May J, Wallace JJ, Cheatham SW. The Use of the Mulligan Concept for the Treatment of a First-Degree Sprain of the First Metatarsophalangeal Joint. *Athletic Training & Sports Health Care: The Journal for the Practicing Clinician*. 2021;13(6):e460-e463. <http://dx.doi.org/10.3928/19425864-20210609-01>
26. Hetherington B. LATERAL LIGAMENT STRAINS OF THE ANKLE, DO THEY EXIST? *Man Ther*. 1996;1(5):274-275. <http://dx.doi.org/10.1054/math.1996.0279>
27. Hidalgo B, Hall T, Berwart M, Biernaux E, Detrembleur C. The immediate effects of two manual therapy techniques on ankle musculoarticular stiffness and dorsiflexion range of motion in people with chronic ankle rigidity: A randomized clinical trial. *Journal of Back & Musculoskeletal Rehabilitation*. 2018;31(3):515-524.

REFERENCE LIST

28. Hoch MC, McKeon PO. The effectiveness of mobilization with movement at improving dorsiflexion after ankle sprain. *Journal of sport rehabilitation*. 2010;19(2):226-232. <http://dx.doi.org/10.1123/jsr.19.2.226>
29. Hopper D, Samsson K, Hulenik T, Ng C, Hall T, Robinson K. The influence of Mulligan ankle taping during balance performance in subjects with unilateral chronic ankle instability. *Phys Ther Sport*. 2009;10(4):125-130. <http://dx.doi.org/10.1016/j.ptsp.2009.07.005>
30. Howe LP. The acute effects of ankle mobilisations on lower extremity joint kinematics. *Journal of bodywork and movement therapies*. 2017;21(4):775-780. <http://dx.doi.org/10.1016/j.jbmt.2016.11.007>
31. Hudson R, Baker RT, May J, Reordan D, Nasypany A. Novel treatment of lateral ankle sprains using the Mulligan concept: an exploratory case series analysis. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2017;25(5):251-259.
32. Izaola-Azkona L, Vicenzino B, Olabarrieta-Eguia I, Saez M, Lascurain-Aguirrebeña I. Effectiveness of Mobilization of the Talus and Distal Fibula in the Management of Acute Lateral Ankle Sprain. *Phys Ther*. 2021;101(8):<http://dx.doi.org/10.1093/ptj/pzab111>
33. Jayaseelan DJ, Kecman M, Alcorn D, Sault JD. Manual therapy and eccentric exercise in the management of Achilles tendinopathy. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2017;25(2):106-114.
34. Kang MH, Kim JW, Kim MH, Park TJ, Park JH, Oh JS. Influence of walking with talus taping on the ankle dorsiflexion passive range of motion. *Journal of physical therapy science*. 2013;25(8):1011-1013. <http://dx.doi.org/10.1589/jpts.25.1011>
35. Kang MH, Oh JS, Kwon OY, Weon JH, An DH, Yoo WG. Immediate combined effect of gastrocnemius stretching and sustained talocrural joint mobilization in individuals with limited ankle dorsiflexion: a randomized controlled trial. *Manual therapy*. 2015;20(6):827 - 834. <http://dx.doi.org/10.1016/j.math.2015.03.016>
36. Kashif M, Albalwi A, Alharbi A, Iram H, Manzoor N. Comparison of subtalar mobilisation with conventional physiotherapy treatment for the management of plantar fasciitis. *J Pak Med Assoc*. 2021;71(12):2705-2709. <http://dx.doi.org/10.47391/JPMA.1049>
37. Kim SL, Lee BH. The effects of posterior talar glide and dorsiflexion of the ankle plus mobilization with movement on balance and gait function in patient with chronic stroke: a randomized controlled trial. *Journal of neurosciences in rural practice*. 2018;9(1):61 - 67. http://dx.doi.org/10.4103/jnpr.jnpr_382_17
38. Kim SY, Kim KS, Hwang YI. Effects of Manual Lymphatic Drainage with Mobilization and Myofascial Release on Muscle Activities during Dynamic Balance in Adults with Calf Muscle Shortening. *Healthcare (Basel)*. 2024;12(10):<http://dx.doi.org/10.3390/healthcare12101038>
39. Kosik KB, Gribble PA. The Effect of Joint Mobilization on Dynamic Postural Control in Patients With Chronic Ankle Instability: A Critically Appraised Topic. *Journal of Sport Rehabilitation*. 2018;27(1):103-108.
40. Kosik KB, McCann RS, Terada M, Gribble PA. Therapeutic interventions for improving self-reported function in patients with chronic ankle instability: a systematic review. *British journal of sports medicine*. 2017;51(2):105-112. <http://dx.doi.org/10.1136/bjsports-2016-096534>
41. Lawson BL, Williamson JD, Baker R, May J, Larkins L, Nasypany A. Examining the Effect of the Mulligan Concept Fibular Repositioning Taping Technique After a Lateral Ankle Sprain. *Athletic Training & Sports Health Care: The Journal for the Practicing Clinician*. 2018;10(1):41-45.
42. Lehr ME, Fink ML, Ulrich E, Butler RJ. Comparison of manual therapy techniques on ankle dorsiflexion range of motion and dynamic single leg balance in collegiate athletes. *Journal of bodywork and movement therapies*. 2022;29(206-214). <http://dx.doi.org/10.1016/j.jbmt.2021.11.004>

REFERENCE LIST

43. Loudon JK, Reiman MP, Sylvain J. The efficacy of manual joint mobilisation/manipulation in treatment of lateral ankle sprains: a systematic review. *British Journal of Sports Medicine*. 2014;48(5):506-509.
44. Luzenski KL, Chaconas EJ, Dinkins EM. Management of a patient with chronic ankle instability utilizing mobilization with movement combined with neuromuscular re-education and patient self-taping in return to athletic activity. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2010;18(4):230-231.
45. Marrón-Gómez D, Rodríguez-Fernández Á, Martín-Urrialde JA. The effect of two mobilization techniques on dorsiflexion in people with chronic ankle instability. *Physical therapy in sport*. 2015;16(1):10 - 15.
<http://dx.doi.org/10.1016/j.ptsp.2014.02.001>
46. Mau H, Baker RT. A MODIFIED MOBILIZATION-WITH-MOVEMENT TO TREAT A LATERAL ANKLE SPRAIN. *International Journal of Sports Physical Therapy*. 2014;9(4):540-548.
47. May JM. *Analysis of an individual clinician's patient outcomes when applying the Mulligan Concept intervention strategy to treat lateral ankle sprains in an intercollegiate athletic training clinic. A dissertation of clinical practice improvement [thesis]*. University of Idaho; 2014.
48. May JM, Nasypany A, Paolino J, Baker R, Seegmiller J. Patient Outcomes Utilizing the Mulligan Concept of Mobilization With Movement to Treat Intercollegiate Patients Diagnosed With Lateral Ankle Sprain: An a Priori Case Series. *Journal of Sport Rehabilitation*. 2017;26(6):486-496.
49. Mehta S, Basu S, Palekar TJ, Davé N. Effect of kinesio taping versus mulligan Taping in treatment of heel pain. *International journal of pharma and bio sciences*. 2017;8(
50. Meyer JE, Rivera MJ, Powden CJ. The Evaluation of Joint Mobilization Dosage on Ankle Range of Motion in Individuals With Decreased Dorsiflexion and a History of Ankle Sprain. *Journal of sport rehabilitation*. 2020;1-6. <http://dx.doi.org/10.1123/jsr.2020-0114>
51. Moiler K, Hall T, Robinson K. The role of fibular tape in the prevention of ankle injury in basketball: A pilot study. *The Journal of orthopaedic and sports physical therapy*. 2006;36(9):661-668.
<http://dx.doi.org/10.2519/jospt.2006.2259>
52. Nascimento LR, Boening A, Ribeiro I, Dos Santos ME, Benevides M, Santuzzi CH. Mobilization with movement is effective for improving ankle range of motion and walking ability in individuals after stroke: A systematic review with meta-analysis. *Pm r*. 2025;17(2):200-209. <http://dx.doi.org/10.1002/pmrj.13259>
53. Nguyen AP, Mahaudens P, Detrembleur C, Hall T, Hidalgo B. Inferior tibiofibular joint mobilization with movement and taping does not improve chronic ankle dorsiflexion stiffness: a randomized placebo-controlled trial. *The Journal of manual & manipulative therapy*. 2020;1-10.
<http://dx.doi.org/10.1080/10669817.2020.1805690>
54. Nguyen AP, Pitance L, Mahaudens P, et al. Effects of Mulligan Mobilization with Movement in Subacute Lateral Ankle Sprains: A Pragmatic Randomized Trial. *The Journal of manual & manipulative therapy*. 2021;29(6):341-352. <http://dx.doi.org/10.1080/10669817.2021.1889165>
55. Norouzi A, Delkhoush CT, Mirmohammadkhani M, Bagheri R. A comparison of mobilization and mobilization with movement on pain and range of motion in people with lateral ankle sprain: A randomized clinical trial. *Journal of bodywork and movement therapies*. 2021;27(654-660).
<http://dx.doi.org/10.1016/j.jbmt.2021.05.006>
56. O'Brien T, Vicenzino B. A study of the effects of Mulligan's mobilization with movement treatment of lateral ankle pain using a case study design. *Manual Therapy*. 1998;3(2):78-84.

REFERENCE LIST

57. Painter EE, Deyle GD, Allen C, Petersen EJ, Croy T, Rivera KP. Manual Physical Therapy Following Immobilization for Stable Ankle Fracture: A Case Series. *The Journal of orthopaedic and sports physical therapy*. 2015;45(9):665-674. <http://dx.doi.org/10.2519/jospt.2015.5981>
58. Ragheb Abushameh RS, Topcu ZG, Tunal AN, Amro A, Arab AA. The effects of ankle mulligan mobilisation in children with cerebral palsy: A randomized single blind control study. *J Pak Med Assoc*. 2024;74(7):1219-1223. <http://dx.doi.org/10.47391/jpma.10328>
59. Reid A, Birmingham TB, Alcock G. Efficacy of mobilization with movement for patients with limited dorsiflexion after ankle sprain: a crossover trial. *Physiotherapy Canada*. 2007;59(3):166-172.
60. Shadegani R, Khanmohammadi R, Olyaei G. Comparison of effects of Mulligan taping and Kinesio taping on ankle neuromuscular control in response to a sudden inversion perturbation in individuals with chronic ankle instability. *Phys Ther Sport*. 2023;63(58-66). <http://dx.doi.org/10.1016/j.ptsp.2023.07.004>
61. Shedge SS, Ramteke SU, Samal S. Integrated Rehabilitation Approach Utilizing Swiss Ball Training, Mulligan Taping, and Mobilization With Movement for Simultaneous Management of Sacroiliac Joint Dysfunction and Lateral Ankle Sprain in a Badminton Athlete: A Case Study. *Cureus*. 2024;16(3):e56942. <http://dx.doi.org/10.7759/cureus.56942>
62. Shumway JD, Vraa D. Short-Term Effect of Manual Therapy & Taping on Subacute Ankle Sprains with Potential Syndesmotic Sprain: A Case Series. *The Journal of manual & manipulative therapy*. 2022;30(2):116-123. <http://dx.doi.org/10.1080/10669817.2021.1974240>
63. Silva MC, Ferreira AS, Baldon RM, et al. Immediate Effects of Manual Therapy Techniques on Ankle Dorsiflexion: A Randomized Clinical Trial. *Journal of manipulative and physiological therapeutics*. 2025;48(1-5):166-176. <http://dx.doi.org/10.1016/j.jmpt.2025.09.002>
64. Simsek S, Yagci N. Acute effects of distal fibular taping technique on pain, balance and forward lunge activities in Chronic Ankle Instability. *Journal of back and musculoskeletal rehabilitation*. 2019;32(1):15-20. <http://dx.doi.org/10.3233/bmr-181132>
65. Smith MD, Vitharana TN, Wallis GM, Vicenzino B. Response profile of fibular repositioning tape on ankle osteokinematics, arthrokinematics, perceived stability and confidence in chronic ankle instability. *Musculoskeletal Science and Practice*. 2020;50(102272). <http://dx.doi.org/https://doi.org/10.1016/j.msksp.2020.102272>
66. Someeh M, Norasteh AA, Daneshmandi H, Asadi A. Immediate effects of Mulligan's fibular repositioning taping on postural control in athletes with and without chronic ankle instability. *Phys Ther Sport*. 2015;16(2):135-139. <http://dx.doi.org/10.1016/j.ptsp.2014.08.003>
67. Stanek JM, Brown B, Barrack J, Parish J. A novel manual therapy technique is effective for short-term increases in tibial internal rotation range of motion. *Journal of exercise rehabilitation*. 2021;17(3):184-191. <http://dx.doi.org/10.12965/jer.2142228.114>
68. Stanek JM, Pieczynski AE. Effectiveness of clinician- and patient-applied mobilisation with movement technique to increase ankle dorsiflexion range of motion. *International Journal of Therapy and Rehabilitation*. 2020;27(4):1-11. <http://dx.doi.org/10.12968/ijtr.2018.0118>
69. Taghizadeh Delkhouh C, Arzani P, Mirmohammadkhani M, Bagheri R, Norouzi A. The Impact of Ankle Mobilization Techniques on Static Stability in Individuals With Acute Inversion Ankle Sprain: A Randomized Clinical Trial. *Journal of chiropractic medicine*. 2024;23(4):153-161. <http://dx.doi.org/10.1016/j.jcm.2024.08.002>

REFERENCE LIST

70. Terada M, Pietrosimone BG, Gribble PA. Therapeutic Interventions for Increasing Ankle Dorsiflexion After Ankle Sprain: A Systematic Review. *Journal of Athletic Training (Allen Press)*. 2013;48(5):696-709.
71. Tomruk M, Soysal Tomruk M, Alkan E, Gelecek N. Immediate Effects of Ankle Joint Mobilization With Movement on Postural Control, Range of Motion, and Muscle Strength in Healthy Individuals: A Randomized, Sham-Controlled Trial. *Journal of sport rehabilitation*. 2019;1-9.
<http://dx.doi.org/10.1123/jsr.2019-0198>
72. van der Wees PJ, Lenssen AF, Hendriks EJ, Stomp DJ, Dekker J, de Bie RA. Effectiveness of exercise therapy and manual mobilisation in ankle sprain and functional instability: a systematic review. *The Australian journal of physiotherapy*. 2006;52(1):27-37.
73. Vicenzino B, Branjerdporn M, Teys P, Jordan K. Initial changes in posterior talar glide and dorsiflexion of the ankle after mobilization with movement in individuals with recurrent ankle sprain. *Journal of orthopaedic and sports physical therapy*. 2006;36(7):464 - 471. <http://dx.doi.org/10.2519/jospt.2006.2265>
74. Weerasekara I, Deam H, Bamborough N, et al. Effect of Mobilisation with Movement (MWM) on clinical outcomes in lateral ankle sprains: A systematic review and meta-analysis. *Foot (Edinburgh, Scotland)*. 2020;43(101657). <http://dx.doi.org/10.1016/j.foot.2019.101657>
75. Weerasekara I, Osmotherly PG, Snodgrass S, Tessier J, Rivett DA. Is the fibula positioned anteriorly in weight-bearing in individuals with chronic ankle instability? A case control study. *Journal of Manual & Manipulative Therapy*. 2021;29(3):168-175. <http://dx.doi.org/10.1080/10669817.2020.1844852>
76. Wheeler TJ, Basnett CR, Hanish MJ, et al. Fibular taping does not influence ankle dorsiflexion range of motion or balance measures in individuals with chronic ankle instability. *Journal of Science and Medicine in Sport*. 2013;16(6):488-492. <http://dx.doi.org/10.1016/j.jsams.2013.02.012>
77. Wikstrom EA, Bagherian S, Allen G, Song K. Anterior-to-Posterior Ankle Joint Mobilizations Improve Dynamic Postural Control in Chronic Ankle Instability Patients: A Critically Appraised Topic. *International Journal of Athletic Therapy & Training*. 2018;23(2):57-61.
78. Woodman R, Berghorn K, Underhill T, Wolanin M. Utilization of mobilization with movement for an apparent sprain of the posterior talofibular ligament: A case report. *Manual Therapy*. 2013;18(1):e1-e7.
79. Yoon J-Y, An D-H, Oh J-S. Plantarflexor and Dorsiflexor Activation during Inclined Walking with and without Modified Mobilization with Movement Using Tape in Women with Limited Ankle Dorsiflexion. *Journal of physical therapy science*. 2013;25(8):993-995. <http://dx.doi.org/10.1589/jpts.25.993>
80. Yoon J-y, Hwang Y-i, An D-h, Oh J-s. Changes in Kinetic, Kinematic, and Temporal Parameters of Walking in People With Limited Ankle Dorsiflexion: Pre-Post Application of Modified Mobilization With Movement Using Talus Glide Taping. *Journal of Manipulative & Physiological Therapeutics*. 2014;37(5):320-325.
<http://dx.doi.org/10.1016/j.jmpt.2014.01.007>
81. Yoon J-y, Oh J-s, An D-h. Three-Dimensional Analysis of Foot Motion After Uphill Walking With Mobilization With Movement Using Tape Applied to the Talocrural Joint in Women With Limited Ankle Dorsiflexion. *Foot & Ankle International*. 2014;35(11):1217-1225.

REFERENCE LIST

13. Stroke & Neurological Conditions (11)

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|-------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Buyukturan | 2022 | | ✓ | | | | | | | | | | | | |
| Nascimento | 2025 | ✓ | | | | | | | | | | | | | |
| Arabzadeh | 2023 | | ✓ | | | | | | | | | | | | |
| Alamer | 2021 | ✓ | | | | | | | | | | | | | |
| An | 2017 | | ✓ | | | | | | | | | | | | |
| Hyun | 2015 | | ✓ | | | | | | | | | | | | |
| Kim | 2024 | | ✓ | | | | | | | | | | | | |
| Park | 2018 | | ✓ | | | | | | | | | | | | |
| Park | 2019 | | ✓ | | | | | | | | | | | | |
| Park | 2020 | | ✓ | | | | | | | | | | | | |
| Sang-Lim | 2016 | | ✓ | | | | | | | | | | | | |

- Alamer A, Melese H, Getie K, et al. Effect of Ankle Joint Mobilization with Movement on Range of Motion, Balance and Gait Function in Chronic Stroke Survivors: Systematic Review of Randomized Controlled Trials. *Degener Neurol Neuromuscul Dis*. 2021;11(51-60. <http://dx.doi.org/10.2147/DNND.S317865>
- An CM, Jo SO. Effects of Talocrural Mobilization with Movement on Ankle Strength, Mobility, and Weight-Bearing Ability in Hemiplegic Patients with Chronic Stroke: A Randomized Controlled Trial. *Journal of stroke and cerebrovascular diseases : the official journal of National Stroke Association*. 2017;26(1):169-176. <http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2016.09.005>
- Arabzadeh S, Kamali F, Bervis S, Razeghi M. The hip joint mobilization with movement technique improves muscle activity, postural stability, functional and dynamic balance in hemiplegia secondary to chronic stroke: a blinded randomized controlled trial. *BMC Neurol*. 2023;23(1):262. <http://dx.doi.org/10.1186/s12883-023-03315-2>
- Buyukturan B, Sas S, Kararti C, Ozsoy I, Habibzadeh A, Buyukturan O. Effects of Subtalar Joint Mobilization with Movement on Muscle Strength, Balance, Functional Performance, and Gait Parameters in Patients with Chronic Stroke: A Single-Blind Randomized Controlled Study. *J Am Podiatr Med Assoc*. 2022;112(1):<http://dx.doi.org/10.7547/20-275>
- Hyun KH, Cho HY, Lim CG. The effect of knee joint Mulligan taping on balance and gait in subacute stroke patients. *Journal of physical therapy science*. 2015;27(11):3545-3547. <http://dx.doi.org/10.1589/jpts.27.3545>

REFERENCE LIST

6. Kim J, Cho J. Effectiveness of mid thoracic spine mobilization on postural balance and gait ability in subacute stroke patients: A randomized clinical trial. *Journal of back and musculoskeletal rehabilitation*. 2024;37(1):233-240. <http://dx.doi.org/10.3233/BMR-230144>
7. Nascimento LR, Boening A, Ribeiro I, Dos Santos ME, Benevides M, Santuzzi CH. Mobilization with movement is effective for improving ankle range of motion and walking ability in individuals after stroke: A systematic review with meta-analysis. *Pm r*. 2025;17(2):200-209. <http://dx.doi.org/10.1002/pmrj.13259>
8. Park D, Cynn H-S, Yi C, Choi WJ, Shim J-H, Oh D-W. Four-week training involving self-ankle mobilization with movement versus calf muscle stretching in patients with chronic stroke: a randomized controlled study. *Topics in stroke rehabilitation*. 2020;27(4):296-304. <http://dx.doi.org/10.1080/10749357.2019.1690831>
9. Park D, Lee JH, Kang TW, Cynn HS. Effects of a 4-Week Self-Ankle Mobilization with Movement Intervention on Ankle Passive Range of Motion, Balance, Gait, and Activities of Daily Living in Patients with Chronic Stroke: A Randomized Controlled Study. *Journal of stroke and cerebrovascular diseases : the official journal of National Stroke Association*. 2018;27(12):3451-3459. <http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2018.08.010>
10. Park D, Lee JH, Kang TW, Cynn HS. Four-week training involving ankle mobilization with movement versus static muscle stretching in patients with chronic stroke: a randomized controlled trial. *Topics in stroke rehabilitation*. 2019;26(2):81-86. <http://dx.doi.org/10.1080/10749357.2018.1550614>
11. Sang-Lim KIM, Byoung-Hee LEE. Effect of Mulligan's mobilization with movement technique on gait function in stroke patients. *Journal of physical therapy science*. 2016;28(8):2326-2329.

14. Other (7)

| Lead Author | Year | Systematic Reviews | Randomised Controlled Trials | Non-randomised Studies | Repeated Measures Studies | Case-Control Studies | Case Series | Prospective Cohort Studies | Case Reports | Diagnostic Accuracy Studies | Other Experimental Research | Non-experimental Studies | Narrative Reviews & CATs | Textbooks and Book Chapters | Trial Protocols |
|-------------|------|--------------------|------------------------------|------------------------|---------------------------|----------------------|-------------|----------------------------|--------------|-----------------------------|-----------------------------|--------------------------|--------------------------|-----------------------------|-----------------|
| Carrasco | 2011 | | | | | | | | ✓ | | | | | | |
| El Gendy | 2023 | | ✓ | | | | | | | | | | | | |
| Elabd | 2024 | | ✓ | | | | | | | | | | | | |
| Özçelep | 2025 | | ✓ | | | | | | | | | | | | |
| Ragheb | 2024 | | ✓ | | | | | | | | | | | | |
| Tat | 2021 | | ✓ | | | | | | | | | | | | |
| Tatsios | 2025 | | ✓ | | | | | | | | | | | | |

REFERENCE LIST

1. Carrasco NM, Bergas MJT, Sánchez CO, Blanco MVV. Effects of Mulligan's technique on a burn patient. A case report. *Revista Iberoamericana de Fisioterapia y Kinesiología*. 2011;14(2):90-93.
2. El Gendy MH, Mohamed SR, Taman SE, Hussein HM, Abu El Kasem ST. Short term effect of spinal mobilization with movement (MWM) on pulmonary functions in nonsmokers with thoracic hyperkyphosis: a randomized single-blinded controlled trial. *The Journal of manual & manipulative therapy*. 2023;31(2):64-71. <http://dx.doi.org/10.1080/10669817.2022.2075203>
3. Elabd OM, Etoom M, Jahan AM, Elabd AM, Khedr AM, Elgohary HM. The Efficacy of Muscle Energy and Mulligan Mobilization Techniques for the Upper Extremities and Posture after Breast Cancer Surgery with Axillary Dissection: A Randomized Controlled Trial. *Journal of Clinical Medicine*. 2024;13(4):<http://dx.doi.org/10.3390/jcm13040980>
4. Özçelep ÖF, Tunalı N, Turhan A, et al. The effect of mobilization with movement on pain, joint distance, effusion area, and inflammation in rheumatoid arthritis: a double-blind randomized controlled clinical trial. *Journal of Orthopaedic Surgery and Research*. 2025;20(1):<http://dx.doi.org/10.1186/s13018-025-06121-3>
5. Ragheb Abushameh RS, Topcu ZG, Tunalı AN, Amro A, Arab AA. The effects of ankle mulligan mobilisation in children with cerebral palsy: A randomized single blind control study. *J Pak Med Assoc*. 2024;74(7):1219-1223. <http://dx.doi.org/10.47391/jpma.10328>
6. Tat AM, Can F, Tat NM, Sasmaz HI, Antmen AB. The effects of manual therapy and exercises on pain, muscle strength, joint health, functionality and quality of life in haemophilic arthropathy of the elbow joint: A randomized controlled pilot study. *Haemophilia*. 2021;27(3):e376-e384. <http://dx.doi.org/https://doi.org/10.1111/hae.14281>
7. Tatsios PI, Grammatopoulou E, Dimitriadis Z, Koumantakis GA. The Effectiveness of Manual Therapy in the Cervical Spine and Diaphragm, in Combination with Breathing Re-Education Exercises, on the Range of Motion and Forward Head Posture in Patients with Non-Specific Chronic Neck Pain: A Randomized Controlled Trial. *Healthcare (Basel)*. 2025;13(14):<http://dx.doi.org/10.3390/healthcare13141765>

CATEGORISED BY STUDY TYPE

1. Systematic Reviews (54)

1. Alamer A, Melese H, Getie K, et al. Effect of Ankle Joint Mobilization with Movement on Range of Motion, Balance and Gait Function in Chronic Stroke Survivors: Systematic Review of Randomized Controlled Trials. *Degener Neurol Neuromuscul Dis*. 2021;11(51-60. <http://dx.doi.org/10.2147/DNND.S317865>
2. Anwer S, Alghadir A, Zafar H, Brismée J-M. Effects of orthopaedic manual therapy in knee osteoarthritis: a systematic review and meta-analysis. *Physiotherapy*. 2018;104(3):264-276.
3. Athanasiadis D, Dionyssiotis Y, Krumov J, Obretenov V, Panayotov K, Papathanasiou J. The cognitive-behavioral aspects of the Mulligan concept of manual therapy: A systematic review. *Eur J Transl Myol*. 2022;<http://dx.doi.org/10.4081/ejtm.2022.10504>
4. Barbosa-Silva J, Luc A, Sobral de Oliveira-Souza AI, et al. The Effectiveness of Mulligan's Techniques in Non-Specific Neck Pain: A Systematic Review and Meta-Analysis. *Physiotherapy research international : the journal for researchers and clinicians in physical therapy*. 2025;30(3):e70045. <http://dx.doi.org/10.1002/pri.70045>
5. Bisset L, Hing W, Vicenzino B. The efficacy of mobilisations with movement treatment on musculoskeletal pain: a systematic review and meta-analysis. *Physiotherapy (united kingdom)*. 2011;97(eS134. <http://dx.doi.org/10.1016/j.physio.2011.04.002>
6. Bisset L, Hing W, Vicenzino B. A systematic review of the efficacy of MWM. In: Vicenzino B, Hing W, Rivett D, Hall T, eds. *Mobilisation With Movement: The Art and the Science*. Chatswood, NSW: Churchill Livingstone Australia; 2011:26-64.
7. Bleakley CM, McDonough SM, MacAuley DC. Some conservative strategies are effective when added to controlled mobilisation with external support after acute ankle sprain: a systematic review. *Australian Journal of Physiotherapy*. 2008;54(1):7-20.
8. Cardoso R, Seixas A, Rodrigues S, et al. The effectiveness of Sustained Natural Apophyseal Glide on Flexion Rotation Test, pain intensity, and functionality in subjects with Cervicogenic Headache: A Systematic Review of Randomized Trials. *Arch Physiother*. 2022;12(1):20. <http://dx.doi.org/10.1186/s40945-022-00144-3>
9. Çelik D, Van Der Veer P, Tiryaki P. The Clinical Significance of Mulligan's Mobilization with Movement in Shoulder Pathologies: A Systematic Review and Meta-Analysis. *Journal of Integrative and Complementary Medicine*. 2024;31(2):134-142. <http://dx.doi.org/10.1089/jicm.2024.0200>
10. Clar C, Tsertsvadze A, Court R, Hundt GL, Clarke A, Sutcliffe P. Clinical effectiveness of manual therapy for the management of musculoskeletal and non-musculoskeletal conditions: systematic review and update of UK evidence report. *Chiropractic & manual therapies*. 2014;22(1):12. <http://dx.doi.org/10.1186/2045-709x-22-12>
11. Desjardins-Charbonneau A, Roy JS, Dionne CE, Fremont P, MacDermid JC, Desmeules F. The efficacy of manual therapy for rotator cuff tendinopathy: a systematic review and meta-analysis. *The Journal of orthopaedic and sports physical therapy*. 2015;45(5):330-350. <http://dx.doi.org/10.2519/jospt.2015.5455>
12. Dias D, Neto MG, Sales S, et al. Effect of Mobilization with Movement on Pain, Disability, and Range of Motion in Patients with Shoulder Pain and Movement Impairment: A Systematic Review and Meta-Analysis. *J Clin Med*. 2023;12(23):<http://dx.doi.org/10.3390/jcm12237416>
13. Drapeza RC, Jr., Navasca SB, Dones V, 3rd, Rimando CR. The effects of taping on de Quervain's disease: A systematic review and meta-analysis. *Journal of bodywork and movement therapies*. 2022;32(218-227. <http://dx.doi.org/10.1016/j.jbmt.2022.05.004>

REFERENCE LIST

14. ElMeligie MM, Abdeen HA, Atef H, Marques-Sule E, Karkosha RN. The effectiveness of mulligan mobilization with movement (MWM) on outcomes of patients with ankle sprain: a systematic review and meta-analysis. *BMC Sports Sci Med Rehabil.* 2025;17(1):105. <http://dx.doi.org/10.1186/s13102-025-01121-6>
15. Gutiérrez-Espinoza H, Araya-Quintanilla F, Olguín-Huerta C, Valenzuela-Fuenzalida J, Gutiérrez-Monclus R, Moncada-Ramírez V. Effectiveness of manual therapy in patients with distal radius fracture: a systematic review and meta-analysis. *The Journal of manual & manipulative therapy.* 2022;30(1):33-45. <http://dx.doi.org/10.1080/10669817.2021.1992090>
16. Haik MN, Albuquerque-Sendin F, Moreira RF, Pires ED, Camargo PR. Effectiveness of physical therapy treatment of clearly defined subacromial pain: a systematic review of randomised controlled trials. *British journal of sports medicine.* 2016;50(18):1124-1134. <http://dx.doi.org/10.1136/bjsports-2015-095771>
17. Heiser R, O'Brien VH, Schwartz DA. The use of joint mobilization to improve clinical outcomes in hand therapy: A systematic review of the literature. *Journal of Hand Therapy.* 2013;26(4):297-310. <http://dx.doi.org/10.1016/j.jht.2013.07.004>
18. Herd CR, Meserve BB. A Systematic Review of the Effectiveness of Manipulative Therapy in Treating Lateral Epicondylalgia. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy).* 2008;16(4):225-237.
19. Hidalgo B, Hall T, Bossert J, Dugeny A, Cagnie B, Pitance L. The efficacy of manual therapy and exercise for treating non-specific neck pain: A systematic review. *Journal of Back & Musculoskeletal Rehabilitation.* 2017;30(6):1149-1169.
20. Ho C-YC, Sole G, Munn J. The effectiveness of manual therapy in the management of musculoskeletal disorders of the shoulder: A systematic review. *Manual Therapy.* 2009;14(5):463-474.
21. Hoogvliet P, Randsdorp MS, Dingemanse R, Koes BW, Huisstede BMA. Does effectiveness of exercise therapy and mobilisation techniques offer guidance for the treatment of lateral and medial epicondylitis? A systematic review. *British Journal of Sports Medicine.* 2013;47(17):1112-1119. <http://dx.doi.org/10.1136/bjsports-2012-091990>
22. Hussein H, Atteya M, Ansari A, Kamel E. A Systematic Review and Meta-Analysis of the Effectiveness of Mulligan Mobilization with Movement on Pain, Range of Motion, Function, and Flexibility in Patients with Sciatica. *NeuroRehabilitation.* 2025;56(2):83-96. <http://dx.doi.org/10.1177/10538135241301693>
23. Jain TK, Sharma NK. The effectiveness of physiotherapeutic interventions in treatment of frozen shoulder/adhesive capsulitis: A systematic review. *Journal of Back & Musculoskeletal Rehabilitation.* 2014;27(3):247-273. <http://dx.doi.org/10.3233/BMR-130443>
24. Jayaseelan DJ, Scalzitti DA, Palmer G, Immerman A, Courtney CA. The effects of joint mobilization on individuals with patellofemoral pain: a systematic review. *Clinical Rehabilitation.* 2018;32(6):722-733.
25. Kosik KB, McCann RS, Terada M, Gribble PA. Therapeutic interventions for improving self-reported function in patients with chronic ankle instability: a systematic review. *British journal of sports medicine.* 2017;51(2):105-112. <http://dx.doi.org/10.1136/bjsports-2016-096534>
26. Kubuk BS, Carrasco-Uribarren A, Cabanillas-Barea S, Ceballos-Laita L, Jimenez-Del-Barrio S, Perez-Guillen S. The effects of end-range interventions in the management of primary adhesive capsulitis of the shoulder: a systematic review and meta-analysis. *Disabil Rehabil.* 2023;1-15. <http://dx.doi.org/10.1080/09638288.2023.2243826>
27. Li L-L, Hu X-J, Di Y-H, Jiao W. Effectiveness of Maitland and Mulligan mobilization methods for adults with knee osteoarthritis: A systematic review and meta-analysis. *World Journal of Clinical Cases.* 2022;10(3):954-965. <http://dx.doi.org/10.12998/wjcc.v10.i3.954>

REFERENCE LIST

28. Lin LH, Lin M, Hsieh GJ, Chen HI, Sun SF, Tsai RJ. Mobilization with movement on reducing pain and disability for knee osteoarthritis: a systematic review and meta-analysis of randomized controlled trials. *The Journal of manual & manipulative therapy*. 2025;1-16. <http://dx.doi.org/10.1080/10669817.2025.2495576>
29. Loudon JK, Reiman MP, Sylvain J. The efficacy of manual joint mobilisation/manipulation in treatment of lateral ankle sprains: a systematic review. *British Journal of Sports Medicine*. 2014;48(5):506-509.
30. Lucado AM, Dale RB, Vincent J, Day JM. Do joint mobilizations assist in the recovery of lateral elbow tendinopathy? A systematic review and meta-analysis. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2018;<http://dx.doi.org/10.1016/j.jht.2018.01.010>
31. Lystad RP, Bell G, Bonnevie-Svendsen M, Carter CV. Manual therapy with and without vestibular rehabilitation for cervicogenic dizziness: a systematic review. *Chiropractic & manual therapies*. 2011;19(1):21. <http://dx.doi.org/10.1186/2045-709x-19-21>
32. Machado M. The Effects of Mobilizations With Movement Versus Maitland Mobilizations on Range of Motion and Shoulder Function in Patients With Adhesive Capsulitis: A Meta-Analysis. *Effects of Mobilizations With Movement Versus Maitland Mobilizations on Range of Motion & Shoulder Function in Patients With Adhesive Capsulitis: A Meta-Analysis*. 2017;1-1.
33. Nascimento LR, Boening A, Ribeiro I, Dos Santos ME, Benevides M, Santuzzi CH. Mobilization with movement is effective for improving ankle range of motion and walking ability in individuals after stroke: A systematic review with meta-analysis. *Pm r*. 2025;17(2):200-209. <http://dx.doi.org/10.1002/pmrj.13259>
34. Neelapala YVR. Effectiveness of Mulligan's Mobilization with Movement techniques on pain and disability of peripheral joints: a systematic review with meta-analysis between 2008 to 2017. *Physiotherapy*. 2019;105(2):290. <http://dx.doi.org/10.1016/j.physio.2018.11.304>
35. Noten S, Meeus M, Stassijns G, Van Glabbeek F, Verborgt O, Struyf F. Efficacy of Different Types of Mobilization Techniques in Patients With Primary Adhesive Capsulitis of the Shoulder: A Systematic Review. *Archives of Physical Medicine & Rehabilitation*. 2016;97(5):815-825.
36. Nunez-Cabaleiro P, Leiros-Rodriguez R. Effectiveness of manual therapy in the treatment of cervicogenic headache: A systematic review. *Headache*. 2022;62(3):271-283. <http://dx.doi.org/10.1111/head.14278>
37. Page MJ, Green S, Kramer S, et al. Manual therapy and exercise for adhesive capsulitis (frozen shoulder). *Cochrane Database of Systematic Reviews*. 2014;8):<http://dx.doi.org/10.1002/14651858.CD011275>
38. Page MJ, Green S, McBain B, et al. Manual therapy and exercise for rotator cuff disease. *Cochrane Database of Systematic Reviews*. 2016;6):<http://dx.doi.org/10.1002/14651858.CD012224>
39. Pourahmadi MR, Mohsenifar H, Dariush M, Aftabi A, Amiri A. Effectiveness of mobilization with movement (Mulligan concept techniques) on low back pain: a systematic review. *Clin Rehabil*. 2018;32(10):1289-1298. <http://dx.doi.org/10.1177/0269215518778321>
40. Racicki S, Gerwin S, DiClaudio S, Reinmann S, Donaldson M. Conservative physical therapy management for the treatment of cervicogenic headache: a systematic review. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2013;21(2):113-124.
41. Reep NC, Leverett SN, Heywood RM, Baker RT, Barnes DL, Cheatham SW. The Efficacy of the Mulligan Concept to Treat Meniscal Pathology: A Systematic Review. *Int J Sports Phys Ther*. 2022;17(7):1219-1235. <http://dx.doi.org/10.26603/001c.55540>
42. Salamh P, Cook C, Reiman MP, Sheets C. Treatment effectiveness and fidelity of manual therapy to the knee: A systematic review and meta-analysis. *Musculoskeletal care*. 2017;15(3):238-248. <http://dx.doi.org/10.1002/msc.1166>

REFERENCE LIST

43. Satpute K, Reid S, Mitchell T, Mackay G, Hall T. Efficacy of mobilization with movement (MWM) for shoulder conditions: a systematic review and meta-analysis. *The Journal of manual & manipulative therapy*. 2022;30(1):13-32. <http://dx.doi.org/10.1080/10669817.2021.1955181>
44. Shepherd MH, Shumway J, Salvatori RT, Rhon DI, Young JL. The influence of manual therapy dosing on outcomes in patients with hip osteoarthritis: a systematic review. *Journal of Manual & Manipulative Therapy*. 2022;1-13. <http://dx.doi.org/10.1080/10669817.2022.2037193>
45. Stathopoulos N, Dimitriadis Z, Koumantakis GA. Effectiveness of Mulligan's Mobilization with Movement techniques on pain and disability of peripheral joints: A systematic review with meta-analysis between 2008–2017. *Physiotherapy*. 2018;<http://dx.doi.org/10.1016/j.physio.2018.10.001>
46. Stathopoulos N, Dimitriadis Z, Koumantakis GA. Effectiveness of Mulligan's Mobilization With Movement Techniques on Range of Motion in Peripheral Joint Pathologies: A Systematic Review With Meta-analysis Between 2008 and 2018. *Journal of Manipulative and Physiological Therapeutics*. 2019;<http://dx.doi.org/10.1016/j.jmpt.2019.04.001>
47. Terada M, Pietrosimone BG, Gribble PA. Therapeutic Interventions for Increasing Ankle Dorsiflexion After Ankle Sprain: A Systematic Review. *Journal of Athletic Training (Allen Press)*. 2013;48(5):696-709.
48. Trudel D, Duley J, Zastrow I, Kerr EW, Davidson R, MacDermid JC. Rehabilitation for patients with lateral epicondylitis: a systematic review. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2004;17(2):243-266. <http://dx.doi.org/10.1197/j.jht.2004.02.011>
49. van der Wees PJ, Lenssen AF, Hendriks EJ, Stomp DJ, Dekker J, de Bie RA. Effectiveness of exercise therapy and manual mobilisation in ankle sprain and functional instability: a systematic review. *The Australian journal of physiotherapy*. 2006;52(1):27-37.
50. Weerasekera I, Deam H, Bamborough N, et al. Effect of Mobilisation with Movement (MWM) on clinical outcomes in lateral ankle sprains: A systematic review and meta-analysis. *Foot (Edinburgh, Scotland)*. 2020;43(101657). <http://dx.doi.org/10.1016/j.foot.2019.101657>
51. Weleslassie GG, Temesgen MH, Alamer A, Tsegay GS, Hailemariam TT, Melese H. Effectiveness of Mobilization with Movement on the Management of Knee Osteoarthritis: A Systematic Review of Randomized Controlled Trials. *Pain Res Manag*. 2021;2021(8815682). <http://dx.doi.org/10.1155/2021/8815682>
52. Westad K, Tjoestolvsen F, Hebron C. The effectiveness of Mulligan's mobilisation with movement (MWM) on peripheral joints in musculoskeletal (MSK) conditions: A systematic review. *Musculoskeletal science & practice*. 2019;39(157-163). <http://dx.doi.org/10.1016/j.msksp.2018.12.001>
53. Xu X, Ling Y. Comparative safety and efficacy of manual therapy interventions for cervicogenic headache: a systematic review and network meta-analysis. *Front Neurol*. 2025;16(1566764). <http://dx.doi.org/10.3389/fneur.2025.1566764>
54. Yaseen K, Hendrick P, Ismail A, Felemban M, Alshehri MA. The effectiveness of manual therapy in treating cervicogenic dizziness: a systematic review. *Journal of physical therapy science*. 2018;30(1):96-102. <http://dx.doi.org/10.1589/jpts.30.96>

2. Randomised Controlled Trials (232)

1. Abdelgalil AA, Balbaa AA, Elazizi HM, Abdelaal AAM. High Velocity Low Amplitude Manipulation versus Sustained Apophyseal Glides on Pain and Range of Motion in Patients with Mechanical Neck Pain: An Immediate Effect. *International Journal of Advanced Research*. 2015;3(June):503-514.
2. Abu El Kasem ST, Alaa FAA, Abd El-Raouf NA, Abd-Elazeim AS. Efficacy of Mulligan thoracic sustained natural apophyseal glides on sub-acromial pain in patients with sub-acromial impingement syndrome: a single-blinded randomized controlled trial. *Journal of Manual & Manipulative Therapy*. 2024;April):1-10. <http://dx.doi.org/10.1080/10669817.2024.2341453>
3. Adnan M, Arsh A, Ali B, Ahmad S. Effectiveness of bent leg raise technique and neurodynamics in patients with radiating low back pain. *Pak J Med Sci*. 2022;38(1):47-51. <http://dx.doi.org/10.12669/pjms.38.1.4010>
4. Afzal MW, Ahmad A, Waqas MS, Ahmad U. Effectiveness of Therapeutic Ultrasound With and Without Mulligan Mobilization In Lateral Epicondylitis. *Annals of King Edward Medical University*. 2016;22(1):47. <http://dx.doi.org/10.21649/akemu.v22i1.798>
5. Agyenkwa SK, Mustafaoglu R, Yeldan I. Therapeutic Effects of Kinesiology Taping Versus Self-Mobilization on Neck Pain, Proprioception, Muscle Activity, and Respiratory Muscle Strength Among Prolonged Electronic Device Users. A Randomized Controlled Trial. *Physiotherapy Research International*. 2025;30(2):e70061. <http://dx.doi.org/https://doi.org/10.1002/pri.70061>
6. Ahmed A, Ibrar M, Arsh A, Wali S, Hayat S, Abass S. Comparing the effectiveness of Mulligan mobilization versus Cyriax approach in the management of patients with subacute lateral epicondylitis. *J Pak Med Assoc*. 2021;71(1(a)):12-15. <http://dx.doi.org/10.47391/jpma.186>
7. Akaras E, Guzel NA, Kafa N, Özdemir YA. The acute effects of two different rigid taping methods in patients with hallux valgus deformity. *Journal of back and musculoskeletal rehabilitation*. 2020;33(1):91-98. <http://dx.doi.org/10.3233/bmr-181150>
8. Akram H, Bashir MS, Zia A, Noor R, Shakeel A. Comparison of muscle energy technique and mobilization with movement to reduce pain and improve functional status in subjects with anterior innominate ilio-sacral dysfunction. *Journal of bodywork and movement therapies*. 2024;40(1336-1341). <http://dx.doi.org/10.1016/j.jbmt.2022.11.003>
9. Alansari SM, Youssef EF, Shanb AA. Efficacy of manual therapy on psychological status and pain in patients with neck pain. A randomized clinical trial. *Saudi Med J*. 2021;42(1):82-90. <http://dx.doi.org/10.15537/smj.2021.1.25589>
10. Ali A, Shakil-ur-Rehman S, Sibtain F. The efficacy of sustained natural apophyseal glides with and without isometric exercise training in non-specific neck pain. *Pakistan journal of medical sciences*. 2014;30(4):<http://dx.doi.org/10.12669/pjms.304.5148>
11. Ali MN, Sethi K, Noohu MM. Comparison of two mobilization techniques in management of chronic non-specific low back pain. *Journal of bodywork and movement therapies*. 2019;23(4):918-923. <http://dx.doi.org/10.1016/j.jbmt.2019.02.020>
12. Alkady SME, Kamel RM, AbuTaleb E, Lasheen Y, Alshaarawy FA. Efficacy of Mulligan Mobilization Versus Muscle Energy Technique in Chronic Sacroiliac Joint Dysfunction. *International Journal of Physiotherapy*. 2017;4(5):<http://dx.doi.org/10.15621/ijphy/2017/v4i5/159427>

REFERENCE LIST

13. Alkhawajah HA, Alshami AM. The effect of mobilization with movement on pain and function in patients with knee osteoarthritis: a randomized double-blind controlled trial. *BMC musculoskeletal disorders*. 2019;20(1):452. <http://dx.doi.org/10.1186/s12891-019-2841-4>
14. Alshami AM, AlSadiq AI. Outcomes of scapulothoracic mobilisation in patients with neck pain and scapular dyskinesis: A randomised clinical trial. *J Taibah Univ Med Sci*. 2021;16(4):540-549. <http://dx.doi.org/10.1016/j.jtumed.2021.03.006>
15. Altmis H, Oskay D, Elbasan B, Duzgun I, Tuna Z. Mobilization with movement and kinesio taping in knee arthritis-evaluation and outcomes. *International orthopaedics*. 2018;42(12):2807-2815. <http://dx.doi.org/10.1007/s00264-018-3938-3>
16. Alves Y, Ribeiro F, Silva AG. Effect of fibular repositioning taping in adult basketball players with chronic ankle instability: a randomized, placebo-controlled, crossover trial. *The Journal of sports medicine and physical fitness*. 2018;58(10):1465-1473. <http://dx.doi.org/10.23736/s0022-4707.17.07472-2>
17. Ambarish AA, Chitra J, Subhash KM. Comparative effectiveness of Mulligan's mobilization in weight bearing and non-weight bearing in the treatment of ankle sprains- a randomized clinical trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2008;2(4):1-4.
18. Amjad F, Asghar H. Comparative effects of gong's mobilization and mobilization with movement in patients with adhesive capsulitis: a randomized clinical trial. *Sci Rep*. 2025;15(1):4272. <http://dx.doi.org/10.1038/s41598-025-88422-5>
19. An CM, Jo SO. Effects of Talocrural Mobilization with Movement on Ankle Strength, Mobility, and Weight-Bearing Ability in Hemiplegic Patients with Chronic Stroke: A Randomized Controlled Trial. *Journal of stroke and cerebrovascular diseases : the official journal of National Stroke Association*. 2017;26(1):169-176. <http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2016.09.005>
20. An CM, Won JI. Effects of ankle joint mobilization with movement and weight-bearing exercise on knee strength, ankle range of motion, and gait velocity in patients with stroke: a pilot study. *Journal of physical therapy science*. 2016;28(2):689 - 694.
21. Analay Akbaba Y, Özdemir AE, Bali K, Yalçın E. Immediate Effects of Mobilization With Movement Technique on Cervical Muscle Stiffness, Pain, and Range of Motion in Individuals With Mechanical Neck Pain: A Double-Blind Randomized Controlled Trial. *Physiotherapy theory and practice*. 2025;41(9):1783-1794. <http://dx.doi.org/10.1080/09593985.2025.2473471>
22. Arabzadeh S, Kamali F, Bervis S, Razeghi M. The hip joint mobilization with movement technique improves muscle activity, postural stability, functional and dynamic balance in hemiplegia secondary to chronic stroke: a blinded randomized controlled trial. *BMC Neurol*. 2023;23(1):262. <http://dx.doi.org/10.1186/s12883-023-03315-2>
23. Arshad HS, Shah IH, Nasir RH. Comparison of Mulligan Mobilization with Movement and End-Range Mobilization Following Maitland Techniques in Patients with Frozen Shoulder in Improving Range of Motion. *International Journal of Science and Research (IJSR)*. 2015;4(4):2761-2767.
24. Baeske R, Hall T, Dall'Olmo RR, Silva MF. In people with shoulder pain, mobilisation with movement and exercise improves function and pain more than sham mobilisation with movement and exercise: a randomised trial. *J Physiother*. 2024;70(4):288-293. <http://dx.doi.org/10.1016/j.jphys.2024.08.009>
25. Bagcaci S, Unuvar BS, Gercek H, Ugurlu I, Sert OA, Yilmaz K. A randomized controlled trial on pain, grip strength, and functionality in lateral elbow pain: Mulligan vs muscle energy techniques. *Journal of back and musculoskeletal rehabilitation*. 2023;36(2):419-427. <http://dx.doi.org/10.3233/BMR-220061>

REFERENCE LIST

26. Bello B, Danazumi MS, Kaka B. Comparative Effectiveness of 2 Manual Therapy Techniques in the Management of Lumbar Radiculopathy: A Randomized Clinical Trial. *Journal of chiropractic medicine*. 2019;18(4):253-260. <http://dx.doi.org/10.1016/j.jcm.2019.10.006>
27. Beselga C, Neto F, Albuquerque-Sendín F, Hall T, Oliveira-Campelo N. Immediate effects of hip mobilization with movement in patients with hip osteoarthritis: a randomised controlled trial. *Manual therapy*. 2016;22(80 - 85). <http://dx.doi.org/10.1016/j.math.2015.10.007>
28. Bhagat M, Neelapala YVR, Gangavelli R. Immediate effects of Mulligan's techniques on pain and functional mobility in individuals with knee osteoarthritis: A randomized control trial. *Physiotherapy research international : the journal for researchers and clinicians in physical therapy*. 2020;25(1):e1812. <http://dx.doi.org/10.1002/pri.1812>
29. Bhardwaj P, Dhawan A. The relative efficacy of mobilization with movement versus Cyriax physiotherapy in the treatment of lateral epicondylitis. *Indian Journal of Physiotherapy & Occupational Therapy*. 2011;5(1):142-146.
30. Bhosale N, Kanase SB, Bathia K. Effect of Mulligan's Pain Release Phenomenon with Kinesiotaping in Chronic Patellofemoral Osteoarthritis. *Indian Journal of Public Health Research & Development*. 2019;10(4):324. <http://dx.doi.org/10.5958/0976-5506.2019.00712.5>
31. Bisset L, Beller E, Jull G, Brooks P, Darnell R, Vicenzino B. Mobilisation with movement and exercise, corticosteroid injection, or wait and see for tennis elbow: randomised trial. *BMJ (clinical research ed.)*. 2006;333(7575):939. <http://dx.doi.org/10.1136/bmj.38961.584653.AE>
32. Boruah L, Dutta A, Deka P, Roy J. To Study the Effect of Scapular Mobilization Versus Mobilization With Movement to Reduce Pain and Improve Gleno-humeral Range of Motion in Adhesive Capsulitis of Shoulder: A Comparative Study. *International Journal of Physiotherapy*. 2015;2(5):<http://dx.doi.org/10.15621/ijphy/2015/v2i5/78239>
33. Buke M, Unver F, Sekeroz S, Oztekin SNS. Effectiveness of Mulligan Mobilization Technique and Core Stabilization Exercises in Female Patients With Knee Osteoarthritis: A Randomized Controlled Single-Blind Study. *Journal of manipulative and physiological therapeutics*. 2024;47(1-4):33-44. <http://dx.doi.org/10.1016/j.jmpt.2024.08.012>
34. Buran Çirak Y, Yurdaışık I, Elbaşı ND, Tütüneken YE, Köçe K, Çınar B. Effect of Sustained Natural Apophyseal Glides on Stiffness of Lumbar Stabilizer Muscles in Patients With Nonspecific Low Back Pain: Randomized Controlled Trial. *Journal of Manipulative and Physiological Therapeutics*. 2021;44(6):445-454. <http://dx.doi.org/https://doi.org/10.1016/j.jmpt.2021.06.005>
35. Buyukturan B, Sas S, Kararti C, Ozsoy I, Habibzadeh A, Buyukturan O. Effects of Subtalar Joint Mobilization with Movement on Muscle Strength, Balance, Functional Performance, and Gait Parameters in Patients with Chronic Stroke: A Single-Blind Randomized Controlled Study. *J Am Podiatr Med Assoc*. 2022;112(1):<http://dx.doi.org/10.7547/20-275>
36. Buyukturan O, Buyukturan B, Sas S, Kararti C, Ceylan I. The Effect of Mulligan Mobilization Technique in Older Adults with Neck Pain: A Randomized Controlled, Double-Blind Study. *Pain Res Manag*. 2018;2018(2856375). <http://dx.doi.org/10.1155/2018/2856375>
37. Cankaya MS, Pala OO. Outcomes of Mulligan Concept Applications in Obese Individuals with Chronic Mechanical Low Back Pain: A Randomized Controlled Trial. *Life (Basel)*. 2024;14(6):<http://dx.doi.org/10.3390/life14060754>

REFERENCE LIST

38. Celik T, Menek B. The effect of Mulligan and Maitland techniques on pain, functionality, proprioception, and quality of life in individuals with rotator cuff lesions. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2025;38(3):574-583. <http://dx.doi.org/10.1016/j.jht.2024.12.018>
39. Cevik R, Pala OO. Effects of upper thoracic Mulligan mobilization on pain, range of motion and function in patients with mechanical neck pain: A randomized placebo-controlled trial. *PLoS One*. 2024;19(10):e0311206. <http://dx.doi.org/10.1371/journal.pone.0311206>
40. Ceylan İ, Büyükturan Ö, Aykanat Ö, Büyükturan B, Şaş S, Ceylan MF. The effectiveness of mobilization with movement on patients with mild and moderate carpal tunnel syndrome: A single-blinded, randomized controlled study. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2023;36(4):773-785. <http://dx.doi.org/10.1016/j.jht.2023.02.004>
41. Channak S, Saelee W, Narongrittikai N, et al. The effects of the T6 sustained natural apophyseal glide (SNAG) with rotation in mechanical chronic thoracic spine pain: a randomized controlled trial. *Journal of medical technology*. 2016;28(80-91).
42. Chitale N, Jr., Patil DS, Phansopkar P. Integrated Neuromuscular Inhibition Technique Versus Mulligan Mobilization on Functional Disability in Subjects With Nonspecific Low Back Pain: A Comparative Study. *Cureus*. 2022;14(10):e30253. <http://dx.doi.org/10.7759/cureus.30253>
43. Christian N. Comparative Study to Find the Effect of Mulligans SNAG Technique (C1-C2) Versus Maitlands Technique (C1-C2) in Cervicogenic Headache Among Information Technology Professionals. *International Journal of Physiotherapy*. 2017;4(3):178-183. <http://dx.doi.org/10.15621/ijphy/2017/v4i3/149071>
44. Coelho BAL, Rodrigues HLdN, Almeida GPL, João SMA. Immediate Effect of Ankle Mobilization on Range of Motion, Dynamic Knee Valgus, and Knee Pain in Women With Patellofemoral Pain and Ankle Dorsiflexion Restriction: A Randomized Controlled Trial With 48-Hour Follow-Up. *Journal of Sport Rehabilitation*. 2021;30(5):697-706. <http://dx.doi.org/10.1123/jsr.2020-0183>
45. Collins N, Teys P, Vicenzino B. The initial effects of a Mulligan's mobilization with movement technique on dorsiflexion and pain in subacute ankle sprains. *Manual therapy*. 2004;9(2):77 - 82. [http://dx.doi.org/10.1016/S1356-689X\(03\)00101-2](http://dx.doi.org/10.1016/S1356-689X(03)00101-2)
46. Coombes BK, Bisset L, Brooks P, Khan A, Vicenzino B. Effect of corticosteroid injection, physiotherapy, or both on clinical outcomes in patients with unilateral lateral epicondylalgia: a randomized controlled trial. *Jama*. 2013;309(5):461-469. <http://dx.doi.org/10.1001/jama.2013.129>
47. Coombes BK, Hams A, Tenbrink R, Love A, Bisset LM. Mobilisation-with-movement induces analgesia during exercise but exercise alone is not analgesic in people with lateral elbow tendinopathy: An assessor blinded, randomised crossover trial. *Musculoskeletal science & practice*. 2025;80(103421). <http://dx.doi.org/10.1016/j.msksp.2025.103421>
48. Copurgensli C, Gur G, Tunay VB. A comparison of the effects of Mulligan's mobilization and Kinesio taping on pain, range of motion, muscle strength, and neck disability in patients with Cervical Spondylosis: a randomized controlled study. *Journal of back and musculoskeletal rehabilitation*. 2017;30(1):51 - 62. <http://dx.doi.org/10.3233/BMR-160713>
49. Cruz-Díaz D, Lomas Vega R, Osuna-Pérez MC, Hita-Contreras F, Martínez-Amat A. Effects of joint mobilization on chronic ankle instability: a randomized controlled trial. *Disability and rehabilitation*. 2015;37(7):601 - 610. <http://dx.doi.org/10.3109/09638288.2014.935877>

REFERENCE LIST

50. Cui X, Zhao P, Guo X, et al. Effectiveness of multimodal active physiotherapy for chronic knee pain: a 12-month randomized controlled trial follow-up study. *Front Physiol.* 2024;15(1451345). <http://dx.doi.org/10.3389/fphys.2024.1451345>
51. Dalvi S, Shinde S, Mishra SD. Effect of Mobilization With Movement on the Glenohumeral Joint Positional Fault in Subacromial Impingement. *Cureus.* 2024;16(6):e62576. <http://dx.doi.org/10.7759/cureus.62576>
52. Danazumi MS, Bello B, Yakasai AM, Kaka B. Two manual therapy techniques for management of lumbar radiculopathy: a randomized clinical trial. *J Osteopath Med.* 2021;121(4):391-400. <http://dx.doi.org/10.1515/jom-2020-0261>
53. Das MSS, Dowle P, Iyengar R. Effect of spinal mobilization with leg movement as an adjunct to neural mobilization and conventional therapy in patients with lumbar radiculopathy: Randomized controlled trial. *Journal of Medical and Scientific Research.* 2018;6(1):11-19. <http://dx.doi.org/10.17727/jmsr.2018/6-3>
54. de-la-Morena JM, Alguacil-Diego IM, Molina-Rueda F, Ramiro-González M, Villafaña JH, Fernández-Carnero J. The Mulligan ankle taping does not affect balance performance in healthy subjects: a prospective, randomized blinded trial. *Journal of physical therapy science.* 2015;27(5):1597-1602. <http://dx.doi.org/10.1589/jpts.27.1597>
55. Delgado-Gil JA, Prado-Robles E, Rodrigues-de-Souza DP, Cleland JA, Fernández-de-las-Peñas C, Alburquerque-Sendín F. Effects of mobilization with movement on pain and range of motion in patients with unilateral shoulder impingement syndrome: a randomized controlled trial. *Journal of manipulative and physiological therapeutics.* 2015;38(4):245 - 252. <http://dx.doi.org/10.1016/j.jmpt.2014.12.008>
56. Demirci S, Kinikli GI, Callaghan MJ, Tunay VB. Comparison of short-term effects of mobilization with movement and Kinesiotaping on pain, function and balance in patellofemoral pain. *Acta orthopaedica ET traumatologica turcica.* 2017;51(6):442 - 447. <http://dx.doi.org/10.1016/j.aott.2017.09.005>
57. Demirkan MY, Oral MA, Cobanoglu G, Guzel NA. Effects of two mobilization with movement techniques to the talocrural joint in individuals with dorsiflexion limitation: clinician vs self-applied. *Physiotherapy theory and practice.* 2025;41(10):2100-2111. <http://dx.doi.org/10.1080/09593985.2025.2496776>
58. Deniz V, Kelle B. Mobilization with movement plus exercise versus exercise alone for patients with central sensitization associated with chronic subacromial pain syndrome: a sham-controlled randomized clinical trial. *BMC Complement Med Ther.* 2025;25(1):289. <http://dx.doi.org/10.1186/s12906-025-05028-0>
59. Desai P, Vinodkumar A. A Comparative Study between Efficacy of Low Level Laser Therapy (LLLT) with Mulligan's Mobilization (MWM) Over Ultrasound Therapy with Mulligan's Mobilization (MWM) in Patients with Acute Supraspinatus Tendinitis. *Indian Journal of Physiotherapy & Occupational Therapy.* 2016;10(3):75-81. <http://dx.doi.org/10.5958/0973-5674.2016.00085.X>
60. Devi NG, Dutta A. A comparative study on the effect of self SNAGs versus dynamic isometric exercises in desk job people with chronic neck pain. *International Journal of Physiotherapy.* 2015;2(5):<http://dx.doi.org/10.15621/ijphy/2015/v2i5/78232>
61. Djordjevic OC, Vukicevic D, Katunac L, Jovic S. Mobilization with movement and kinesiotaping compared with a supervised exercise program for painful shoulder: results of a clinical trial. *Journal of manipulative and physiological therapeutics.* 2012;35(6):454 - 463. <http://dx.doi.org/10.1016/j.jmpt.2012.07.006>
62. Doner G, Guven Z, Atalay A, Celiker R. Evaluation of Mulligan's technique for adhesive capsulitis of the shoulder. *Journal of rehabilitation medicine.* 2013;45(1):87 - 91. <http://dx.doi.org/10.2340/16501977-1064>

REFERENCE LIST

63. Doweir AM, Mashaal A, Basha SAZ, et al. Effect of modified mobilization with movement and motor learning on volleyball females players with shoulder impingement syndrome. *J Educ Health Promot.* 2025;14(200). http://dx.doi.org/10.4103/jehp.jehp_1834_24
64. Duymaz T, Yagci N. Effectiveness of the mulligan mobilization technique in mechanical neck pain. *Journal of clinical and analytical medicine.* 2018;9(4):304 - 309. <http://dx.doi.org/10.4328/JCAM.5715>
65. El-Sodany AM, Alayat MSM, Zafer AMI. Sustained natural apophyseal glides mobilization versus manipulation in the treatment of cervical spine disorders: a randomized controlled trial. *International journal of advanced research.* 2014;2(6):274 - 280.
66. El Gendy MH, Mohamed SR, Taman SE, Hussein HM, Abu El Kasem ST. Short term effect of spinal mobilization with movement (MWM) on pulmonary functions in nonsmokers with thoracic hyperkyphosis: a randomized single-blinded controlled trial. *The Journal of manual & manipulative therapy.* 2023;31(2):64-71. <http://dx.doi.org/10.1080/10669817.2022.2075203>
67. Elabd OM, Etoom M, Jahan AM, Elabd AM, Khedr AM, Elgohary HM. The Efficacy of Muscle Energy and Mulligan Mobilization Techniques for the Upper Extremities and Posture after Breast Cancer Surgery with Axillary Dissection: A Randomized Controlled Trial. *Journal of Clinical Medicine.* 2024;13(4):<http://dx.doi.org/10.3390/jcm13040980>
68. Elrazik RKA, Samir SM, Zaki LA, Koura GA. Mobilisation with movement versus postero-anterior mobilisation in chronic non specific low back pain. *International journal of pharmtech research.* 2016;9(6):(pp 9 - 16), 2016. Date of Publication: 2016.):
69. Elsayed WH, Mohamed AF, El-Monem GA, Ahmed HH. Effect of SNAGS Mulligan Technique on Chronic Cervical Radiculopathy : A Randomized Clinical Trial. 2017.
70. Erol E, Burak M, Elbasan B. Effects of instrument-assisted manipulation and mobilization with movement in chronic non-specific low back pain: A randomized controlled trial. *Journal of back and musculoskeletal rehabilitation.* 2025;38(3):640-650. <http://dx.doi.org/10.1177/10538127241309343>
71. Ganesh GS, Mohanty P, Pattnaik M, Mishra C. Effectiveness of mobilization therapy and exercises in mechanical neck pain. *Physiotherapy theory and practice.* 2015;31(2):99 - 106. <http://dx.doi.org/10.3109/09593985.2014.963904>
72. Gautam R, Dhamija JK, Puri A. Comparison of Maitland and Mulligan Mobilization in Improving Neck Pain, ROM and Disability. *International journal of physiotherapy and research.* 2014;2(482-487).
73. Ghadi P, Verma C. Study of the efficacy of the Mulligan's Movement with Mobilization and Taping Technique as an Adjunct to the Conventional Therapy for Lateral Ankle Sprain. *Indian Journal of Physiotherapy & Occupational Therapy.* 2013;7(3):167-171. <http://dx.doi.org/10.5958/j.0973-5674.7.3.086>
74. Ghafoor F, Ahmad Z, Irfan A, Munawar A, Sabir I, Zulqernain F. Comparison of Mulligan Mobilization Technique versus Mckenzie Exercises among Patient with Sacroiliac Joint Dysfunction: A Randomized Clinical Trial. *Journal of Orthopaedics and Sports Medicine.* 2023;05(01):<http://dx.doi.org/10.26502/josm.511500093>
75. Gogate N, Satpute K, Hall T. The effectiveness of mobilization with movement on pain, balance and function following acute and sub acute inversion ankle sprain - A randomized, placebo controlled trial. *Phys Ther Sport.* 2021;48(91-100). <http://dx.doi.org/10.1016/j.ptsp.2020.12.016>
76. Guimaraes JF, Salvini TF, Siqueira AL, Ribeiro IL, Camargo PR, Albuquerque-Sendin F. Immediate Effects of Mobilization With Movement vs Sham Technique on Range of Motion, Strength, and Function in Patients

REFERENCE LIST

- With Shoulder Impingement Syndrome: randomized Clinical Trial. *Journal of manipulative and physiological therapeutics*. 2016;39(9):605 - 615. <http://dx.doi.org/10.1016/j.jmpt.2016.08.001>
77. Hall T, Chan HT, Christensen L, Odenthal B, Wells C, Robinson K. Efficacy of a C1-C2 self-sustained natural apophyseal glide (SNAG) in the management of cervicogenic headache. *Journal of orthopaedic and sports physical therapy*. 2007;37(3):100 - 107. <http://dx.doi.org/10.2519/jospt.2007.2379>
78. Hall T, Hardt S, Schafer A, Wallin L. Mulligan bent leg raise technique--a preliminary randomized trial of immediate effects after a single intervention. *Man Ther*. 2006;11(2):130-135. <http://dx.doi.org/10.1016/j.math.2005.04.009>
79. Hanney W. Immediate Changes in Hip Range of Motion after Mobilization with Movement Versus Static Stretching. *Archives of physical medicine and rehabilitation*. 2022;103(3):e40. <http://dx.doi.org/10.1016/j.apmr.2022.01.111>
80. Heggannavar A, Gupta R. Quantitative effects of proprioceptive exercises and mulligan's MWM in subjects with osteoarthritis of knee-a randomized clinical trail. *Physiotherapy (united kingdom)*. 2015;101(eS555 - eS556). <http://dx.doi.org/10.1016/j.physio.2015.03.3370>
81. Hidalgo B, Hall T, Berwart M, Biernaux E, Detrembleur C. The immediate effects of two manual therapy techniques on ankle musculoarticular stiffness and dorsiflexion range of motion in people with chronic ankle rigidity: A randomized clinical trial. *Journal of Back & Musculoskeletal Rehabilitation*. 2018;31(3):515-524.
82. Hidalgo B, Pitance L, Hall T, Detrembleur C, Nielens H. Short-term effects of Mulligan mobilization with movement on pain, disability, and kinematic spinal movements in patients with nonspecific low back pain: a randomized placebo-controlled trial. *Journal of manipulative and physiological therapeutics*. 2015;38(6):365 - 374. <http://dx.doi.org/10.1016/j.jmpt.2015.06.013>
83. Horoz L, Cigdem-Karacay B, Ceylan I, Alkan H. Effectiveness of mobilization with movement in patients operated for distal radius fracture: a single-blinded, randomized controlled study. *Revista da Associação Médica Brasileira*. 2024;70(11):<http://dx.doi.org/10.1590/1806-9282.20241190>
84. Hotwani R, Metgud S, Ganesh BR. Comparison of McConnell patellar taping versus mobilisation with movement in chronic knee osteoarthritis: a randomized clinical trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2010;4(4):132-136.
85. Hudson R, Richmond A, Sanchez B, et al. Innovative treatment of clinically diagnosed meniscal tears: a randomized sham-controlled trial of the Mulligan concept 'squeeze' technique. *The Journal of manual & manipulative therapy*. 2018;1-10. <http://dx.doi.org/10.1080/10669817.2018.1456614>
86. Hussein HM, Morsi AA, Abdelraoof NA. The immediate effect of sustained natural apophyseal glide on postural stability and pain in individuals presenting with flexion-dominant chronic low back pain: A randomized single-blinded placebo-controlled trial. *Journal of back and musculoskeletal rehabilitation*. 2021;34(6):1079-1086. <http://dx.doi.org/10.3233/bmr-200217>
87. Hussien HM, Abdel-Raooof NA, Kattabei OM, Ahmed HH. Effect of Mulligan Concept Lumbar SNAG on Chronic Nonspecific Low Back Pain. *Journal of chiropractic medicine*. 2017;16(2):94 - 102.
88. Hyun KH, Cho HY, Lim CG. The effect of knee joint Mulligan taping on balance and gait in subacute stroke patients. *Journal of physical therapy science*. 2015;27(11):3545-3547. <http://dx.doi.org/10.1589/jpts.27.3545>
89. Iqbal S, Khan IA, Khan MK, et al. Therapeutic Utility of Mulligan Traction Straight Leg Raise Stretch and Proprioceptive Exercises in Osteoarthritis Treatment. *Cureus*. 2024;<http://dx.doi.org/10.7759/cureus.74382>

REFERENCE LIST

90. Izaola-Azkona L, Vicenzino B, Olabarrieta-Eguia I, Saez M, Lascurain-Aguirrebeña I. Effectiveness of Mobilization of the Talus and Distal Fibula in the Management of Acute Lateral Ankle Sprain. *Phys Ther.* 2021;101(8):<http://dx.doi.org/10.1093/ptj/pzab111>
91. Jeong-Hyun S, Gi Duck P, Hoo Sung P. The Effect of Sacroiliac Joint Mobilization on Pelvic Deformation and the Static Balance Ability of Female University Students with SI Joint Dysfunction. *Journal of physical therapy science.* 2014;26(6):845-848. <http://dx.doi.org/10.1589/jpts.26.845>
92. Jin X, Du H-G, Kong N, Shen J-L, Chen W-J. Clinical efficacy of the mulligan maneuver for cervicogenic headache: a randomized controlled trial. *Scientific Reports.* 2023;13(1):<http://dx.doi.org/10.1038/s41598-023-48864-1>
93. Kachingwe AF, Phillips B, Sletten E, Plunkett SW. Comparison of manual therapy techniques with therapeutic exercise in the treatment of shoulder impingement: a randomized controlled pilot clinical trial. *The Journal of manual & manipulative therapy.* 2008;16(4):238-247. <http://dx.doi.org/10.1179/106698108790818314>
94. Kakati T, Dutta A. A Comparative Study to Find Out Immediate Effectiveness of Movement With Mobilization Versus Elbow Orthosis on Pain and Grip Strength in Lateral Epicondylitis in Housewives. *International Journal of Physiotherapy.* 2015;2(6):<http://dx.doi.org/10.15621/ijphy/2015/v2i6/80772>
95. Kang MH, Oh JS, Kwon OY, Weon JH, An DH, Yoo WG. Immediate combined effect of gastrocnemius stretching and sustained talocrural joint mobilization in individuals with limited ankle dorsiflexion: a randomized controlled trial. *Manual therapy.* 2015;20(6):827 - 834. <http://dx.doi.org/10.1016/j.math.2015.03.016>
96. Kashif M, Albalwi A, Alharbi A, Iram H, Manzoor N. Comparison of subtalar mobilisation with conventional physiotherapy treatment for the management of plantar fasciitis. *J Pak Med Assoc.* 2021;71(12):2705-2709. <http://dx.doi.org/10.47391/JPMA.1049>
97. Kashif M, Manzoor N, Safdar R, Khan H, Farooq M, Wassi A. Effectiveness of sustained natural apophyseal glides in females with cervicogenic headache: A randomized controlled trial. *Journal of back and musculoskeletal rehabilitation.* 2022;35(3):597-603. <http://dx.doi.org/10.3233/bmr-210018>
98. Kaya Mutlu E, Ercin E, Razak Ozdincler A, Ones N. A comparison of two manual physical therapy approaches and electrotherapy modalities for patients with knee osteoarthritis: A randomized three arm clinical trial. *Physiotherapy Theory & Practice.* 2018;34(8):600-612. <http://dx.doi.org/10.1080/09593985.2018.1423591>
99. Kaya Mutlu E, Razak Ozdincler A, Ercin E. Comparison of two different mobilization techniques in the management of osteoarthritis of the knee: a randomized clinical trial. *Osteoarthritis and cartilage.* 2015;23(A391 - A392).
100. Khaki S, Ravanbod R, Ashtiani MN. Mechanical correction in kinesiology and mulligan taping: A comparative study on scapular dyskinesis in computer users. *Journal of back and musculoskeletal rehabilitation.* 2025;38(5):981-994. <http://dx.doi.org/10.1177/10538127251323952>
101. Khalil MA, Alkhozamy H, Fadle S, Hefny AM, Ismail M. Effect of Mulligan upper cervical manual traction in the treatment of cervicogenic headache: a randomized controlled trial. 2019;
102. Khalil R, Tanveer F, Hanif A, Ahmad A. Comparison of Mulligan technique versus muscle energy technique in patients with adhesive capsulitis. *J Pak Med Assoc.* 2022;72(2):211-215. <http://dx.doi.org/10.47391/jpma.1678>

REFERENCE LIST

103. Khan M, Ali SS, Soomro RR. Efficacy of C 1-C 2 Sustained Natural Apophyseal Glide (SNAG) Versus Posterior Anterior Vertebral Mobilization (PAVMs) in the Management of Cervicogenic Headache. *Journal of Basic & Applied Sciences*. 2014;10(226-230).
104. Khandaloo A, Taghizadeh Delkhouh C, Paknazar F, Ehsani F, Shokrian Z. A comparison of two mobilization approaches on the acromiohumeral distance in overhead athletes with primary subacromial impingement syndrome: a randomized clinical study. *Journal of Manual & Manipulative Therapy*. 2025;1-14.
<http://dx.doi.org/10.1080/10669817.2025.2544288>
105. Khyathi P, Vinod Babu K, Sai Kumar N, Asha D. Comparative Effect of Spencer Technique Versus Mulligan's Technique for Subjects with Frozen Shoulder-A Single Blind Study. *International Journal of Physiotherapy*. 2015;2(2):448. <http://dx.doi.org/10.15621/ijphy/2015/v2i2/65255>
106. Kim J, Cho J. Effectiveness of mid thoracic spine mobilization on postural balance and gait ability in subacute stroke patients: A randomized clinical trial. *Journal of back and musculoskeletal rehabilitation*. 2024;37(1):233-240. <http://dx.doi.org/10.3233/BMR-230144>
107. Kim LJ, Choi H, Moon D. Improvement of Pain and Functional Activities in Patients with Lateral Epicondylitis of the Elbow by Mobilization with Movement: a Randomized, Placebo-Controlled Pilot Study. *Journal of physical therapy science*. 2012;24(9):787-790.
108. Kim S-Y, Kim N-S, Kim LJ. Effects of cervical sustained natural apophyseal glide on forward head posture and respiratory function. *Journal of physical therapy science*. 2015;27(6):1851-1854.
<http://dx.doi.org/10.1589/jpts.27.1851>
109. Kim SL, Lee BH. The effects of posterior talar glide and dorsiflexion of the ankle plus mobilization with movement on balance and gait function in patient with chronic stroke: a randomized controlled trial. *Journal of neurosciences in rural practice*. 2018;9(1):61 - 67. http://dx.doi.org/10.4103/jnpr.jnpr_382_17
110. Kim SY, Kim KS, Hwang YI. Effects of Manual Lymphatic Drainage with Mobilization and Myofascial Release on Muscle Activities during Dynamic Balance in Adults with Calf Muscle Shortening. *Healthcare (Basel)*. 2024;12(10):<http://dx.doi.org/10.3390/healthcare12101038>
111. Kirkaya AC, Atici E, Aydin G, Surenkok O. Comparing the Effectiveness of Mulligan Movement with Mobilization and Proprioceptive Neuromuscular Facilitation Techniques in Rehabilitation of Rotator Cuff Syndrome: A Randomized Controlled Trial. *Indian Journal of Orthopaedics*. 2025;59(11):1969-1978.
<http://dx.doi.org/10.1007/s43465-025-01435-0>
112. Kirthika S V, K P, Sudhakar S, Kumar M V. Is Mulligan's Sustained Natural Apophyseal Glides (SNAGS) or Muscle Energy Technique is effective in the non-surgical management of cervicogenic headache? A two-group pretest-posttest randomized controlled trial. *Asian Journal of Pharmaceutical and Clinical Research*. 2018;11(9):230-233. <http://dx.doi.org/10.22159/ajpcr.2018.v11i9.26808>
113. Kochar M, Dogra A. Effectiveness of a specific physiotherapy regimen on patients with tennis elbow: clinical study. *Physiotherapy*. 2002;88(6):333 - 341.
114. Komalasari DR, Vongsirinavarat M, Nilmart P. Effectiveness of manipulation with movement and muscle energy technique in elderly with knee osteoarthritis: A double-blind randomized control trial. *Journal of back and musculoskeletal rehabilitation*. 2025;38(6):1352-1361. <http://dx.doi.org/10.1177/10538127251328541>
115. Konstantinos Z. The short and mid-term effects of Mulligan concept in patients with chronic mechanical neck pain. *Journal of Novel Physiotherapy and Rehabilitation*. 2018;022-035.
<http://dx.doi.org/10.29328/journal.jnpr.1001018>

REFERENCE LIST

116. Konstantinou K, Foster N, Rushton A, Baxter D, Wright C, Breen A. Flexion mobilizations with movement techniques: the immediate effects on range of movement and pain in subjects with low back pain. *Journal of manipulative and physiological therapeutics*. 2007;30(3):178 - 185.
<http://dx.doi.org/10.1016/j.jmpt.2007.01.015>
117. Kumar D. *A Study on the Efficacy of Mulligan Concept in Cervical Spine pain and Stiffness*. Amritsar, India: <http://hdl.handle.net/10603/10445>; 2011.
118. Kumar D, Sandhu JS, Broota A. Efficacy of Mulligan concept (NAGs) on pain at available end range in cervical spine: a randomised controlled trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2011;5(1):154-158.
119. Lehr ME, Fink ML, Ulrich E, Butler RJ. Comparison of manual therapy techniques on ankle dorsiflexion range of motion and dynamic single leg balance in collegiate athletes. *Journal of bodywork and movement therapies*. 2022;29(206-214). <http://dx.doi.org/10.1016/j.jbmt.2021.11.004>
120. Lewis JS, Hewitt JS, Billington L, Cole S, Byng J, Karayiannis S. A randomized clinical trial comparing two physiotherapy interventions for chronic low back pain. *Spine*. 2005;30(7):711 - 721.
121. Lin Y, Luo X. Therapeutic efficacy of mobilization with movement in early postoperative rehabilitation after unicompartmental knee arthroplasty: a double-blind, randomized controlled trial. *J Orthop Surg Res*. 2025;20(1):660. <http://dx.doi.org/10.1186/s13018-025-06047-w>
122. Lirio Romero C, Torres Lacomba M, Castilla Montoro Y, et al. Mobilization With Movement for Shoulder Dysfunction in Older Adults: A Pilot Trial. *Journal of chiropractic medicine*. 2015;14(4):249-258.
<http://dx.doi.org/10.1016/j.jcm.2015.03.001>
123. Lopez-Lopez A, Alonso Perez JL, González Gutierrez JL, et al. Mobilization versus manipulations versus sustain apophyseal natural glide techniques and interaction with psychological factors for patients with chronic neck pain: randomized controlled trial. *European journal of physical and rehabilitation medicine*. 2015;51(2):121 - 132.
124. Manchanda G, Grover D. Effectiveness of movement with mobilization compared with manipulation of wrist in case of lateral epicondylitis. *Indian journal of physiotherapy and occupational therapy*. 2008;2(1):16-21.
125. Manzoor A, Anwar N, Khalid K, Haider R, Saghir M, Javed MA. Comparison of effectiveness of muscle energy technique with Mulligan mobilization in patients with non-specific neck pain. *J Pak Med Assoc*. 2021;71(6):1532-1524. <http://dx.doi.org/10.47391/JPMA.981>
126. Marrón-Gómez D, Rodríguez-Fernández Á, Martín-Urrialde JA. The effect of two mobilization techniques on dorsiflexion in people with chronic ankle instability. *Physical therapy in sport*. 2015;16(1):10 - 15.
<http://dx.doi.org/10.1016/j.ptsp.2014.02.001>
127. Martinez-Cervera FV, Olteanu TE, Gil-Martinez A, Diaz-Pulido B, Ferrer-Pena R. Influence of expectations plus mobilization with movement in patient with lateral epicondylalgia: a pilot randomized controlled trial. *Journal of exercise rehabilitation*. 2017;13(1):101-109. <http://dx.doi.org/10.12965/jer.1732848.424>
128. Martinez Pozas O, Cuenca-Zaldivar JN, Gonzalez-Alvarez ME, et al. Effectiveness of mobilization with movement on conditioned pain modulation, mechanical hyperalgesia, and pain intensity in adults with chronic low back pain: A randomized controlled trial. *Musculoskeletal science & practice*. 2025;75(103220).
<http://dx.doi.org/10.1016/j.msksp.2024.103220>
129. Mehta S, Basu S, Palekar TJ, Davé N. Effect of kinesio taping versus mulligan Taping in treatment of heel pain. *International journal of pharma and bio sciences*. 2017;8(

REFERENCE LIST

130. Menek B, Menek MY. The efficacy of Mulligan mobilization and corticosteroid injection on pain, functionality, and proprioception in rotator cuff tears: A randomized controlled trial. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2025;38(3):410-417. <http://dx.doi.org/10.1016/j.jht.2024.12.016>
131. Menek B, Tarakci D, Algun ZC. The effect of Mulligan mobilization on pain and life quality of patients with Rotator cuff syndrome: A randomized controlled trial. *Journal of back and musculoskeletal rehabilitation*. 2019;32(1):171-178. <http://dx.doi.org/10.3233/bmr-181230>
132. Metgud SC, D'Silva PV, Kamat PS. Immediate effect of MWM adductor stretch, myofascial release, and conventional stretching in asymptomatic individuals with hip adductor tightness: A randomized controlled trial. *Journal of bodywork and movement therapies*. 2022;32(213-217). <http://dx.doi.org/10.1016/j.jbmt.2022.04.006>
133. Mhatre BS, Singh YL, Tembhekar JY, Mehta A. Which is the better method to improve "perceived hamstrings tightness" – Exercises targeting neural tissue mobility or exercises targeting hamstrings muscle extensibility? *International Journal of Osteopathic Medicine*. 2013;16(3):153-162. <http://dx.doi.org/10.1016/j.ijosm.2013.06.002>
134. Micarelli A, Viziano A, Granito I, et al. Postural and clinical outcomes of sustained natural apophyseal glides treatment in cervicogenic dizziness patients: A randomised controlled trial. *Clin Rehabil*. 2021;35(11):1566-1576. <http://dx.doi.org/10.1177/02692155211012413>
135. Mohamed AA, Shendy WS, Semaary M, et al. Combined use of cervical headache snag and cervical snag half rotation techniques in the treatment of cervicogenic headache. *Journal of physical therapy science*. 2019;31(4):376-381. <http://dx.doi.org/10.1589/jpts.31.376>
136. Murtza S, Noor R, Bashir MS, Ikram M. Effects of sustained natural apophyseal glides versus rocabado 6 × 6 program in subjects with cervicogenic headache. *BMC musculoskeletal disorders*. 2024;25(1):169. <http://dx.doi.org/10.1186/s12891-024-07290-8>
137. Naik VC, Chitra J, Khatri S. Effectiveness of maitland versus mulligan mobilization technique following post surgical management of colles' - fracture - rct. *Indian journal of physiotherapy and occupational therapy*. 2007;1(4):
138. Nam C-W, Park S-I, Yong M-S, Kim Y-M. Effects of the MWM Technique Accompanied by Trunk Stabilization Exercises on Pain and Physical Dysfunctions Caused by Degenerative Osteoarthritis. *Journal of physical therapy science*. 2013;25(9):1137-1140. <http://dx.doi.org/10.1589/jpts.25.1137>
139. Nazir SNB, Rathore FA. Efficacy of Mulligan joint mobilizations and trunk stabilization exercises versus isometric knee strengthening in the management of knee osteoarthritis: a randomized controlled trial. *BMC Sports Sci Med Rehabil*. 2024;16(1):105. <http://dx.doi.org/10.1186/s13102-024-00893-7>
140. Neelapala YVR, Reddy YRS, Danait R. Effect of Mulligan's posterolateral glide on shoulder rotator strength, scapular upward rotation in shoulder pain subjects - A randomized controlled trial. *Journal of musculoskeletal research*. 2016;19(3):1650014. <http://dx.doi.org/10.1142/S0218957716500147>
141. Nguyen AP, Mahaudens P, Detrembleur C, Hall T, Hidalgo B. Inferior tibiofibular joint mobilization with movement and taping does not improve chronic ankle dorsiflexion stiffness: a randomized placebo-controlled trial. *The Journal of manual & manipulative therapy*. 2020;1-10. <http://dx.doi.org/10.1080/10669817.2020.1805690>

REFERENCE LIST

142. Nguyen AP, Pitance L, Mahaudens P, et al. Effects of Mulligan Mobilization with Movement in Subacute Lateral Ankle Sprains: A Pragmatic Randomized Trial. *The Journal of manual & manipulative therapy*. 2021;29(6):341-352. <http://dx.doi.org/10.1080/10669817.2021.1889165>
143. Nigam A, Satpute KH, Hall TM. Long term efficacy of mobilisation with movement on pain and functional status in patients with knee osteoarthritis: a randomised clinical trial. *Clin Rehabil*. 2020;269215520946932. <http://dx.doi.org/10.1177/0269215520946932>
144. Norouzi A, Delkhoush CT, Mirmohammadkhani M, Bagheri R. A comparison of mobilization and mobilization with movement on pain and range of motion in people with lateral ankle sprain: A randomized clinical trial. *Journal of bodywork and movement therapies*. 2021;27(654-660). <http://dx.doi.org/10.1016/j.jbmt.2021.05.006>
145. Nunes GS, Wolf DF, Dos Santos DA, de Noronha M, Serrão FV. Acute Effects of Hip Mobilization With Movement Technique on Pain and Biomechanics in Females With Patellofemoral Pain: A Randomized, Placebo-Controlled Trial. *Journal of sport rehabilitation*. 2019;1-9. <http://dx.doi.org/10.1123/jsr.2018-0497>
146. Oskay D, Altmis H, Duzgun I, Elbasan B. Immediate effects of mulligan's concept mobilization with movement on knee pain and functions in patients with knee osteoarthritis. *Annals of the rheumatic diseases*. 2015;74(1315). <http://dx.doi.org/10.1136/annrheumdis-2015-eular.4743>
147. Özçelep ÖF, Tunali N, Turhan A, et al. The effect of mobilization with movement on pain, joint distance, effusion area, and inflammation in rheumatoid arthritis: a double-blind randomized controlled clinical trial. *Journal of Orthopaedic Surgery and Research*. 2025;20(1):<http://dx.doi.org/10.1186/s13018-025-06121-3>
148. Ozlu O, Sahin M. The effect of mulligan mobilization technique application in addition to conventional physiotherapy on pain and joint range of motion in people with neck pain. *Journal of bodywork and movement therapies*. 2024;39(225-230). <http://dx.doi.org/10.1016/j.jbmt.2024.02.009>
149. Pal A, Misra A. Effectiveness of Snag Mobilization on Computer Professionals with Mechanical Neck Pain and Mobility Deficit. *International Journal of Physiotherapy and Research*. 2019;7(2):3022-3027. <http://dx.doi.org/10.16965/ijpr.2019.104>
150. Park D, Cynn H-S, Yi C, Choi WJ, Shim J-H, Oh D-W. Four-week training involving self-ankle mobilization with movement versus calf muscle stretching in patients with chronic stroke: a randomized controlled study. *Topics in stroke rehabilitation*. 2020;27(4):296-304. <http://dx.doi.org/10.1080/10749357.2019.1690831>
151. Park D, Lee JH, Kang TW, Cynn HS. Effects of a 4-Week Self-Ankle Mobilization with Movement Intervention on Ankle Passive Range of Motion, Balance, Gait, and Activities of Daily Living in Patients with Chronic Stroke: A Randomized Controlled Study. *Journal of stroke and cerebrovascular diseases : the official journal of National Stroke Association*. 2018;27(12):3451-3459. <http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2018.08.010>
152. Park D, Lee JH, Kang TW, Cynn HS. Four-week training involving ankle mobilization with movement versus static muscle stretching in patients with chronic stroke: a randomized controlled trial. *Topics in stroke rehabilitation*. 2019;26(2):81-86. <http://dx.doi.org/10.1080/10749357.2018.1550614>
153. Park SW, Lee HS, Kim JH. The Effectiveness of Intensive Mobilization Techniques Combined with Capsular Distension for Adhesive Capsulitis of the Shoulder. *Journal of physical therapy science*. 2014;26(11):1767-1770. <http://dx.doi.org/10.1589/jpts.26.1767>
154. Patra RC, Mohanty P, Gautam AP. Effectiveness of C1-C2 sustained natural apophyseal glide combined with dry needling on pressure point threshold and headache disability in cervicogenic headache. *Asian*

REFERENCE LIST

- journal of pharmaceutical and clinical research*. 2018;11(1):171 - 174.
<http://dx.doi.org/10.22159/ajpcr.2018.v11i1.22349>
155. Pérez HI, Perez JLA, Martinez AG, et al. Is one better than another?: a randomized clinical trial of manual therapy for patients with chronic neck pain. *Manual therapy*. 2014;19(3):215 - 221.
<http://dx.doi.org/10.1016/j.math.2013.12.002>
156. Pragassame AS, Kurup MVK. Efficacy of Limited Treatment Frequency of Mulligan's Mobilization with Movement for Frozen Shoulder. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(2):218-223. <http://dx.doi.org/10.5958/j.0973-5674.8.2.089>
157. Qadir W, Waheed A, Niazi R, Mahmood T, Awan IZ. Comparative short-term effects of oscillatory mobilization and mulligan MWM on pain, disability, and range of motion among De Quervain's tenosynovitis patients- a randomized clinical trial. *The Journal of manual & manipulative therapy*. 2025;1-9.
<http://dx.doi.org/10.1080/10669817.2025.2557951>
158. Qamar MM, Kiran A, Ijaz MJ, Basharat A, Rasul A, Ahmed W. Comparison of efficacy of mulligan's mobilization with movement with maitland mobilization along with conventional therapy in the patients with knee osteoarthritis: A randomized clinical trial. *Libyan International Medical University Journal*. 2018;3(1):26.
http://dx.doi.org/10.4103/liuj.liuj_12_18
159. Ragheb Abushameh RS, Topcu ZG, Tunal AN, Amro A, Arab AA. The effects of ankle mulligan mobilisation in children with cerebral palsy: A randomized single blind control study. *J Pak Med Assoc*. 2024;74(7):1219-1223. <http://dx.doi.org/10.47391/jpma.10328>
160. Rahman H, Charturvedi PA, Apparao P, Srithulasi PR. Effectiveness of Mulligan Mobilisation with Movement Compared to Supervised Exercise Program in Subjects with Lateral Epicondylitis. *International Journal of Physiotherapy and Research*. 2016;4(2):1394-1400. <http://dx.doi.org/10.16965/ijpr.2016.104>
161. Ranganath PNU, Dowle P, Chandrasekhar P. Effectiveness of MWM, Neurodynamics and Conventional Therapy Versus Neurodynamics and Conventional Therapy in Unilateral Cervical Radiculopathy: A Randomized Control Trial. *Indian Journal of Physiotherapy and Occupational Therapy - An International Journal*. 2018;12(3):<http://dx.doi.org/10.5958/0973-5674.2018.00066.7>
162. Ranjana, Sahay P, Banerjee D, Bhushan V, Equebal A. Long Term Efficacy of Maitland Mobilization Versus Mulligan Mobilization in Idiopathic Adhesive Capsulitis of Shoulder: A Randomized Controlled Trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2016;10(4):91-97. <http://dx.doi.org/10.5958/0973-5674.2016.00126.X>
163. Rao RV, Balthillaya G, Prabhu A, Kamath A. Immediate effects of Maitland mobilization versus Mulligan Mobilization with Movement in Osteoarthritis knee- A Randomized Crossover trial. *Journal of bodywork and movement therapies*. 2017;(no pagination)(<http://dx.doi.org/10.1016/j.jbmt.2017.09.017>
164. Razek RA, Shenouda MM. Efficacy of Mulligan's Mobilization with Movement on Pain, Disability, and Range of Motion in Patients with Knee Osteoarthritis: A Randomized Controlled Pilot Study. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(1):242-247. <http://dx.doi.org/10.5958/j.0973-5674.8.1.046>
165. Razzaq A, Nadeem RD, Akhtar M, Ghazanfar M, Aslam N, Nawaz S. Comparing the effects of muscle energy technique and mulligan mobilization with movements on pain, range of motion, and disability in adhesive capsulitis. *J Pak Med Assoc*. 2022;72(1):13-16. <http://dx.doi.org/10.47391/JPMA.1360>
166. Rehman M, Riaz H. Comparison of mobilization with movement and Mulligan knee taping on Patellofemoral pain syndrome. *J Pak Med Assoc*. 2021;71(9):2119-2123. <http://dx.doi.org/10.47391/JPMA.04-658>

REFERENCE LIST

167. Reid A, Birmingham TB, Alcock G. Efficacy of mobilization with movement for patients with limited dorsiflexion after ankle sprain: a crossover trial. *Physiotherapy Canada*. 2007;59(3):166-172.
168. Reid S, Callister R, Snodgrass S, Katekar M, Rivett D. Long-term outcomes of Mulligan sustained natural apophyseal glides and maitland passive joint mobilisations for chronic cervicogenic dizziness: a randomised trial. *Physiotherapy (united kingdom)*. 2015;101(eS1270 - eS1271).
<http://dx.doi.org/10.1016/j.physio.2015.03.1180>
169. Reid SA, Andersen JM, Vicenzino B. Adding mobilisation with movement to exercise and advice hastens the improvement in range, pain and function after non-operative cast immobilisation for distal radius fracture: a multicentre, randomised trial. *Journal of Physiotherapy*. 2020;<http://dx.doi.org/10.1016/j.jphys.2020.03.010>
170. Reid SA, Callister R, Katekar MG, Rivett DA. Effects of cervical spine manual therapy on range of motion, head repositioning, and balance in participants with cervicogenic dizziness: a randomized controlled trial. *Archives of physical medicine and rehabilitation*. 2014;95(9):1603 - 1612.
<http://dx.doi.org/10.1016/j.apmr.2014.04.009>
171. Reid SA, Callister R, Snodgrass SJ, Katekar MG, Rivett DA. Manual therapy for cervicogenic dizziness: long-term outcomes of a randomised trial. *Manual therapy*. 2015;20(1):148 - 156.
<http://dx.doi.org/10.1016/j.math.2014.08.003>
172. Reid SA, Rivett DA, Katekar MG, Callister R. Comparison of mulligan sustained natural apophyseal glides and maitland mobilizations for treatment of cervicogenic dizziness: a randomized controlled trial. *Physical therapy*. 2014;94(4):466 - 476. <http://dx.doi.org/10.2522/ptj.20120483>
173. Reid SA, Rivett DA, Katekar MG, Callister R. Sustained natural apophyseal glides (SNAGs) are an effective treatment for cervicogenic dizziness. *Manual therapy*. 2008;13(4):357 - 366.
<http://dx.doi.org/10.1016/j.math.2007.03.006>
174. Reyhan AC, Sindel D, Dereli EE. The effects of Mulligan's mobilization with movement technique in patients with lateral epicondylitis. *Journal of back and musculoskeletal rehabilitation*. 2020;33(1):99-107.
<http://dx.doi.org/10.3233/BMR-181135>
175. Rezkallah SS, Abdullah GA. Comparison between sustained natural apophyseal glides (SNAG's) and myofascial release techniques combined with exercises in non specific neck pain. *Physiotherapy Practice & Research*. 2018;39(2):135-145. <http://dx.doi.org/10.3233/PPR-180116>
176. Romero CL, Torres Lacomba M, Montoro YC, et al. Mobilization With Movement for Shoulder Dysfunction in Older Adults: A Pilot Trial. *Journal of Chiropractic Medicine*. 2015;14(4):249-258.
<http://dx.doi.org/10.1016/j.jcmm.2015.03.001>
177. Sai KV, Kumar JNS. Effects of Mulligan's Mobilisation with Movement on Pain and Range of Motion in Diabetic Frozen Shoulder a Randomized Clinical Trail. *Indian Journal of Physiotherapy & Occupational Therapy*. 2015;9(4):187-193. <http://dx.doi.org/10.5958/0973-5674.2015.00170.7>
178. Said S, Ali OI, Elazm SNA, Abdelraoof NA. Mulligan Self Mobilization Versus Mulligan Snags on Cervical Position Sense. *International Journal of Physiotherapy*. 2017;4(2):93-100.
179. Salik S, Rani S, Hayat R, Manzoor S, Malik AU, Maqbool S. Comparison between Mulligan Sustained natural apophyseal glides (snags) VS McKenzie exercises in Chronic Mechanical Low back pain. *Pakistan Journal of Medical and Health Sciences*. 2022;16(10):141-143. <http://dx.doi.org/10.53350/pjmhs221610141>
180. Samir S, Zak L, Soliman M. Mulligan versus maitland mobilizations in patients with chronic low back dysfunction. *International journal of pharmtech research*. 9 (6) (pp 92-99), 2016. Date of publication: 2016. 2016;

REFERENCE LIST

181. Sang-Lim KIM, Byoung-Hee LEE. Effect of Mulligan's mobilization with movement technique on gait function in stroke patients. *Journal of physical therapy science*. 2016;28(8):2326-2329.
182. Saptale A, Patrekar S, Aphale S, Shinde S. Effects of Positional Traction Integrated With Mobilization With Movement on Cervical Facet Joint Syndrome. *Cureus*. 2025;17(7):e88276.
<http://dx.doi.org/10.7759/cureus.88276>
183. Satpute K, Bedekar N, Hall T. Effect of Mulligan manual therapy and exercise on headache frequency, intensity, disability, and upper cervical joint hypomobility in people with episodic tension-type headache: a randomized clinical trial. *Physiotherapy theory and practice*. 2025;41(11):2271-2287.
<http://dx.doi.org/10.1080/09593985.2025.2516765>
184. Satpute K, Bedekar N, Hall T. Mulligan manual therapy added to exercise improves headache frequency, intensity and disability more than exercise alone in people with cervicogenic headache: a randomised trial. *J Physiother*. 2024;<http://dx.doi.org/10.1016/j.jphys.2024.06.002>
185. Satpute K, Hall T, Bisen R, Lokhande P. The Effect of Spinal Mobilization With Leg Movement in Patients With Lumbar Radiculopathy-A Double-Blind Randomized Controlled Trial. *Archives of physical medicine and rehabilitation*. 2019;100(5):828-836. <http://dx.doi.org/10.1016/j.apmr.2018.11.004>
186. Satpute KH, Bhandari P, Hall T. Efficacy of Hand Behind Back Mobilization With Movement for Acute Shoulder Pain and Movement Impairment: a Randomized Controlled Trial. *Journal of manipulative and physiological therapeutics*. 2015;38(5):324 - 334. <http://dx.doi.org/10.1016/j.jmpt.2015.04.003>
187. Sekeroz S, Telci EA, Buke M, Akkaya N. Comparison of effectiveness of Mulligan mobilization technique and cervical stabilization training in patients with chronic neck pain: a single-blinded randomized controlled trial. *Rehabilitation (Stuttg)*. 2025;64(06):334-343. <http://dx.doi.org/10.1055/a-2618-6281>
188. Seo UH, Kim JH, Lee BH. Effects of Mulligan Mobilization and Low-Level Laser Therapy on Physical Disability, Pain, and Range of Motion in Patients with Chronic Low Back Pain: A Pilot Randomized Controlled Trial. *Healthcare (Basel)*. 2020;8(3):<http://dx.doi.org/10.3390/healthcare8030237>
189. Sevik Kacmaz K, Unver B. Immediate Effects of Mulligan Mobilization on Elbow Proprioception in Healthy Individuals: A Randomized Placebo-Controlled Single-Blind Study. *Journal of manipulative and physiological therapeutics*. 2023;46(1):59-64. <http://dx.doi.org/10.1016/j.jmpt.2023.05.001>
190. Shafique S, Ahmad S, Shakil-Ur-Rehman S. Effect of Mulligan spinal mobilization with arm movement along with neurodynamics and manual traction in cervical radiculopathy patients: A randomized controlled trial. *J Pak Med Assoc*. 2019;69(11):1601-1604. <http://dx.doi.org/10.5455/JPMA.297956>.
191. Shahid S, Ahmed A, Ahmed U. Effectiveness of Routine Physical Therapy with and Without Pain Release Phenomenon in Patello-Femoral Pain Syndrome. *International Journal of Science and Research (IJSR)*. 2016;5(7):1891-1919. <http://dx.doi.org/10.21275/v5i7.ART2016586>
192. Shelke A, B AP, M GB, Kumaran SD, G PR. Immediate effect of craniocervical flexion exercise and Mulligan mobilisation in patients with mechanical neck pain — A randomised clinical trial. *Hong Kong Physiotherapy Journal*. 2023;43(02):137-147. <http://dx.doi.org/10.1142/s1013702523500154>
193. Shin EJ, Lee BH. The effect of sustained natural apophyseal glides on headache, duration and cervical function in women with cervicogenic headache. *Journal of exercise rehabilitation*. 2014;10(2):131-135.
<http://dx.doi.org/10.12965/jer.140098>
194. Shinde M, Jagtap V. Effect of muscle energy technique and mulligan mobilization in sacroiliac joint dysfunction. *Global Journal for Research Analysis*. 2018;7(3 - March 2018):79-91.

REFERENCE LIST

195. Shrivastava A, Shyam AK, Sabnis S, Sancheti P. Randomised controlled study of Mulligan's Vs. Maitland's mobilization technique in adhesive capsulitis of shoulder joint. *Indian Journal of Physiotherapy & Occupational Therapy*. 2011;5(4):12-15.
196. Silva MC, Ferreira AS, Baldon RM, et al. Immediate Effects of Manual Therapy Techniques on Ankle Dorsiflexion: A Randomized Clinical Trial. *Journal of manipulative and physiological therapeutics*. 2025;48(1-5):166-176. <http://dx.doi.org/10.1016/j.jmpt.2025.09.002>
197. Simsek S, Yagci N, Korkmaz MB. Mid-term Effect of Lumbar Sustained Natural Apophyseal Glides in Patients with Non-specific Chronic Low Back Pain: A Randomized Clinical Trial. *Eurasian J Med*. 2023;55(2):152-157. <http://dx.doi.org/10.5152/eurasianjmed.2023.0202>
198. Solanki D, Kage V. A Comparative Study on Immediate effect of Adductor Stretch MWM Versus MET in Subjects with Hip Adductor Tightness - Randomized Clinical Trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2012;6(4):44-47.
199. Son J-H, Park GD, Park HS. The effect of sacroiliac joint mobilization on pelvic deformation and the static balance ability of female university students with si joint dysfunction. *Journal of physical therapy science*. 2014;26(6):845-848. <http://dx.doi.org/10.1589/jpts.26.845>
200. Srivastava N, Joshi S. Comparision between the Effectiveness of Mobilization with Movement and End Range Mobilization along with Conventional Therapy for Management of Frozen Shoulder. *Indian Journal of Physiotherapy & Occupational Therapy*. 2017;11(4):176-179. <http://dx.doi.org/10.5958/0973-5674.2017.00141.1>
201. Srivastava S, Eapen C, Mittal H. Comparison of Mobilisation with Movement and Cryotherapy in Shoulder Impingement Syndrome-A Randomised Clinical Trial. *Journal of Clinical and Diagnostic Research*. 2018;<http://dx.doi.org/10.7860/jcdr/2018/34624.12091>
202. Stanek JM, Brown B, Barrack J, Parish J. A novel manual therapy technique is effective for short-term increases in tibial internal rotation range of motion. *Journal of exercise rehabilitation*. 2021;17(3):184-191. <http://dx.doi.org/10.12965/jer.2142228.114>
203. Stanek JM, Pieczynski AE. Effectiveness of clinician- and patient-applied mobilisation with movement technique to increase ankle dorsiflexion range of motion. *International Journal of Therapy and Rehabilitation*. 2020;27(4):1-11. <http://dx.doi.org/10.12968/ijtr.2018.0118>
204. Taghizadeh Delkhouh C, Arzani P, Mirmohammadkhani M, Bagheri R, Norouzi A. The Impact of Ankle Mobilization Techniques on Static Stability in Individuals With Acute Inversion Ankle Sprain: A Randomized Clinical Trial. *Journal of chiropractic medicine*. 2024;23(4):153-161. <http://dx.doi.org/10.1016/j.jcm.2024.08.002>
205. Tambekar N, Sabnis S, Phadke A, Bedekar N. Effect of Butler's neural tissue mobilization and Mulligan's bent leg raise on pain and straight leg raise in patients of low back ache. *Journal of bodywork and movement therapies*. 2016;20(2):280 - 285. <http://dx.doi.org/10.1016/j.jbmt.2015.08.003>
206. Tank KD, Choks P, Makwana P. To Study the Effect of Muscle Energy Technique Versus Mulligan Snags on Pain, Range of Motion and Functional Disability for Individuals with Mechanical Neck Pain". – a Comparative Study. *International Journal of Physiotherapy and Research*. 2018;6(1):2582-2587. <http://dx.doi.org/10.16965/ijpr.2017.253>
207. Tat AM, Can F, Tat NM, Sasmaz HI, Antmen AB. The effects of manual therapy and exercises on pain, muscle strength, joint health, functionality and quality of life in haemophilic arthropathy of the elbow joint: A

REFERENCE LIST

- randomized controlled pilot study. *Haemophilia*. 2021;27(3):e376-e384.
<http://dx.doi.org/https://doi.org/10.1111/hae.14281>
208. Tatsios PI, Grammatopoulou E, Dimitriadis Z, Koumantakis GA. The Effectiveness of Manual Therapy in the Cervical Spine and Diaphragm, in Combination with Breathing Re-Education Exercises, on the Range of Motion and Forward Head Posture in Patients with Non-Specific Chronic Neck Pain: A Randomized Controlled Trial. *Healthcare (Basel)*. 2025;13(14):<http://dx.doi.org/10.3390/healthcare13141765>
209. Teys P, Bisset L, Collins N, Coombes B, Vicenzino B. One-week time course of the effects of Mulligan's Mobilisation with Movement and taping in painful shoulders. *Manual therapy*. 2013;18(5):372 - 377.
<http://dx.doi.org/10.1016/j.math.2013.01.001>
210. Teys P, Bisset L, Vicenzino B. The initial effects of a Mulligan's mobilization with movement technique on range of movement and pressure pain threshold in pain-limited shoulders. *Manual therapy*. 2008;13(1):37 - 42. <http://dx.doi.org/10.1016/j.math.2006.07.011>
211. Thomaidou E, McCarthy CJ, Tsepis E, Fousekis K, Billis E. Manual Therapy versus Localisation (Tactile, Sensory Training) in Patients with Non-Specific Neck Pain: A Randomised Clinical Pilot Trial. *Healthcare (Basel)*. 2023;11(10):<http://dx.doi.org/10.3390/healthcare11101385>
212. Tomruk M, Gelecek N, Basçi O, Özkan MH. Effects of early manual therapy on functional outcomes after volar plating of distal radius fractures: A randomized controlled trial. *Hand surgery & rehabilitation*. 2020;39(3):178-185. <http://dx.doi.org/10.1016/j.hansur.2019.12.002>
213. Tomruk M, Soysal Tomruk M, Alkan E, Gelecek N. Immediate Effects of Ankle Joint Mobilization With Movement on Postural Control, Range of Motion, and Muscle Strength in Healthy Individuals: A Randomized, Sham-Controlled Trial. *Journal of sport rehabilitation*. 2019;1-9.
<http://dx.doi.org/10.1123/jsr.2019-0198>
214. Torres D, Hanney WJ, Velazquez L, Pabian PS, Pilkington C. The Effect of Mobilization With Movement and Passive Stretching on Hip Range of Motion: A Randomized Controlled Trial. *Orthopaedic Physical Therapy Practice*. 2021;33(3):150-154.
215. Tul Ain SQ, Shakil Ur Rehman S, Maryam M, Kiani SK. Effects of Sustained Natural Apophyseal Glides with and without thoracic posture correction techniques on mechanical back pain: a randomized control trial. *J Pak Med Assoc*. 2019;69(11):1584-1587. <http://dx.doi.org/10.5455/jpma.274875>.
216. Ughreja RA, Shukla YU. Mulligan's Mobilisation with Movement (MWM) relieves pain and improves functional status in osteoarthritis knee. *Int J Physiother*. 2017;4(2):132-138.
217. Uttamchandani SR, Phansopkar P. Efficacy of PowerBall Versus Mulligan Mobilization With Movement on Pain and Function in Patients With Lateral Epicondylitis: A Randomized Clinical Trial. *Cureus*. 2024;16(3):e56444. <http://dx.doi.org/10.7759/cureus.56444>
218. Vasseljen O. Physiotherapy interventions improve tennis elbow with superior long-term outcomes to corticosteroid injections. *Australian Journal of Physiotherapy*. 2007;53(1):61-61.
219. Vicenzino B, Branjerdporn M, Teys P, Jordan K. Initial changes in posterior talar glide and dorsiflexion of the ankle after mobilization with movement in individuals with recurrent ankle sprain. *Journal of orthopaedic and sports physical therapy*. 2006;36(7):464 - 471. <http://dx.doi.org/10.2519/jospt.2006.2265>
220. Wade PG, Franklin CVJ. The Effect of Mobilisation and Core Muscle Strengthening For Cervical Spine in Relieving Cervicogenic Headache. *IOSR Journal of Nursing and Health Science*. 2015;4(5):13-16.

REFERENCE LIST

221. Walsh R, Kinsella S. The effects of caudal mobilisation with movement (MWM) and caudal self-mobilisation with movement (SMWM) in relation to restricted internal rotation in the hip: a randomised control pilot study. *Manual therapy*. 2016;22(9 - 15). <http://dx.doi.org/10.1016/j.math.2016.01.007>
222. Wang S, Zeng J, Mani R, Chapple CM, Ribeiro DC. The immediate effects of mobilization with movement on shoulder range of motion and pain in patients with rotator cuff-related shoulder pain: A randomized controlled trial (Evolution Trial). *Braz J Phys Ther*. 2024;28(6):101145. <http://dx.doi.org/10.1016/j.bjpt.2024.101145>
223. Wang Y, Wang C, Chen H, Ye X. [Shoulder joint pain of rotator cuff injury treated with electroacupuncture and Mulligan's mobilization: a randomized controlled trial]. *Zhongguo zhen jiu = Chinese acupuncture & moxibustion*. 2018;38(1):17-21. <http://dx.doi.org/10.13703/j.0255-2930.2018.01.004>
224. Waqqar S, Shakil-ur-Rehman S, Ahmad S. Mckenzie treatment versus mulligan sustained natural apophyseal glides for chronic mechanical low back pain. *Pakistan journal of medical sciences*. 2016;32(2):476 - 479. <http://dx.doi.org/10.12669/pjms.322.9127>
225. Yadav S, Nijhawan MA, Panda P. Effectiveness of Spinal Mobilization With Leg Movement (SMWLM) in Patients With Lumbar Radiculopathy (L5 / S1 Nerve Root) in Lumbar Disc Herniation. *International Journal of Physiotherapy and Research*. 2014;2(5):712-718.
226. Yan H, Zhao P, Guo X, Zhou X. The effects of Core Stability Exercises and Mulligan's mobilization with movement techniques on sacroiliac joint dysfunction. *Front Physiol*. 2024;15(1337754). <http://dx.doi.org/10.3389/fphys.2024.1337754>
227. Yang JL, Chang CW, Chen SY, Wang SF, Lin JJ. Mobilization techniques in subjects with frozen shoulder syndrome: randomized multiple-treatment trial. *Physical therapy*. 2007;87(10):1307 - 1315. <http://dx.doi.org/10.2522/ptj.20060295>
228. Yıldırım MS, Ozyurek S, Tosun O, Uzer S, Gelecek N. Comparison of effects of static, proprioceptive neuromuscular facilitation and Mulligan stretching on hip flexion range of motion: a randomized controlled trial. *Biology of sport*. 2016;33(1):89-94. <http://dx.doi.org/10.5604/20831862.1194126>
229. Youssef AR. Mulligan Mobilization Is More Effective in Treating Diabetic Frozen Shoulder Than the Maitland Technique. *International Journal of Physiotherapy*. 2015;2(5):<http://dx.doi.org/10.15621/ijphy/2015/v2i5/78238>
230. Zanjani B, Shojaedin SS, Abbasi H. "Investigating the combined effects of scapular-focused training and Mulligan mobilization on shoulder impingement syndrome" a three-arm pilot randomized controlled trial. *BMC musculoskeletal disorders*. 2024;25(1):897. <http://dx.doi.org/10.1186/s12891-024-07966-1>
231. Zemadanis K, Betsos T, Mandalidis D. The short and long-term effect of weight-bearing mobilization-with-movement (MWM) and automobilization-MWM techniques on pain and functional status in patients with hip osteoarthritis. *International Journal of Physiotherapy*. 2017;4(3):<http://dx.doi.org/10.15621/ijphy/2017/v4i3/149068>
232. Zemadanis K, Sykaras E, Athanasopoulos S, Mandalidis D. Mobilization-with-movement prior to exercise provides early pain and functionality improvements in patients with patellofemoral pain syndrome. *International Musculoskeletal Medicine*. 2015;37(3):101-107. <http://dx.doi.org/10.1179/1753615415Y.0000000009>

3. Non-randomised Studies (11)

1. Amro A, Diener I, Bdair WO, Hamed IM, Shalabi AI, Ilyyan DI. The effects of Mulligan mobilisation with movement and taping techniques on pain, grip strength, and function in patients with lateral epicondylitis. *Hong kong physiotherapy journal*. 2010;28(1):19 - 23. <http://dx.doi.org/10.1016/j.hkpj.2010.11.004>
2. Bhat PV, Patel VD, Eapen C, Shenoy M, Milanese S. Myofascial release versus Mulligan sustained natural apophyseal glides' immediate and short-term effects on pain, function, and mobility in non-specific low back pain. *PeerJ*. 2021;9(e10706). <http://dx.doi.org/10.7717/peerj.10706>
3. Chan-Woo N, Sang-In P, Min-Sik Y, Young-Min K. Effects of the MWM Technique Accompanied by Trunk Stabilization Exercises on Pain and Physical Dysfunctions Caused by Degenerative Osteoarthritis. *Journal of physical therapy science*. 2013;25(9):1137-1140. <http://dx.doi.org/10.1589/jpts.25.1137>
4. Dabholkar A, Kumari S, Yardi S. Comparative Study of Short Term Response between Maitland Mobilization and Mulligan's Mobilization with Movement of Hip Joint in Osteoarthritis of Knee Patients Identified as Per Clinical Prediction Rule. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(4):6-10. <http://dx.doi.org/10.5958/0973-5674.2014.00002.1>
5. Farooq S, Zahid S, Hafeez S, Hassan D. Effectiveness of Mulligan mobilization and Kinesio-taping technique on the anterior innominate dysfunction in females. *J Pak Med Assoc*. 2021;71(7):1716-1719. <http://dx.doi.org/10.47391/JPMA.828>
6. Ghosh Dasm P. Comparative Analysis of Cyriax Approach Versus Mobilization with Movement Approach in the Treatment of Patients with Lateral Epicondylitis. *Indian Journal of Physiotherapy & Occupational Therapy*. 2012;6(1):96-102.
7. Javaid M, Anwar S, Uzair Asghar M, et al. Comparison of Maitland Mobilization and Mulligan Mobilization with movement on pain and hand function in patients having post Colle's Fracture Stiffness. *Pakistan Journal of Medical and Health Sciences*. 2022;16(1):169-171. <http://dx.doi.org/10.53350/pjmhs22161169>
8. Jie H, Lingfeng X, Xiaoling H, Xiaohua H. Effects of mulligan's mobilization with movement combined with stretching therapy in the management of frozen shoulder. *Physiotherapy (united kingdom)*. 2015;101(eS683 - eS684). <http://dx.doi.org/10.1016/j.physio.2015.03.3528>
9. Moiler K, Hall T, Robinson K. The role of fibular tape in the prevention of ankle injury in basketball: A pilot study. *The Journal of orthopaedic and sports physical therapy*. 2006;36(9):661-668. <http://dx.doi.org/10.2519/jospt.2006.2259>
10. Singh D. An Experimental Study on effects of Mulligan Mobilization Technique and Isometric Exercises in Patients with Osteoarthritis Knee. *Indian Journal of Physiotherapy & Occupational Therapy*. 2012;6(4):158-162.
11. Syed AU, Haider D, Rana M. The effects of the addition of Mulligan mobilization with movement to exercise on elbow pain and function associated with lateral elbow tendinopathy. *Journal of Bodywork and Movement Therapies*. 2024;<http://dx.doi.org/https://doi.org/10.1016/j.jbmt.2024.06.007>

REFERENCE LIST

4. Repeated Measures Studies (41)

1. Abbott JH. Mobilization with movement applied to the elbow affects shoulder range of movement in subjects with lateral epicondylalgia. *Manual therapy*. 2001;6(3):170 - 177.
<http://dx.doi.org/10.1054/math.2001.0407>
2. Abbott JH, Patla CE, Jensen RH. The initial effects of an elbow mobilization with movement technique on grip strength in subjects with lateral epicondylalgia. *Manual therapy*. 2001;6(3):163 - 169.
<http://dx.doi.org/10.1054/math.2001.0408>
3. Bowler N, Browning P, Lascurain-Aguirrebena I. The effects of cervical sustained natural apophyseal glides on neck range of movement and sympathetic nervous system activity. *International journal of osteopathic medicine. (no pagination)*, 2017. 2017;Date of Publication: June 04(<http://dx.doi.org/10.1016/j.ijosm.2017.02.003>)
4. Browning P, Gangwal K. The effect of a cervical rotational snag on median nerve extensibility in an asymptomatic population, a within subjects randomised design. *Physiotherapy (united kingdom)*. 2011;97(eS162 - eS163. <http://dx.doi.org/10.1016/j.physio.2011.04.002>)
5. Delahunt E, Cusack KIM, Wilson L, Doherty C. Joint Mobilization Acutely Improves Landing Kinematics in Chronic Ankle Instability. *Medicine & Science in Sports & Exercise*. 2013;45(3):514-519.
6. Delahunt E, McGrath A, Doran N, Coughlan GF. Effect of taping on actual and perceived dynamic postural stability in persons with chronic ankle instability. *Archives of physical medicine and rehabilitation*. 2010;91(9):1383-1389. <http://dx.doi.org/10.1016/j.apmr.2010.06.023>
7. Deng F, Adams R, Pranata A, Cui F, Han J. Tibial internal and external rotation taping for improving pain in patients with patellofemoral pain syndrome. *Journal of Science and Medicine in Sport*. 2022;<http://dx.doi.org/10.1016/j.jsams.2022.04.003>
8. Fazeli SH, Amiri A, Jamshidi AA, et al. Effect of ankle taping on postural control measures during grasp and release task in patients with chronic ankle instability. *Journal of back and musculoskeletal rehabilitation*. 2018;31(5):881-887. <http://dx.doi.org/10.3233/bmr-171067>
9. Grindstaff TL, Hanish MJ, Wheeler TJ, et al. Fibular taping does not alter lower extremity spinal reflex excitability in individuals with chronic ankle instability. *J Electromyogr Kinesiol*. 2015;25(2):253-259.
<http://dx.doi.org/10.1016/j.jelekin.2015.01.009>
10. Hall T, Cacho A, McNee C, Riches J, Walsh J. Effects of the Mulligan Traction Straight Leg Raise Technique on Range of Movement. *Journal of Manual & Manipulative Therapy*. 2001;9(3):128-133.
<http://dx.doi.org/10.1179/jmt.2001.9.3.128>
11. Hendry D, Campbell A, Ng L, Grisbrook TL, Hopper DM. Effect of Mulligan's and Kinesio knee taping on adolescent ballet dancers knee and hip biomechanics during landing. *Scand J Med Sci Sports*. 2014;<http://dx.doi.org/10.1111/sms.12302>
12. Hickey A, Hopper D, Hall T, Wild CY. The effect of the Mulligan knee taping technique on patellofemoral pain and lower limb biomechanics. *Am J Sports Med*. 2016;44(5):1179-1185.
<http://dx.doi.org/10.1177/0363546516629418>

REFERENCE LIST

13. Hopper D, Samsson K, Hulenik T, Ng C, Hall T, Robinson K. The influence of Mulligan ankle taping during balance performance in subjects with unilateral chronic ankle instability. *Phys Ther Sport*. 2009;10(4):125-130. <http://dx.doi.org/10.1016/j.ptsp.2009.07.005>
14. Howe A, Campbell A, Ng L, Hall T, Hopper D. Effects of two different knee tape procedures on lower-limb kinematics and kinetics in recreational runners. *Scand J Med Sci Sports*. 2015;25(4):517-524. <http://dx.doi.org/10.1111/sms.12269>
15. Howe LP. The acute effects of ankle mobilisations on lower extremity joint kinematics. *Journal of bodywork and movement therapies*. 2017;21(4):775-780. <http://dx.doi.org/10.1016/j.jbmt.2016.11.007>
16. Kang MH, Kim JW, Kim MH, Park TJ, Park JH, Oh JS. Influence of walking with talus taping on the ankle dorsiflexion passive range of motion. *Journal of physical therapy science*. 2013;25(8):1011-1013. <http://dx.doi.org/10.1589/jpts.25.1011>
17. Mackay GJK, Stearne SM, Wild CY, et al. Mulligan Knee Taping Using Both Elastic and Rigid Tape Reduces Pain and Alters Lower Limb Biomechanics in Female Patients With Patellofemoral Pain. *Orthopaedic Journal of Sports Medicine*. 2020;8(5):232596712092167. <http://dx.doi.org/10.1177/2325967120921673>
18. Mane AS, Yadav T. The Short-Term Efficacy of Mulligan Traction Straight Leg Raise on Low Back Pain Associated With Hamstring Tightness in Young Adults. *Cureus*. 2025;17(3):e80215. <http://dx.doi.org/10.7759/cureus.80215>
19. McLean S, Naish R, Reed L, Urry S, Vicenzino B. A pilot study of the manual force levels required to produce manipulation induced hypoalgesia. *Clinical biomechanics (Bristol, Avon)*. 2002;17(4):304-308.
20. Moulson A, Watson T. A preliminary investigation into the relationship between cervical snags and sympathetic nervous system activity in the upper limbs of an asymptomatic population. *Man Ther*. 2006;11(3):214-224. <http://dx.doi.org/10.1016/j.math.2006.04.003>
21. Moutzouri M, Billis E, Strimpakos N, Kottika P, Oldham JA. The effects of the Mulligan Sustained Natural Apophyseal Glide (SNAG) mobilisation in the lumbar flexion range of asymptomatic subjects as measured by the Zebris CMS20 3-D motion analysis system. *BMC musculoskeletal disorders*. 2008;9(131). <http://dx.doi.org/10.1186/1471-2474-9-131>
22. Moutzouri M, Perry J, Joanna P, Billis E, Eudokia B. Investigation of the effects of a centrally applied lumbar sustained natural apophyseal glide mobilization on lower limb sympathetic nervous system activity in asymptomatic subjects. *Journal of manipulative and physiological therapeutics*. 2012;35(4):286 - 294. <http://dx.doi.org/10.1016/j.jmpt.2012.04.016>
23. Paungmali A, O'Leary S, Souvlis T, Vicenzino B. Hypoalgesic and sympathoexcitatory effects of mobilization with movement for lateral epicondylalgia. *Physical Therapy*. 2003;83(4):374-383.
24. Paungmali A, O'Leary S, Souvlis T, Vicenzino B. Naloxone fails to antagonize initial hypoalgesic effect of a manual therapy treatment for lateral epicondylalgia. *Journal of manipulative and physiological therapeutics*. 2004;27(3):180-185. <http://dx.doi.org/10.1016/j.jmpt.2003.12.022>
25. Paungmali A, Vicenzino B, Smith M. Hypoalgesia induced by elbow manipulation in lateral epicondylalgia does not exhibit tolerance. *Journal of Pain*. 2003;4(8):448-454.
26. Ribeiro DC, de Castro MP, Sole G, Vicenzino B. The initial effects of a sustained glenohumeral postero-lateral glide during elevation on shoulder muscle activity: A repeated measures study on asymptomatic shoulders. *Man Ther*. 2016;22(101-108). <http://dx.doi.org/10.1016/j.math.2015.10.014>
27. Ribeiro DC, Sole G, Venkat R, Shemmell J. Differences between clinician- and self-administered shoulder sustained mobilization on scapular and shoulder muscle activity during shoulder abduction: A repeated-

REFERENCE LIST

- measures study on asymptomatic individuals. *Musculoskeletal science & practice*. 2017;30(25-33).
<http://dx.doi.org/10.1016/j.msksp.2017.04.010>
28. Seo Y, Lee J, Han D. The effects of spinal mobilization with arm movements on shoulder muscle strengthening. *Journal of physical therapy science*. 2015;27(1):11-13. <http://dx.doi.org/10.1589/jpts.27.11>
 29. Shadegani R, Khanmohammadi R, Olyaei G. Comparison of effects of Mulligan taping and Kinesio taping on ankle neuromuscular control in response to a sudden inversion perturbation in individuals with chronic ankle instability. *Phys Ther Sport*. 2023;63(58-66). <http://dx.doi.org/10.1016/j.ptsp.2023.07.004>
 30. Simsek S, Yagci N. Acute effects of distal fibular taping technique on pain, balance and forward lunge activities in Chronic Ankle Instability. *Journal of back and musculoskeletal rehabilitation*. 2019;32(1):15-20. <http://dx.doi.org/10.3233/bmr-181132>
 31. Slater H, Arendt-Nielsen L, Wright A, Graven-Nielsen T. Effects of a manual therapy technique in experimental lateral epicondylalgia. *Manual therapy*. 2006;11(2):107 - 117. <http://dx.doi.org/10.1016/j.math.2005.04.005>
 32. Smith DA, Saranga J, Pritchard A, Kommatas NA, Punnoose SK, Kale ST. Effect of a lateral glide mobilisation with movement of the hip on vibration threshold in healthy volunteers. *Journal of Bodywork and Movement Therapies*. 2018;22(1):13-17. <http://dx.doi.org/https://doi.org/10.1016/j.jbmt.2016.10.001>
 33. Smith MD, Vitharana TN, Wallis GM, Vicenzino B. Response profile of fibular repositioning tape on ankle osteokinematics, arthrokinematics, perceived stability and confidence in chronic ankle instability. *Musculoskeletal Science and Practice*. 2020;50(102272). <http://dx.doi.org/https://doi.org/10.1016/j.msksp.2020.102272>
 34. Someeh M, Norasteh AA, Daneshmandi H, Asadi A. Immediate effects of Mulligan's fibular repositioning taping on postural control in athletes with and without chronic ankle instability. *Phys Ther Sport*. 2015;16(2):135-139. <http://dx.doi.org/10.1016/j.ptsp.2014.08.003>
 35. Takasaki H, Hall T, Kaneko S, Iizawa T, Ikemoto Y. Cervical segmental motion induced by shoulder abduction assessed by magnetic resonance imaging. *Spine*. 2009;34(3):E122-126. <http://dx.doi.org/10.1097/BRS.0b013e31818a26d9>
 36. Takasaki H, Hall T, Oshiro S, Kaneko S, Ikemoto Y, Jull G. Normal kinematics of the upper cervical spine during the Flexion-Rotation Test - In vivo measurements using magnetic resonance imaging. *Man Ther*. 2011;16(2):167-171. <http://dx.doi.org/10.1016/j.math.2010.10.002>
 37. Wheeler TJ, Basnett CR, Hanish MJ, et al. Fibular taping does not influence ankle dorsiflexion range of motion or balance measures in individuals with chronic ankle instability. *Journal of Science and Medicine in Sport*. 2013;16(6):488-492. <http://dx.doi.org/10.1016/j.jsams.2013.02.012>
 38. Yoon J-Y, An D-H, Oh J-S. Plantarflexor and Dorsiflexor Activation during Inclined Walking with and without Modified Mobilization with Movement Using Tape in Women with Limited Ankle Dorsiflexion. *Journal of physical therapy science*. 2013;25(8):993-995. <http://dx.doi.org/10.1589/jpts.25.993>
 39. Yoon J-y, Hwang Y-i, An D-h, Oh J-s. Changes in Kinetic, Kinematic, and Temporal Parameters of Walking in People With Limited Ankle Dorsiflexion: Pre-Post Application of Modified Mobilization With Movement Using Talus Glide Taping. *Journal of Manipulative & Physiological Therapeutics*. 2014;37(5):320-325. <http://dx.doi.org/10.1016/j.jmpt.2014.01.007>
 40. Yoon J-y, Oh J-s, An D-h. Three-Dimensional Analysis of Foot Motion After Uphill Walking With Mobilization With Movement Using Tape Applied to the Talocrural Joint in Women With Limited Ankle Dorsiflexion. *Foot & Ankle International*. 2014;35(11):1217-1225.

REFERENCE LIST

41. Yoshikawa A, Ogata Y, Yanagihashi R, Fujiwara T, Abe K. Analysis of a Manual Technique for Cervical Rotation using a Small Three Dimensional Strain Meter. *Rigakuryoho Kagaku*. 2011;26(4):507-510.

5. Case-Control Studies (1)

1. Weerasekera I, Osmotherly PG, Snodgrass S, Tessier J, Rivett DA. Is the fibula positioned anteriorly in weight-bearing in individuals with chronic ankle instability? A case control study. *Journal of Manual & Manipulative Therapy*. 2021;29(3):168-175. <http://dx.doi.org/10.1080/10669817.2020.1844852>

6. Case Series (32)

1. Abassi M, Whiteley R. Serial Within-Session Improvements in Ankle Dorsiflexion During Clinical Interventions Including Mobilization-With-Movement and A Novel Manipulation Intervention - A Case Series. *Int J Sports Phys Ther*. 2021;16(4):1158-1168. <http://dx.doi.org/10.26603/001c.25544>
2. Andrews DP, Odland-Wolf KB, May J, Baker R, Nasypany A. The Utilization of Mulligan Concept Thoracic Sustained Natural Apophyseal Glides on Patients Classified with Secondary Impingement Syndrome: A Multi-Site Case Series. *International Journal of Sports Physical Therapy*. 2018;13(1):121-130.
3. Andrews DP, Odland-Wolf KB, May J, Baker R, Nasypany A, Dinkins EM. Immediate and short-term effects of mulligan concept positional sustained natural apophyseal glides on an athletic young-adult population classified with mechanical neck pain: an exploratory investigation. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2018;26(4):203-211.
4. Balasundaram AP, Sreerama Rajan S. Short-term effects of mobilisation with movement in patients with post-traumatic stiffness of the knee joint. *Journal of bodywork and movement therapies*. 2018;22(2):498-501. <http://dx.doi.org/10.1016/j.jbmt.2017.06.007>
5. Bianco L, Fermin S, Oates R, May J, Cheatham SW, Nasypany A. Use of the Mulligan concept in the treatment of lateral ankle sprains in the active population: an exploratory prospective case series. *The Journal of the Canadian Chiropractic Association*. 2019;63(3):154-161.
6. Brody K, Baker RT, Nasypany A, Seegmiller J, Piccininni JJ. Treatment of Meniscal Lesions Using the Mulligan "Squeeze" Technique: A Case Series. *International Journal of Athletic Therapy and Training*. 2015;20(6):24-31. <http://dx.doi.org/10.1123/ijatt.2014-0135>
7. Choung S-D, Kwon O-Y, Park K-N, Kim S-H, Cynn H-S. Short-term effects of self-mobilization with a strap on pain and range of motion of the wrist joint in patients with dorsal wrist pain when weight bearing through the hand: A case series. *Manual Therapy*. 2013;18(6):568-572.
8. Creighton D, Krauss J, Pascoe S, Patel H, Pierce J. The effects of tibio-femoral joint traction mobilization on patients with limited passive knee flexion: a case series. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2006;14(3):173-174.
9. Dinkins EM, Stevens-Lapsley J. Management of symptoms of Restless Legs Syndrome with use of a traction straight leg raise: a preliminary case series. *Man Ther*. 2013;18(4):299-302. <http://dx.doi.org/10.1016/j.math.2012.11.002>

REFERENCE LIST

10. Gilbreath JP, Gaven SL, Van Lunen BL, Hoch MC. The effects of Mobilization with Movement on dorsiflexion range of motion, dynamic balance, and self-reported function in individuals with chronic ankle instability. *Manual Therapy*. 2014;19(2):152-157.
11. Gomes MG, Primo AF, De Jesus L, Dionisio VC. Short-term Effects of Mulligan's Mobilization With Movement on Pain, Function, and Emotional Aspects in Individuals With Knee Osteoarthritis: A Prospective Case Series. *Journal of manipulative and physiological therapeutics*. 2020;43(5):437-445. <http://dx.doi.org/10.1016/j.jmpt.2019.04.011>
12. González-Iglesias J, Cleland JA, del Rosario Gutierrez-Vega M, Fernández-de-las-Peñas C. Multimodal management of lateral epicondylalgia in rock climbers: a prospective case series. *Journal of manipulative and physiological therapeutics*. 2011;34(9):635-642. <http://dx.doi.org/10.1016/j.jmpt.2011.09.003>
13. González-Iglesias J, Cleland JA, Neto F, Hall T, Fernández-de-las-Peñas C. Mobilization with movement, thoracic spine manipulation, and dry needling for the management of temporomandibular disorder: A prospective case series. *Physiotherapy Theory & Practice*. 2013;29(8):586-595. <http://dx.doi.org/10.3109/09593985.2013.783895>
14. Haik MN, Evans K, Smith A, Bisset L. Investigating the effects of mobilization with movement and exercise on pain modulation processes in shoulder pain - a single cohort pilot study with short-term follow up. *The Journal of manual & manipulative therapy*. 2022;1-10. <http://dx.doi.org/10.1080/10669817.2022.2030626>
15. Hall T, Beyerlein C, Hansson U, Lim HT, Odermark M, Sainsbury D. Mulligan Traction Straight Leg Raise: A Pilot Study to Investigate Effects on Range of Motion in Patients with Low Back Pain. *Journal of Manual & Manipulative Therapy*. 2006;14(2):95-100. <http://dx.doi.org/10.1179/106698106698106790820782>
16. Hudson R, Baker RT, May J, Reordan D, Nasypany A. Novel treatment of lateral ankle sprains using the Mulligan concept: an exploratory case series analysis. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2017;25(5):251-259.
17. Hudson R, Richmond A, Sanchez B, et al. An Alternative Approach to the Treatment of Meniscal Pathologies: A Case Series Analysis of the Mulligan Concept "Squeeze" Technique. *International Journal of Sports Physical Therapy*. 2016;11(4):564-574.
18. Jayaseelan DJ, Kecman M, Alcorn D, Sault JD. Manual therapy and eccentric exercise in the management of Achilles tendinopathy. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2017;25(2):106-114.
19. Kaneko S, Takasaki H. Forearm pain, diagnosed as intersection syndrome, managed by taping: a case series. *The Journal of orthopaedic and sports physical therapy*. 2011;41(7):514-519. <http://dx.doi.org/10.2519/jospt.2011.3569>
20. Krzyzanowicz R, Baker R, Nasypany A, Gargano F, Seegmiller J. Patient Outcomes Utilizing the Selective Functional Movement Assessment and Mulligan Mobilizations With Movement on Recreational Dancers With Sacroiliac Joint Pain: A Case Series. *International Journal of Athletic Therapy & Training*. 2015;20(3):31-37.
21. Lewis C, Diaz R, Lopez G, Marki N, Olivio B. A preliminary study to evaluate postural improvement in subjects with scoliosis: active therapeutic movement version 2 device and home exercises using the Mulligan's mobilization-with-movement concept. *Journal of Manipulative & Physiological Therapeutics*. 2014;37(7):502-509. <http://dx.doi.org/10.1016/j.jmpt.2014.07.005>
22. Marcolino AM, das Neves LM, Oliveira BG, et al. Multimodal approach to rehabilitation of the patients with lateral epicondylitis: a case series. *SpringerPlus*. 2016;5(1):1718. <http://dx.doi.org/10.1186/s40064-016-3375-y>

REFERENCE LIST

23. May JM, Nasypany A, Paolino J, Baker R, Seegmiller J. Patient Outcomes Utilizing the Mulligan Concept of Mobilization With Movement to Treat Intercollegiate Patients Diagnosed With Lateral Ankle Sprain: An a Priori Case Series. *Journal of Sport Rehabilitation*. 2017;26(6):486-496.
24. Meyer JE, Rivera MJ, Powden CJ. The Evaluation of Joint Mobilization Dosage on Ankle Range of Motion in Individuals With Decreased Dorsiflexion and a History of Ankle Sprain. *Journal of sport rehabilitation*. 2020;1-6. <http://dx.doi.org/10.1123/jsr.2020-0114>
25. Mittal M, Hameed UA, Chaudhary A, Ruchika. Mulligan's Manual Therapy Treatment Dosing for Subacute Mechanical Neck Pain - A Comparison between Loading and Movement Disorders of Cervical Spine. *Indian Journal of Physiotherapy & Occupational Therapy*. 2011;5(2):89-96.
26. Painter EE, Deyle GD, Allen C, Petersen EJ, Croy T, Rivera KP. Manual Physical Therapy Following Immobilization for Stable Ankle Fracture: A Case Series. *The Journal of orthopaedic and sports physical therapy*. 2015;45(9):665-674. <http://dx.doi.org/10.2519/jospt.2015.5981>
27. Paquin JP, Tousignant-Laflamme Y, Dumas JP. Effects of SNAG mobilization combined with a self-SNAG home-exercise for the treatment of cervicogenic headache: a pilot study. *The Journal of manual & manipulative therapy*. 2021;29(4):244-254. <http://dx.doi.org/10.1080/10669817.2020.1864960>
28. Rabin A, Israeli T, Kozol Z. Physiotherapy Management of People Diagnosed with de Quervain's Disease: A Case Series. *Physiotherapy Canada. Physiotherapie Canada*. 2015;67(3):263-267. <http://dx.doi.org/10.3138/ptc.2014-47>
29. Shumway JD, Vraa D. Short-Term Effect of Manual Therapy & Taping on Subacute Ankle Sprains with Potential Syndesmotom Sprain: A Case Series. *The Journal of manual & manipulative therapy*. 2022;30(2):116-123. <http://dx.doi.org/10.1080/10669817.2021.1974240>
30. Takasaki H, Hall T, Jull G. Immediate and short-term effects of Mulligan's mobilization with movement on knee pain and disability associated with knee osteoarthritis - A prospective case series. *Physiotherapy Theory & Practice*. 2013;29(2):87-95. <http://dx.doi.org/10.3109/09593985.2012.702854>
31. Wong CK, Strang BL, Schram GA, Mercer EA, Kesting RS, Deo KS. A pragmatic regional interdependence approach to primary frozen shoulder: a retrospective case series*. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2018;26(2):109-118.
32. Young SW, Young TW, MacDonald CW. Conservative management of De Quervain's tendinopathy with an orthopedic manual physical therapy approach emphasizing first CMC manipulation: a retrospective case series. *Physiotherapy theory and practice*. 2022;38(4):587-596. <http://dx.doi.org/10.1080/09593985.2020.1771800>

7. Prospective Cohort Studies (1)

1. Fernandez-Carnero J, Beltran-Alacreu H, Arribas-Romano A, et al. Prediction of Patient Satisfaction after Treatment of Chronic Neck Pain with Mulligan's Mobilization. *Life (Basel)*. 2022;13(1):<http://dx.doi.org/10.3390/life13010048>

REFERENCE LIST

8. Case Reports (52)

1. Aiken DL, Vaughn D. The use of functional and traditional mobilization interventions in a patient with chronic thoracic pain: a case report. *The Journal of manual & manipulative therapy*. 2013;21(3):134-141. <http://dx.doi.org/10.1179/2042618612y.0000000024>
2. Anandkumar S. Effect of a novel mobilization with movement procedure on anterolateral ankle impingement - A case report. *Physiotherapy Theory & Practice*. 2018;34(7):569-577. <http://dx.doi.org/10.1080/09593985.2017.1422822>
3. Anandkumar S. The effect of sustained natural apophyseal glide (SNAG) combined with neurodynamics in the management of a patient with cervical radiculopathy: a case report. *Physiotherapy Theory & Practice*. 2015;31(2):140-145. <http://dx.doi.org/10.3109/09593985.2014.971922>
4. Anandkumar S, Miller J, J. Werstine R, Young S. Effect of mobilization with movement on lateral knee pain due to proximal tibiofibular joint hypomobility. *Physiotherapy Theory & Practice*. 2018;34(10):813-820. <http://dx.doi.org/10.1080/09593985.2018.1424979>
5. Backstrom KM. Mobilization with movement as an adjunct intervention in a patient with complicated De Quervain's tenosynovitis: a case report...including commentary by LaStayo P with author response. *Journal of Orthopaedic & Sports Physical Therapy*. 2002;32(3):86-97.
6. Baglan-Yentur S, Mete O, Tuna Z, Tufan A, Oskay D. The effects of the Mulligan concept in ankylosing spondylitis: a report of two cases. *International Journal of Therapy & Rehabilitation*. 2019;26(5):1-10. <http://dx.doi.org/10.12968/ijtr.2018.0068>
7. Bindra S. Hip Rotation MWM for Sacroiliac Joint Dysfunction: A Case Report. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(3):8-11. <http://dx.doi.org/10.5958/0973-5674.2014.00346.3>
8. Bonnery K. Manipulation of the cervico-thoracic junction accompanied by mobilisation with movement and exercise in a patient with medial epicondylalgia. *Manuelle Therapie*. 2014;18(1):29-37. <http://dx.doi.org/10.1055/s-0034-1368804>
9. Boob MA, Phansopkar P, Somaiya KJ. The Therapeutic Efficacy of Ankle Mobilization and Advance Physiotherapy in Alleviating Heel Spur and Plantar Fasciitis: A Case Report. *Cureus*. 2024;16(4):e57524. <http://dx.doi.org/10.7759/cureus.57524>
10. Buonopane MP. Case Study: A Nontraditional Treatment Approach to Acute Acromioclavicular Joint Injury Care. *International Journal of Athletic Therapy & Training*. 2015;20(5):6-10. <http://dx.doi.org/https://doi.org/10.1123/ijatt.2014-0108>
11. Carpenter G. The effects of hip mobilization and mobilization with movement in the physical therapy management of a person with lateral hip pain: a case report. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2008;16(3):170-170.
12. Carrasco NM, Bergas MJT, Sánchez CO, Blanco MVV. Effects of Mulligan's technique on a burn patient. A case report. *Revista Iberoamericana de Fisioterapia y Kinesiología*. 2011;14(2):90-93.
13. Carson PA. The rehabilitation of a competitive swimmer with an asymmetrical breaststroke movement pattern. *Manual Therapy*. 1999;4(2):100-106.
14. Chaconas E, Gray S, Kempfert D. Mobilization with movement symptom modification procedure for a 38 year old male with patella femoral pain syndrome. *Manual Therapy*. 2016;25(e63-e64).

REFERENCE LIST

15. Cherian K, Cherian N, Cook C, Kaltenbach JA. Improving tinnitus with mechanical treatment of the cervical spine and jaw. *J Am Acad Audiol*. 2013;24(7):544-555. <http://dx.doi.org/10.3766/jaaa.24.7.3>
16. da Rocha RCG, Nee R, Hall T, Chopard R. Treatment of persistent knee pain associated with lumbar dysfunction: a case report. *New Zealand Journal of Physiotherapy*. 2006;34(1):31-35.
17. Desantis L, Hasson SM. Use of Mobilization with Movement in the Treatment of a Patient with Subacromial Impingement: A Case Report. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2006;14(2):77-87.
18. Eusea J, Nasypany A, Seegmiller J, Baker R. Utilizing Mulligan Sustained Natural Apophyseal Glides Within a Clinical Prediction Rule for Treatment of Low Back Pain in a Secondary School Football Player. *International Journal of Athletic Therapy & Training*. 2015;20(1):18-24.
19. Exelby L. The locked lumbar facet joint: intervention using mobilizations with movement. *Manual Therapy*. 2001;6(2):116-121.
20. Fernández-Carnero J, Fernández-de-las-Peñas C, Cleland JA. Mulligan's Mobilization with Movement and Muscle Trigger Point Dry Needling for the Management of Chronic Lateral Epicondylalgia: A Case Report. *Journal of Musculoskeletal Pain*. 2009;17(4):409-415.
21. Folk B. Traumatic thumb injury management using mobilization with movement. *Manual Therapy*. 2001;6(3):178-182.
22. Fujinawa O, Kondo Y, Tachikawa K, Jigami H, Hirose K, Matsunaga H. Athletic Rehabilitation of a Platform Diver for Return to Competition after a Shoulder Dislocation. *XIth International Symposium for Biomechanics & Medicine in Swimming*. 2010;11):362-364.
23. Gebhardt TL, Whitman JM, Smith MB. Mobilization with movement as part of a comprehensive physical therapy program for a patient with shoulder impingement: a case report. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2006;14(3):176-176.
24. Hendley C, May J, Wallace JJ, Cheatham SW. The Use of the Mulligan Concept for the Treatment of a First-Degree Sprain of the First Metatarsophalangeal Joint. *Athletic Training & Sports Health Care: The Journal for the Practicing Clinician*. 2021;13(6):e460-e463. <http://dx.doi.org/10.3928/19425864-20210609-01>
25. Horton SJ. Acute locked thoracic spine: treatment with a modified SNAG. *Manual Therapy*. 2002;7(2):103-107.
26. Hsieh CY, Vicenzino B, Yang CH, Hu MH, Yang C. Mulligan's mobilization with movement for the thumb: a single case report using magnetic resonance imaging to evaluate the positional fault hypothesis. *Man Ther*. 2002;7(1):44-49. <http://dx.doi.org/10.1054/math.2001.0434>
27. Hudson RA, Baker RT, Nasypany A, Reordan D. Treatment of Anterior Shoulder Subluxation Using the Mulligan Concept and Reflex Neuromuscular Stabilization: A Case Report. *International Journal of Sports Physical Therapy*. 2017;12(1):155-162.
28. Jaiswal PR, Ramteke SU, Samal S. Integrative Approach of Conventional Physiotherapy, Mulligan's Mobilisation With Movement, and Plyometric Training in a Young Volleyball Athlete After Anterior Cruciate Ligament (ACL) Reconstruction: A Case Report. *Cureus*. 2024;16(2):e54895. <http://dx.doi.org/10.7759/cureus.54895>
29. Karanjkar SM, Dhage P. "Mulligan Bent Leg Raise" Technique in Avascular Necrosis. *Cureus*. 2023;15(12):e50727. <http://dx.doi.org/10.7759/cureus.50727>

REFERENCE LIST

30. Lawson BL, Williamson JD, Baker R, May J, Larkins L, Nasypany A. Examining the Effect of the Mulligan Concept Fibular Repositioning Taping Technique After a Lateral Ankle Sprain. *Athletic Training & Sports Health Care: The Journal for the Practicing Clinician*. 2018;10(1):41-45.
31. Lenker C, Larocca N, Lee J, Tucker P. The Use of Thoracic Mobilization With Movement to Treat Shoulder Impingement in Older Adults: A Case Study. *Topics in Geriatric Rehabilitation*. 2012;28(3):195-200.
<http://dx.doi.org/10.1097/TGR.0b013e31825d3834>
32. Luzenski KL, Chaconas EJ, Dinkins EM. Management of a patient with chronic ankle instability utilizing mobilization with movement combined with neuromuscular re-education and patient self-taping in return to athletic activity. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2010;18(4):230-231.
33. Malo-Urriés M, Hidalgo-García C, Bueno-Gracia E, Estébanez-de-Miguel E, Lucha-López O, Tricás-Moreno JM. Clinical and ultrasonographic evidence of a proximal positional fault of the radius. A case report. *Manual Therapy*. 2014;19(3):264-269.
34. Matocha MA, Baker RT, Nasypany AM, Seegmiller JG. Effects of Neuromobilization on Tendinopathy: Part II. *International Journal of Athletic Therapy & Training*. 2015;20(2):41-47.
35. Mau H, Baker RT. A MODIFIED MOBILIZATION-WITH-MOVEMENT TO TREAT A LATERAL ANKLE SPRAIN. *International Journal of Sports Physical Therapy*. 2014;9(4):540-548.
36. McNair PJ, Portero P, Chiquet C, Mawston G, Lavaste F. Acute neck pain: Cervical spine range of motion and position sense prior to and after joint mobilization. *Manual Therapy*. 2007;12(4):390-394.
37. Nathani HR, Ramteke SU, Jaiswal PR. Physiotherapeutic Management for Acromioclavicular Joint Sprain With Volar Intercalated Segment Instability at the Wrist: A Case Report. *Cureus*. 2024;16(4):e58399.
<http://dx.doi.org/10.7759/cureus.58399>
38. O'Brien T, Vicenzino B. A study of the effects of Mulligan's mobilization with movement treatment of lateral ankle pain using a case study design. *Manual Therapy*. 1998;3(2):78-84.
39. Panjwani KD. To Compare the Effect of MWM v/s MWM along with Neural Tissue Mobilization in Case of Cervical Radiculopathy. *Indian Journal of Physiotherapy & Occupational Therapy*. 2016;10(1):42-46.
<http://dx.doi.org/10.5958/0973-5674.2016.00010.1>
40. Park JT. Evaluation and treatment of cervicogenic headache: a case study using interventions of soft tissue, joint mobilization, and stabilization exercises. *Orthopaedic Physical Therapy Practice*. 2011;23(4):190-196.
41. Popescu FG, Vaida MA, Mackay GJK, et al. Successful management of a professional viola player with a complex playing related musculoskeletal disorder. *Romanian Journal of Occupational Medicine*. 2021;72(1):59-65. <http://dx.doi.org/10.2478/rjom-2021-0009>
42. Rhinehart A. Effective Treatment of an Apparent Meniscal Injury Using the Mulligan Concept. *Journal of Sports Medicine and Allied Health Sciences: Official Journal of the Ohio Athletic Trainers Association*. 2015;1(2):<http://dx.doi.org/10.25035/jsmahs.01.02.04>
43. Rhinehart A, Buonopane M. Use of the Mulligan Concept and Positional Release Therapy in the Treatment of a Moderate Grade Acromioclavicular Injury. *Athletic Training & Sports Health Care: The Journal for the Practicing Clinician*. 2016;8(2):82-88.
44. Richardson CJ. Treatment of cervicogenic headaches using Mulligan 'SNAGS' and postural reeducation: a case report. *Orthopaedic Physical Therapy Practice*. 2009;21(1):33-38.
45. Sanchez BJ, Baker RT. Conservative Management of Possible Meniscal Derangement Using the Mulligan Concept: A Case Report. *Journal of Chiropractic Medicine*. 2017;16(4):308-315.
<http://dx.doi.org/10.1016/j.jcm.2017.08.005>

REFERENCE LIST

46. Satpute K, Bedekar N, Hall T. Headache symptom modification: the relevance of appropriate manual therapy assessment and management of a patient with features of migraine and cervicogenic headache - a case report. *The Journal of manual & manipulative therapy*. 2020;28(3):181-188.
<http://dx.doi.org/10.1080/10669817.2019.1662637>
47. Shedge SS, Ramteke SU, Samal S. Integrated Rehabilitation Approach Utilizing Swiss Ball Training, Mulligan Taping, and Mobilization With Movement for Simultaneous Management of Sacroiliac Joint Dysfunction and Lateral Ankle Sprain in a Badminton Athlete: A Case Study. *Cureus*. 2024;16(3):e56942.
<http://dx.doi.org/10.7759/cureus.56942>
48. Sivakumar S, Reddy CR, Jayabalan P. Combining the Effects of Mobilization With Movement and Cyriax Physiotherapy in Lateral Epicondylitis: A Case Report. *Cureus*. 2025;17(7):e87093.
<http://dx.doi.org/10.7759/cureus.87093>
49. Somaiya KJ, Samal S, Boob MA. Effectiveness of Recent Physiotherapy Techniques Along With Conventional Physiotherapy Techniques in a Patient With Knee Osteoarthritis: A Case Report. *Cureus*. 2024;16(2):e54872. <http://dx.doi.org/10.7759/cureus.54872>
50. Tikhile P, Patil DS, Jaiswal PR. Management of Low Back Pain With Concurrent Hamstring Tightness: A Case Report Highlighting the Efficacy of Proprioceptive Neuromuscular Facilitation, Mulligan's Two-Leg Rotation Technique, and Exercise Regimen. *Cureus*. 2024;16(4):e58705.
<http://dx.doi.org/10.7759/cureus.58705>
51. Villafane JH, Langford D, Alguacil-Diego IM, Fernandez-Carnero J. Management of trapeziometacarpal osteoarthritis pain and dysfunction using mobilization with movement technique in combination with kinesiography tape: a case report. *Journal of chiropractic medicine*. 2013;12(2):79-86.
<http://dx.doi.org/10.1016/j.jcm.2013.06.001>
52. Woodman R, Berghorn K, Underhill T, Wolanin M. Utilization of mobilization with movement for an apparent sprain of the posterior talofibular ligament: A case report. *Manual Therapy*. 2013;18(1):e1-e7.

9. Diagnostic Accuracy Studies (9)

1. Hall T, Briffa K, Hopper D. The influence of lower cervical joint pain on range of motion and interpretation of the flexion-rotation test. *The Journal of manual & manipulative therapy*. 2010;18(3):126-131.
<http://dx.doi.org/10.1179/106698110X12640740712293>
2. Hall T, Briffa K, Hopper D, Robinson K. Long-Term Stability and Minimal Detectable Change of the Cervical Flexion-Rotation Test. *Journal of Orthopaedic & Sports Physical Therapy*. 2010;40(4):225-229.
<http://dx.doi.org/10.2519/jospt.2010.3100>
3. Hall T, Robinson K. The flexion-rotation test and active cervical mobility--a comparative measurement study in cervicogenic headache. *Man Ther*. 2004;9(4):197-202. <http://dx.doi.org/10.1016/j.math.2004.04.004>
4. Hall TM, Briffa K, Hopper D, Robinson K. Comparative analysis and diagnostic accuracy of the cervical flexion-rotation test. *The journal of headache and pain*. 2010;11(5):391-397.
<http://dx.doi.org/10.1007/s10194-010-0222-3>
5. Hall TM, Briffa K, Hopper D, Robinson KW. The relationship between cervicogenic headache and impairment determined by the flexion-rotation test. *Journal of manipulative and physiological therapeutics*. 2010;33(9):666-671. <http://dx.doi.org/10.1016/j.jmpt.2010.09.002>

REFERENCE LIST

- Ogince M, Hall T, Robinson K, Blackmore AM. The diagnostic validity of the cervical flexion-rotation test in C1/2-related cervicogenic headache. *Man Ther.* 2007;12(3):256-262.
<http://dx.doi.org/10.1016/j.math.2006.06.016>
- Satpute K, Nalband S, Hall T. The C0-C2 axial rotation test: normal values, intra- and inter-rater reliability and correlation with the flexion rotation test in normal subjects. *The Journal of manual & manipulative therapy.* 2019;27(2):92-98. <http://dx.doi.org/10.1080/10669817.2018.1533195>
- Satpute KH, Parekh K, Hall TM. The C0-C2 axial rotation test – Reliability and correlation with the flexion rotation test in people with cervicogenic headache and migraine. *Musculoskeletal Science and Practice.* 2020;102286. <http://dx.doi.org/10.1016/j.msksp.2020.102286>
- Schäfer A, Lüdtke K, Breuel F, et al. Validity of eyeball estimation for range of motion during the cervical flexion rotation test compared to an ultrasound-based movement analysis system. *Physiotherapy theory and practice.* 2018;34(8):622-628. <http://dx.doi.org/10.1080/09593985.2017.1423523>

10. Other Experimental Research (1)

- Ho K-Y, Hsu A-T. Displacement of the head of humerus while performing “mobilization with movements” in glenohumeral joint: A cadaver study. *Manual Therapy.* 2009;14(2):160-166.
<http://dx.doi.org/https://doi.org/10.1016/j.math.2008.01.008>

11. Non-experimental Studies (4)

- Baeske R, Silva MF, Hall T. The clinical decision making process in the use of mobilisation with movement - A Delphi survey. *Musculoskeletal science & practice.* 2020;49(October 2020):102212.
<http://dx.doi.org/10.1016/j.msksp.2020.102212>
- Konstantinou K, Foster N, Rushton A, Baxter D. The use and reported effects of mobilization with movement techniques in low back pain management; a cross-sectional descriptive survey of physiotherapists in Britain. *Manual Therapy.* 2002;7(4):206-214.
- May J, Krzyzanowicz R, Nasypany A, Baker R, Seegmiller J. Mulligan Concept Use and Clinical Profile From the Perspective of American Certified Mulligan Practitioners. *Journal of Sport Rehabilitation.* 2015;24(4):337-341.
- Vicenzino B, Smith D, Cleland J, Bisset L. Development of a clinical prediction rule to identify initial responders to mobilisation with movement and exercise for lateral epicondylalgia. *Manual Therapy.* 2009;14(5):550-554.

12. Narrative Reviews and Critically Appraised Topics (39)

- Ahuja D. Efficacy of mobilization with movement (MWM) in lateral epicondylalgia: role of pain mechanisms- a narrative review. *Journal of Physical Therapy.* 2010;2(1):19-34.

REFERENCE LIST

2. Albertin ES, Miley EN, May J, Baker RT, Reordan D. The Effects of Hip Mobilizations on Patient Outcomes: A Critically Appraised Topic. *Journal of sport rehabilitation*. 2019;28(4):390-394.
<http://dx.doi.org/10.1123/jsr.2016-0238>
3. Andrews D. Utilizing Manual Therapy within a Regional Interdependence Model for the Treatment of Cervicothoracic Dysfunction: A Dissertation of Clinical Practice Improvement. *Utilizing Manual Therapy within a Regional Interdependence Model for the Treatment of Cervicothoracic Dysfunction: A Dissertation of Clinical Practice Improvement*. 2017;1-1.
4. Baeske R. Mobilisation with movement: a step towards understanding the importance of peripheral mechanoreceptors. *Physical Therapy Reviews*. 2015;20(5/6):299-305.
<http://dx.doi.org/10.1080/10833196.2015.1121014>
5. Baker RT, Nasypany A, Seegmiller JG, Baker JG, Turner T. The Mulligan Concept: Mobilizations With Movement. *International Journal of Athletic Therapy & Training*. 2013;18(1):30-34.
6. Chitale N, Jr., Patil DS, Phansopkar P, Joshi A. A Review on Treatment Approaches for Chronic Low Back Pain via Mulligans Movement With Mobilization and Physical Therapy. *Cureus*. 2022;14(8):e28127.
<http://dx.doi.org/10.7759/cureus.28127>
7. Coombes BK, Bisset L, Vicenzino B. Management of Lateral Elbow Tendinopathy: One Size Does Not Fit All. *The Journal of orthopaedic and sports physical therapy*. 2015;45(11):938-949.
<http://dx.doi.org/10.2519/jospt.2015.5841>
8. Exelby L. Mobilisations with movement: a personal view. *Physiotherapy*. 1995;81(12):724-729.
9. Exelby L. The Mulligan concept: its application in the management of spinal conditions. *Manual Therapy*. 2002;7(2):64-70.
10. Exelby L. Peripheral mobilisations with movement. *Manual Therapy*. 1996;1(3):118-126.
11. Foster RL, O'Driscoll M. Current concepts in the conservative management of the frozen shoulder. *Physical Therapy Reviews*. 2010;15(5):399-404. <http://dx.doi.org/10.1179/174328810X12786297204710>
12. Garcia JD, Arnold S, Tetley K, Voight K, Frank RA. Mobilization and Manipulation of the Cervical Spine in Patients with Cervicogenic Headache: Any Scientific Evidence? *Front Neurol*. 2016;7(40).
<http://dx.doi.org/10.3389/fneur.2016.00040>
13. Hall T, Robinson K. Mobilisation with movement. *Australian Journal of Physiotherapy*. 1998;Autumn):16-18.
14. Hearn A, Rivett DA. Cervical SNAGs: a biomechanical analysis. *Manual Therapy*. 2002;7(2):71-79.
15. Heiser RD, O'Brien V, Schwartz DA. Joint Mobilization in the Distal Upper Extremity -- Putting Evidence into Practice. *Journal of Hand Therapy*. 2014;27(3):e5-e5.
16. Hetherington B. LATERAL LIGAMENT STRAINS OF THE ANKLE, DO THEY EXIST? *Man Ther*. 1996;1(5):274-275. <http://dx.doi.org/10.1054/math.1996.0279>
17. Hing W, Bigelow R, Bremner T. Mulligan's mobilisation with movement: a review of the tenets and prescription of MWMs. *New Zealand Journal of Physiotherapy*. 2008;36(3):144-164.
18. Hoch MC, McKeon PO. The effectiveness of mobilization with movement at improving dorsiflexion after ankle sprain. *Journal of sport rehabilitation*. 2010;19(2):226-232. <http://dx.doi.org/10.1123/jsr.19.2.226>
19. Kelley MJ, McClure PW, Leggin BG. Frozen shoulder: evidence and a proposed model guiding rehabilitation. *The Journal of orthopaedic and sports physical therapy*. 2009;39(2):135-148.
<http://dx.doi.org/10.2519/jospt.2009.2916>
20. Kosik KB, Gribble PA. The Effect of Joint Mobilization on Dynamic Postural Control in Patients With Chronic Ankle Instability: A Critically Appraised Topic. *Journal of Sport Rehabilitation*. 2018;27(1):103-108.

REFERENCE LIST

21. Kumar D. *A Study on the Efficacy of Mulligan Concept in Cervical Spine pain and Stiffness*. Amritsar, India: <http://hdl.handle.net/10603/10445>; 2011.
22. Lehman GJ. The Role and Value of Symptom-Modification Approaches in Musculoskeletal Practice. *The Journal of orthopaedic and sports physical therapy*. 2018;48(6):430-435. <http://dx.doi.org/10.2519/jospt.2018.0608>
23. May JM. *Analysis of an individual clinician's patient outcomes when applying the Mulligan Concept intervention strategy to treat lateral ankle sprains in an intercollegiate athletic training clinic. A dissertation of clinical practice improvement [thesis]*. University of Idaho; 2014.
24. McDowell JM, Johnson GM, Hetherington BH. Mulligan Concept manual therapy: Standardizing annotation. *Manual Therapy*. 2014;19(5):499-503.
25. Mulligan BR. Manual therapy rounds. Mobilisations with movement (MWMS) for the hip joint to restore internal rotation and flexion. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 1996;4(1):35-36.
26. Mulligan BR. Manual therapy rounds. Spiral mobilizations with leg movement (further mobilizations with movement). *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 1995;3(1):25-27.
27. Mulligan BR. Manual therapy rounds. Update on spinal mobilisations with leg movement. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 1997;5(4):184-187.
28. Mulligan BR. Manual Therapy Rounds: Mobilisations With Movement (MWM'S). *Journal of Manual & Manipulative Therapy*. 1993;1(4):154-156.
29. Mulligan BR. The painful dysfunctional shoulder. A new treatment approach using 'Mobilisation with Movement'. *New Zealand Journal of Physiotherapy*. 2003;31(3):140-142.
30. Mulligan BR. Spinal mobilisations with arm movement (further mobilisations with movement). *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 1994;2(2):75-77.
31. Pagorek S. Effect of Manual Mobilization with Movement on Pain and Strength in Adults with Chronic Lateral Epicondylitis. *Journal of Sport Rehabilitation*. 2009;18(3):448-457. <http://dx.doi.org/10.1123/jsr.18.3.448>
32. Plummer S, Leonard J. Mobilization With Movement as Therapy to Reduce Knee Pain and Increase Knee Range of Motion. *Journal of Sport Rehabilitation*. 2022;31(7):950-953. <http://dx.doi.org/10.1123/jsr.2021-0294>
33. Silva JG, Torres DdFM, Chagas CA, Guimarães F. Anatomical Considerations of The Acromioclavicular Joint for the Application of Mobilization-With-Movement: A Narrative Review. *Journal of Physical Therapy*. 2013;6(2):59-66.
34. Taylor A, Wolff AL. The forgotten radial nerve: A conceptual framework for treatment of lateral elbow pain. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2021;34(2):323-329. <http://dx.doi.org/10.1016/j.jht.2021.05.009>
35. Vicenzino B, Cleland JA, Bisset L. Joint manipulation in the management of lateral epicondylalgia: a clinical commentary. *The Journal of manual & manipulative therapy*. 2007;15(1):50-56. <http://dx.doi.org/10.1179/106698107791090132>
36. Vicenzino B, Paungmali A, Teys P. Mulligan's mobilization-with-movement, positional faults and pain relief: current concepts from a critical review of literature. *Man Ther*. 2007;12(2):98-108. <http://dx.doi.org/10.1016/j.math.2006.07.012>

REFERENCE LIST

37. Villafañe JH, Valdes K. Mobilization with movement and elastic tape application for the conservative management of carpometacarpal joint osteoarthritis. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2015;28(1):82-84; quiz 85. <http://dx.doi.org/10.1016/j.jht.2014.08.001>
38. Wikstrom EA, Bagherian S, Allen G, Song K. Anterior-to-Posterior Ankle Joint Mobilizations Improve Dynamic Postural Control in Chronic Ankle Instability Patients: A Critically Appraised Topic. *International Journal of Athletic Therapy & Training*. 2018;23(2):57-61.
39. Wilson E. The Mulligan concept: NAGS, SNAGS and mobilizations with movement. *Journal of Bodywork & Movement Therapies*. 2001;5(2):81-89.

13. Textbooks and Book Chapters (7)

1. Hing W, Hall T, Mulligan B. *The Mulligan Concept of Manual Therapy: Textbook of Techniques*. 2nd. Chatswood, NSW: Elsevier Australia; 2020.
2. McDowell J, Mitchell T, Mulligan BR. *Self-treatments for back, neck and limbs: the Mulligan Concept approach*. Revised fourth edition. Invercagill, New Zealand: Plane View Services (2019) Ltd; 2022.
3. Mitchell T, Anderson A, Sault J, Glynn P. Joint-biased interventions for hip and knee pain disorders. In: Mathew B, Courtney CA, Fernandez-de-las-Penas C, eds. *Hip and Knee Pain Disorders: Integrating manual therapy and exercise*. Edinburgh, Scotland: Handspring; 2022:
4. Mulligan BR. *Manual Therapy: NAGS, SNAGS, MWMS etc*. Revised 7th. Invercagill, New Zealand: Plane View Services 2021 Ltd; 2021.
5. Mulligan BR. *Self Treatments for Back, Neck and Limbs: A New Approach*. 3rd. Wellington, New Zealand: Plane View Services; 2012.
6. Runge N, Sault J, Anderson AM, Thomas. Effectiveness of manual therapy approaches for hip and knee pain disorders: an exercise-based approach. In: Mathew B, Courtney CA, Fernandez-de-las-Penas C, eds. *Hip and Knee Pain Disorders: Integrating manual therapy and exercise*. Edinburgh, Scotland: Handspring; 2022:
7. Vicenzino B, Hing W, Rivett D, Hall T. *Mobilisation with Movement: The Art and the Science*. Chatswood: Elsevier Australia; 2011.

14. Trial Protocols (7)

1. Alsiri NF, Alhadhoud MA, Al-Mukaimi A, Palmer S. The effect of Mulligan's mobilization with movement following total knee arthroplasty: Protocol of a single-blind randomized controlled trial. *Musculoskeletal care*. 2020;<http://dx.doi.org/10.1002/msc.1503>
2. Baeske R, Hall T, Silva MF. The inclusion of mobilisation with movement to a standard exercise programme for patients with rotator cuff related pain: a randomised, placebo-controlled protocol trial. *BMC musculoskeletal disorders*. 2020;21(1):744. <http://dx.doi.org/10.1186/s12891-020-03765-6>
3. de Castro Silva M, de Marche Baldon R, Lins C, de Andrade GM, de Castro GBB, Felicio LR. Immediate effect of manual therapy techniques on the limitation of ankle dorsiflexion: a randomized, controlled, blind clinical trial protocol. *Trials*. 2021;22(1):886. <http://dx.doi.org/10.1186/s13063-021-05858-6>

REFERENCE LIST

4. Huda MN, Haque MO, Urme NA, Halder P. Effectiveness of mobilisation with movement (MWM) along with usual care for knee osteoarthritis: a study protocol for a randomised clinical trial. *BMJ Open Sport Exerc Med.* 2025;11(2):e002735. <http://dx.doi.org/10.1136/bmjsem-2025-002735>
5. Reid SA, Rivett DA, Katekar MG, Callister R. Efficacy of manual therapy treatments for people with cervicogenic dizziness and pain: protocol of a randomised controlled trial. *BMC musculoskeletal disorders.* 2012;13(201). <http://dx.doi.org/10.1186/1471-2474-13-201>
6. Satpute K, Bedekar N, Hall T. Effectiveness of Mulligan manual therapy over exercise on headache frequency, intensity and disability for patients with migraine, tension-type headache and cervicogenic headache - a protocol of a pragmatic randomized controlled trial. *BMC musculoskeletal disorders.* 2021;22(1):243. <http://dx.doi.org/10.1186/s12891-021-04105-y>
7. Wang S, Zeng J, Chapple CM, Mani R, Ribeiro DC. Initial effect of high-volume mobilisation with movement on shoulder range of motion and pain in patients with rotator cuff-related shoulder pain: protocol for a randomised controlled trial (Evolution Trial). *BMJ Open.* 2023;13(8):e069919. <http://dx.doi.org/10.1136/bmjopen-2022-069919>

REFERENCE LIST

CATEGORISED BY FIRST AUTHOR

1. Abassi M, Whiteley R. Serial Within-Session Improvements in Ankle Dorsiflexion During Clinical Interventions Including Mobilization-With-Movement and A Novel Manipulation Intervention - A Case Series. *Int J Sports Phys Ther.* 2021;16(4):1158-1168. <http://dx.doi.org/10.26603/001c.25544>
2. Abbott JH. Mobilization with movement applied to the elbow affects shoulder range of movement in subjects with lateral epicondylalgia. *Manual therapy.* 2001;6(3):170 - 177. <http://dx.doi.org/10.1054/math.2001.0407>
3. Abbott JH, Patla CE, Jensen RH. The initial effects of an elbow mobilization with movement technique on grip strength in subjects with lateral epicondylalgia. *Manual therapy.* 2001;6(3):163 - 169. <http://dx.doi.org/10.1054/math.2001.0408>
4. Abdelgalil AA, Balbaa AA, Elazizi HM, Abdelaal AAM. High Velocity Low Amplitude Manipulation versus Sustained Apophyseal Glides on Pain and Range of Motion in Patients with Mechanical Neck Pain: An Immediate Effect. *International Journal of Advanced Research.* 2015;3(June):503-514.
5. Abu El Kasem ST, Alaa FAA, Abd El-Raouf NA, Abd-Elazeim AS. Efficacy of Mulligan thoracic sustained natural apophyseal glides on sub-acromial pain in patients with sub-acromial impingement syndrome: a single-blinded randomized controlled trial. *Journal of Manual & Manipulative Therapy.* 2024;April):1-10. <http://dx.doi.org/10.1080/10669817.2024.2341453>
6. Adnan M, Arsh A, Ali B, Ahmad S. Effectiveness of bent leg raise technique and neurodynamics in patients with radiating low back pain. *Pak J Med Sci.* 2022;38(1):47-51. <http://dx.doi.org/10.12669/pjms.38.1.4010>
7. Afzal MW, Ahmad A, Waqas MS, Ahmad U. Effectiveness of Therapeutic Ultrasound With and Without Mulligan Mobilization In Lateral Epicondylitis. *Annals of King Edward Medical University.* 2016;22(1):47. <http://dx.doi.org/10.21649/akemu.v22i1.798>
8. Agyenkwa SK, Mustafaoglu R, Yeldan I. Therapeutic Effects of Kinesiology Taping Versus Self-Mobilization on Neck Pain, Proprioception, Muscle Activity, and Respiratory Muscle Strength Among Prolonged Electronic Device Users. A Randomized Controlled Trial. *Physiotherapy Research International.* 2025;30(2):e70061. <http://dx.doi.org/https://doi.org/10.1002/pri.70061>
9. Ahmed A, Ibrar M, Arsh A, Wali S, Hayat S, Abass S. Comparing the effectiveness of Mulligan mobilization versus Cyriax approach in the management of patients with subacute lateral epicondylitis. *J Pak Med Assoc.* 2021;71(1(a)):12-15. <http://dx.doi.org/10.47391/jpma.186>
10. Ahuja D. Efficacy of mobilization with movement (MWM) in lateral epicondylalgia: role of pain mechanisms- a narrative review. *Journal of Physical Therapy.* 2010;2(1):19-34.
11. Aiken DL, Vaughn D. The use of functional and traditional mobilization interventions in a patient with chronic thoracic pain: a case report. *The Journal of manual & manipulative therapy.* 2013;21(3):134-141. <http://dx.doi.org/10.1179/2042618612y.0000000024>
12. Akaras E, Guzel NA, Kafa N, Özdemir YA. The acute effects of two different rigid taping methods in patients with hallux valgus deformity. *Journal of back and musculoskeletal rehabilitation.* 2020;33(1):91-98. <http://dx.doi.org/10.3233/bmr-181150>
13. Akram H, Bashir MS, Zia A, Noor R, Shakeel A. Comparison of muscle energy technique and mobilization with movement to reduce pain and improve functional status in subjects with anterior innominate ilio-sacral

REFERENCE LIST

- dysfunction. *Journal of bodywork and movement therapies*. 2024;40(1336-1341).
<http://dx.doi.org/10.1016/j.jbmt.2022.11.003>
14. Alamer A, Melese H, Getie K, et al. Effect of Ankle Joint Mobilization with Movement on Range of Motion, Balance and Gait Function in Chronic Stroke Survivors: Systematic Review of Randomized Controlled Trials. *Degener Neurol Neuromuscul Dis*. 2021;11(51-60). <http://dx.doi.org/10.2147/DNND.S317865>
 15. Alansari SM, Youssef EF, Shanb AA. Efficacy of manual therapy on psychological status and pain in patients with neck pain. A randomized clinical trial. *Saudi Med J*. 2021;42(1):82-90.
<http://dx.doi.org/10.15537/smj.2021.1.25589>
 16. Albertin ES, Miley EN, May J, Baker RT, Reordan D. The Effects of Hip Mobilizations on Patient Outcomes: A Critically Appraised Topic. *Journal of sport rehabilitation*. 2019;28(4):390-394.
<http://dx.doi.org/10.1123/jsr.2016-0238>
 17. Ali A, Shakil-ur-Rehman S, Sibtain F. The efficacy of sustained natural apophyseal glides with and without isometric exercise training in non-specific neck pain. *Pakistan journal of medical sciences*. 2014;30(4):<http://dx.doi.org/10.12669/pjms.304.5148>
 18. Ali MN, Sethi K, Noohu MM. Comparison of two mobilization techniques in management of chronic non-specific low back pain. *Journal of bodywork and movement therapies*. 2019;23(4):918-923.
<http://dx.doi.org/10.1016/j.jbmt.2019.02.020>
 19. Alkady SME, Kamel RM, AbuTaleb E, Lasheen Y, Alshaarawy FA. Efficacy of Mulligan Mobilization Versus Muscle Energy Technique in Chronic Sacroiliac Joint Dysfunction. *International Journal of Physiotherapy*. 2017;4(5):<http://dx.doi.org/10.15621/ijphy/2017/v4i5/159427>
 20. Alkhwajah HA, Alshami AM. The effect of mobilization with movement on pain and function in patients with knee osteoarthritis: a randomized double-blind controlled trial. *BMC musculoskeletal disorders*. 2019;20(1):452. <http://dx.doi.org/10.1186/s12891-019-2841-4>
 21. Alshami AM, AlSadiq AI. Outcomes of scapulothoracic mobilisation in patients with neck pain and scapular dyskinesia: A randomised clinical trial. *J Taibah Univ Med Sci*. 2021;16(4):540-549.
<http://dx.doi.org/10.1016/j.jtumed.2021.03.006>
 22. Alsiri NF, Alhadhoud MA, Al-Mukaimi A, Palmer S. The effect of Mulligan's mobilization with movement following total knee arthroplasty: Protocol of a single-blind randomized controlled trial. *Musculoskeletal care*. 2020;<http://dx.doi.org/10.1002/msc.1503>
 23. Altamis H, Oskay D, Elbasan B, Duzgun I, Tuna Z. Mobilization with movement and kinesio taping in knee arthritis-evaluation and outcomes. *International orthopaedics*. 2018;42(12):2807-2815.
<http://dx.doi.org/10.1007/s00264-018-3938-3>
 24. Alves Y, Ribeiro F, Silva AG. Effect of fibular repositioning taping in adult basketball players with chronic ankle instability: a randomized, placebo-controlled, crossover trial. *The Journal of sports medicine and physical fitness*. 2018;58(10):1465-1473. <http://dx.doi.org/10.23736/s0022-4707.17.07472-2>
 25. Ambarish AA, Chitra J, Subhash KM. Comparative effectiveness of Mulligan's mobilization in weight bearing and non-weight bearing in the treatment of ankle sprains- a randomized clinical trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2008;2(4):1-4.
 26. Amjad F, Asghar H. Comparative effects of gong's mobilization and mobilization with movement in patients with adhesive capsulitis: a randomized clinical trial. *Sci Rep*. 2025;15(1):4272.
<http://dx.doi.org/10.1038/s41598-025-88422-5>

REFERENCE LIST

27. Amro A, Diener I, Bdair WO, Hamed IM, Shalabi AI, Ilyyan DI. The effects of Mulligan mobilisation with movement and taping techniques on pain, grip strength, and function in patients with lateral epicondylitis. *Hong kong physiotherapy journal*. 2010;28(1):19 - 23. <http://dx.doi.org/10.1016/j.hkpj.2010.11.004>
28. An CM, Jo SO. Effects of Talocrural Mobilization with Movement on Ankle Strength, Mobility, and Weight-Bearing Ability in Hemiplegic Patients with Chronic Stroke: A Randomized Controlled Trial. *Journal of stroke and cerebrovascular diseases : the official journal of National Stroke Association*. 2017;26(1):169-176. <http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2016.09.005>
29. An CM, Won JI. Effects of ankle joint mobilization with movement and weight-bearing exercise on knee strength, ankle range of motion, and gait velocity in patients with stroke: a pilot study. *Journal of physical therapy science*. 2016;28(2):689 - 694.
30. Analay Akbaba Y, Özdemir AE, Bali K, Yalçın E. Immediate Effects of Mobilization With Movement Technique on Cervical Muscle Stiffness, Pain, and Range of Motion in Individuals With Mechanical Neck Pain: A Double-Blind Randomized Controlled Trial. *Physiotherapy theory and practice*. 2025;41(9):1783-1794. <http://dx.doi.org/10.1080/09593985.2025.2473471>
31. Anandkumar S. Effect of a novel mobilization with movement procedure on anterolateral ankle impingement - A case report. *Physiotherapy Theory & Practice*. 2018;34(7):569-577. <http://dx.doi.org/10.1080/09593985.2017.1422822>
32. Anandkumar S. The effect of sustained natural apophyseal glide (SNAG) combined with neurodynamics in the management of a patient with cervical radiculopathy: a case report. *Physiotherapy Theory & Practice*. 2015;31(2):140-145. <http://dx.doi.org/10.3109/09593985.2014.971922>
33. Anandkumar S, Miller J, J. Werstine R, Young S. Effect of mobilization with movement on lateral knee pain due to proximal tibiofibular joint hypomobility. *Physiotherapy Theory & Practice*. 2018;34(10):813-820. <http://dx.doi.org/10.1080/09593985.2018.1424979>
34. Andrews D. Utilizing Manual Therapy within a Regional Interdependence Model for the Treatment of Cervicothoracic Dysfunction: A Dissertation of Clinical Practice Improvement. *Utilizing Manual Therapy within a Regional Interdependence Model for the Treatment of Cervicothoracic Dysfunction: A Dissertation of Clinical Practice Improvement*. 2017;1-1.
35. Andrews DP, Odland-Wolf KB, May J, Baker R, Nasypany A. The Utilization of Mulligan Concept Thoracic Sustained Natural Apophyseal Glides on Patients Classified with Secondary Impingement Syndrome: A Multi-Site Case Series. *International Journal of Sports Physical Therapy*. 2018;13(1):121-130.
36. Andrews DP, Odland-Wolf KB, May J, Baker R, Nasypany A, Dinkins EM. Immediate and short-term effects of mulligan concept positional sustained natural apophyseal glides on an athletic young-adult population classified with mechanical neck pain: an exploratory investigation. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2018;26(4):203-211. <http://dx.doi.org/10.1080/10669817.2018.1460965>
37. Anwer S, Alghadir A, Zafar H, Brismée J-M. Effects of orthopaedic manual therapy in knee osteoarthritis: a systematic review and meta-analysis. *Physiotherapy*. 2018;104(3):264-276.
38. Arabzadeh S, Kamali F, Bervis S, Razeghi M. The hip joint mobilization with movement technique improves muscle activity, postural stability, functional and dynamic balance in hemiplegia secondary to chronic stroke: a blinded randomized controlled trial. *BMC Neurol*. 2023;23(1):262. <http://dx.doi.org/10.1186/s12883-023-03315-2>

REFERENCE LIST

39. Arshad HS, Shah IH, Nasir RH. Comparison of Mulligan Mobilization with Movement and End-Range Mobilization Following Maitland Techniques in Patients with Frozen Shoulder in Improving Range of Motion. *International Journal of Science and Research (IJSR)*. 2015;4(4):2761-2767.
40. Athanasiadis D, Dionyssiotis Y, Krumov J, Obretenov V, Panayotov K, Papathanasiou J. The cognitive-behavioral aspects of the Mulligan concept of manual therapy: A systematic review. *Eur J Transl Myol*. 2022;<http://dx.doi.org/10.4081/ejtm.2022.10504>
41. Backstrom KM. Mobilization with movement as an adjunct intervention in a patient with complicated De Quervain's tenosynovitis: a case report...including commentary by LaStayo P with author response. *Journal of Orthopaedic & Sports Physical Therapy*. 2002;32(3):86-97.
42. Baeske R. Mobilisation with movement: a step towards understanding the importance of peripheral mechanoreceptors. *Physical Therapy Reviews*. 2015;20(5/6):299-305.
<http://dx.doi.org/10.1080/10833196.2015.1121014>
43. Baeske R, Hall T, Dall'Olmo RR, Silva MF. In people with shoulder pain, mobilisation with movement and exercise improves function and pain more than sham mobilisation with movement and exercise: a randomised trial. *J Physiother*. 2024;70(4):288-293. <http://dx.doi.org/10.1016/j.jphys.2024.08.009>
44. Baeske R, Hall T, Silva MF. The inclusion of mobilisation with movement to a standard exercise programme for patients with rotator cuff related pain: a randomised, placebo-controlled protocol trial. *BMC musculoskeletal disorders*. 2020;21(1):744. <http://dx.doi.org/10.1186/s12891-020-03765-6>
45. Baeske R, Silva MF, Hall T. The clinical decision making process in the use of mobilisation with movement - A Delphi survey. *Musculoskeletal science & practice*. 2020;49(October 2020):102212.
<http://dx.doi.org/10.1016/j.msksp.2020.102212>
46. Bagcaci S, Unuvar BS, Gercek H, Ugurlu I, Sert OA, Yilmaz K. A randomized controlled trial on pain, grip strength, and functionality in lateral elbow pain: Mulligan vs muscle energy techniques. *Journal of back and musculoskeletal rehabilitation*. 2023;36(2):419-427. <http://dx.doi.org/10.3233/BMR-220061>
47. Baglan-Yentur S, Mete O, Tuna Z, Tufan A, Oskay D. The effects of the Mulligan concept in ankylosing spondylitis: a report of two cases. *International Journal of Therapy & Rehabilitation*. 2019;26(5):1-10.
<http://dx.doi.org/10.12968/ijtr.2018.0068>
48. Baker RT, Nasypany A, Seegmiller JG, Baker JG, Turner T. The Mulligan Concept: Mobilizations With Movement. *International Journal of Athletic Therapy & Training*. 2013;18(1):30-34.
49. Balasundaram AP, Sreerama Rajan S. Short-term effects of mobilisation with movement in patients with post-traumatic stiffness of the knee joint. *Journal of bodywork and movement therapies*. 2018;22(2):498-501. <http://dx.doi.org/10.1016/j.jbmt.2017.06.007>
50. Barbosa-Silva J, Luc A, Sobral de Oliveira-Souza AI, et al. The Effectiveness of Mulligan's Techniques in Non-Specific Neck Pain: A Systematic Review and Meta-Analysis. *Physiotherapy research international : the journal for researchers and clinicians in physical therapy*. 2025;30(3):e70045.
<http://dx.doi.org/10.1002/pri.70045>
51. Bello B, Danazumi MS, Kaka B. Comparative Effectiveness of 2 Manual Therapy Techniques in the Management of Lumbar Radiculopathy: A Randomized Clinical Trial. *Journal of chiropractic medicine*. 2019;18(4):253-260. <http://dx.doi.org/10.1016/j.jcm.2019.10.006>
52. Beselga C, Neto F, Alburquerque-Sendín F, Hall T, Oliveira-Campelo N. Immediate effects of hip mobilization with movement in patients with hip osteoarthritis: a randomised controlled trial. *Manual therapy*. 2016;22(80 - 85). <http://dx.doi.org/10.1016/j.math.2015.10.007>

REFERENCE LIST

53. Bhagat M, Neelapala YVR, Gangavelli R. Immediate effects of Mulligan's techniques on pain and functional mobility in individuals with knee osteoarthritis: A randomized control trial. *Physiotherapy research international : the journal for researchers and clinicians in physical therapy*. 2020;25(1):e1812. <http://dx.doi.org/10.1002/pri.1812>
54. Bhardwaj P, Dhawan A. The relative efficacy of mobilization with movement versus Cyriax physiotherapy in the treatment of lateral epicondylitis. *Indian Journal of Physiotherapy & Occupational Therapy*. 2011;5(1):142-146.
55. Bhat PV, Patel VD, Eapen C, Shenoy M, Milanese S. Myofascial release versus Mulligan sustained natural apophyseal glides' immediate and short-term effects on pain, function, and mobility in non-specific low back pain. *PeerJ*. 2021;9(e10706). <http://dx.doi.org/10.7717/peerj.10706>
56. Bhosale N, Kanase SB, Bathia K. Effect of Mulligan's Pain Release Phenomenon with Kinesiotaping in Chronic Patellofemoral Osteoarthritis. *Indian Journal of Public Health Research & Development*. 2019;10(4):324. <http://dx.doi.org/10.5958/0976-5506.2019.00712.5>
57. Bianco L, Fermin S, Oates R, May J, Cheatham SW, Nasypany A. Use of the Mulligan concept in the treatment of lateral ankle sprains in the active population: an exploratory prospective case series. *The Journal of the Canadian Chiropractic Association*. 2019;63(3):154-161.
58. Bindra S. Hip Rotation MWM for Sacroiliac Joint Dysfunction: A Case Report. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(3):8-11. <http://dx.doi.org/10.5958/0973-5674.2014.00346.3>
59. Bisset L, Beller E, Jull G, Brooks P, Darnell R, Vicenzino B. Mobilisation with movement and exercise, corticosteroid injection, or wait and see for tennis elbow: randomised trial. *BMJ (clinical research ed.)*. 2006;333(7575):939. <http://dx.doi.org/10.1136/bmj.38961.584653.AE>
60. Bisset L, Hing W, Vicenzino B. The efficacy of mobilisations with movement treatment on musculoskeletal pain: a systematic review and meta-analysis. *Physiotherapy (united kingdom)*. 2011;97(eS134). <http://dx.doi.org/10.1016/j.physio.2011.04.002>
61. Bisset L, Hing W, Vicenzino B. A systematic review of the efficacy of MWM. In: Vicenzino B, Hing W, Rivett D, Hall T, eds. *Mobilisation With Movement: The Art and the Science*. Chatswood, NSW: Churchill Livingstone Australia; 2011:26-64.
62. Bleakley CM, McDonough SM, MacAuley DC. Some conservative strategies are effective when added to controlled mobilisation with external support after acute ankle sprain: a systematic review. *Australian Journal of Physiotherapy*. 2008;54(1):7-20.
63. Bonnery K. Manipulation of the cervico-thoracic junction accompanied by mobilisation with movement and exercise in a patient with medial epicondylalgia. *Manuelle Therapie*. 2014;18(1):29-37. <http://dx.doi.org/10.1055/s-0034-1368804>
64. Boob MA, Phansopkar P, Somaiya KJ. The Therapeutic Efficacy of Ankle Mobilization and Advance Physiotherapy in Alleviating Heel Spur and Plantar Fasciitis: A Case Report. *Cureus*. 2024;16(4):e57524. <http://dx.doi.org/10.7759/cureus.57524>
65. Boruah L, Dutta A, Deka P, Roy J. To Study the Effect of Scapular Mobilization Versus Mobilization With Movement to Reduce Pain and Improve Gleno-humeral Range of Motion in Adhesive Capsulitis of Shoulder: A Comparative Study. *International Journal of Physiotherapy*. 2015;2(5):<http://dx.doi.org/10.15621/ijphy/2015/v2i5/78239>
66. Bowler N, Browning P, Lascurain-Aguirrebena I. The effects of cervical sustained natural apophyseal glides on neck range of movement and sympathetic nervous system activity. *International journal of osteopathic*

REFERENCE LIST

- medicine. (no pagination), 2017. 2017;Date of Publication: June 04*(<http://dx.doi.org/10.1016/j.ijosm.2017.02.003>)
67. Brody K, Baker RT, Nasypany A, Seegmiller J, Piccininni JJ. Treatment of Meniscal Lesions Using the Mulligan “Squeeze” Technique: A Case Series. *International Journal of Athletic Therapy and Training*. 2015;20(6):24-31. <http://dx.doi.org/10.1123/ijatt.2014-0135>
68. Browning P, Gangwal K. The effect of a cervical rotational snag on median nerve extensibility in an asymptomatic population, a within subjects randomised design. *Physiotherapy (united kingdom)*. 2011;97(eS162 - eS163). <http://dx.doi.org/10.1016/j.physio.2011.04.002>
69. Buke M, Unver F, Sekeroz S, Oztekin SNS. Effectiveness of Mulligan Mobilization Technique and Core Stabilization Exercises in Female Patients With Knee Osteoarthritis: A Randomized Controlled Single-Blind Study. *Journal of manipulative and physiological therapeutics*. 2024;47(1-4):33-44. <http://dx.doi.org/10.1016/j.jmpt.2024.08.012>
70. Buonopane MP. Case Study: A Nontraditional Treatment Approach to Acute Acromioclavicular Joint Injury Care. *International Journal of Athletic Therapy & Training*. 2015;20(5):6-10. <http://dx.doi.org/https://doi.org/10.1123/ijatt.2014-0108>
71. Buran Çirak Y, Yurdaşık I, Elbaşı ND, Tütüneken YE, Köçe K, Çınar B. Effect of Sustained Natural Apophyseal Glides on Stiffness of Lumbar Stabilizer Muscles in Patients With Nonspecific Low Back Pain: Randomized Controlled Trial. *Journal of Manipulative and Physiological Therapeutics*. 2021;44(6):445-454. <http://dx.doi.org/https://doi.org/10.1016/j.jmpt.2021.06.005>
72. Buyukturan B, Sas S, Kararti C, Ozsoy I, Habibzadeh A, Buyukturan O. Effects of Subtalar Joint Mobilization with Movement on Muscle Strength, Balance, Functional Performance, and Gait Parameters in Patients with Chronic Stroke: A Single-Blind Randomized Controlled Study. *J Am Podiatr Med Assoc*. 2022;112(1):<http://dx.doi.org/10.7547/20-275>
73. Buyukturan O, Buyukturan B, Sas S, Kararti C, Ceylan I. The Effect of Mulligan Mobilization Technique in Older Adults with Neck Pain: A Randomized Controlled, Double-Blind Study. *Pain Res Manag*. 2018;2018(2856375). <http://dx.doi.org/10.1155/2018/2856375>
74. Cankaya MS, Pala OO. Outcomes of Mulligan Concept Applications in Obese Individuals with Chronic Mechanical Low Back Pain: A Randomized Controlled Trial. *Life (Basel)*. 2024;14(6):<http://dx.doi.org/10.3390/life14060754>
75. Cardoso R, Seixas A, Rodrigues S, et al. The effectiveness of Sustained Natural Apophyseal Glide on Flexion Rotation Test, pain intensity, and functionality in subjects with Cervicogenic Headache: A Systematic Review of Randomized Trials. *Arch Physiother*. 2022;12(1):20. <http://dx.doi.org/10.1186/s40945-022-00144-3>
76. Carpenter G. The effects of hip mobilization and mobilization with movement in the physical therapy management of a person with lateral hip pain: a case report. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2008;16(3):170-170.
77. Carrasco NM, Bergas MJT, Sánchez CO, Blanco MVV. Effects of Mulligan's technique on a burn patient. A case report. *Revista Iberoamericana de Fisioterapia y Kinesiología*. 2011;14(2):90-93.
78. Carson PA. The rehabilitation of a competitive swimmer with an asymmetrical breaststroke movement pattern. *Manual Therapy*. 1999;4(2):100-106.

REFERENCE LIST

79. Çelik D, Van Der Veer P, Tiryaki P. The Clinical Significance of Mulligan's Mobilization with Movement in Shoulder Pathologies: A Systematic Review and Meta-Analysis. *Journal of Integrative and Complementary Medicine*. 2024;31(2):134-142. <http://dx.doi.org/10.1089/jicm.2024.0200>
80. Celik T, Menek B. The effect of Mulligan and Maitland techniques on pain, functionality, proprioception, and quality of life in individuals with rotator cuff lesions. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2025;38(3):574-583. <http://dx.doi.org/10.1016/j.jht.2024.12.018>
81. Cevik R, Pala OO. Effects of upper thoracic Mulligan mobilization on pain, range of motion and function in patients with mechanical neck pain: A randomized placebo-controlled trial. *PLoS One*. 2024;19(10):e0311206. <http://dx.doi.org/10.1371/journal.pone.0311206>
82. Ceylan İ, Büyükturan Ö, Aykanat Ö, Büyükturan B, Şaş S, Ceylan MF. The effectiveness of mobilization with movement on patients with mild and moderate carpal tunnel syndrome: A single-blinded, randomized controlled study. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2023;36(4):773-785. <http://dx.doi.org/10.1016/j.jht.2023.02.004>
83. Chaconas E, Gray S, Kempfert D. Mobilization with movement symptom modification procedure for a 38 year old male with patella femoral pain syndrome. *Manual Therapy*. 2016;25(e63-e64).
84. Chan-Woo N, Sang-In P, Min-Sik Y, Young-Min K. Effects of the MWM Technique Accompanied by Trunk Stabilization Exercises on Pain and Physical Dysfunctions Caused by Degenerative Osteoarthritis. *Journal of physical therapy science*. 2013;25(9):1137-1140. <http://dx.doi.org/10.1589/jpts.25.1137>
85. Channak S, Saelee W, Narongrattikai N, et al. The effects of the T6 sustained natural apophyseal glide (SNAG) with rotation in mechanical chronic thoracic spine pain: a randomized controlled trial. *Journal of medical technology*. 2016;28(80-91).
86. Cherian K, Cherian N, Cook C, Kaltenbach JA. Improving tinnitus with mechanical treatment of the cervical spine and jaw. *J Am Acad Audiol*. 2013;24(7):544-555. <http://dx.doi.org/10.3766/jaaa.24.7.3>
87. Chitale N, Jr., Patil DS, Phansopkar P. Integrated Neuromuscular Inhibition Technique Versus Mulligan Mobilization on Functional Disability in Subjects With Nonspecific Low Back Pain: A Comparative Study. *Cureus*. 2022;14(10):e30253. <http://dx.doi.org/10.7759/cureus.30253>
88. Chitale N, Jr., Patil DS, Phansopkar P, Joshi A. A Review on Treatment Approaches for Chronic Low Back Pain via Mulligans Movement With Mobilization and Physical Therapy. *Cureus*. 2022;14(8):e28127. <http://dx.doi.org/10.7759/cureus.28127>
89. Choung S-D, Kwon O-Y, Park K-N, Kim S-H, Cynn H-S. Short-term effects of self-mobilization with a strap on pain and range of motion of the wrist joint in patients with dorsal wrist pain when weight bearing through the hand: A case series. *Manual Therapy*. 2013;18(6):568-572.
90. Christian N. Comparative Study to Find the Effect of Mulligans SNAG Technique (C1-C2) Versus Maitlands Technique (C1-C2) in Cervicogenic Headache Among Information Technology Professionals. *International Journal of Physiotherapy*. 2017;4(3):178-183. <http://dx.doi.org/10.15621/ijphy/2017/v4i3/149071>
91. Clar C, Tsertsvadze A, Court R, Hundt GL, Clarke A, Sutcliffe P. Clinical effectiveness of manual therapy for the management of musculoskeletal and non-musculoskeletal conditions: systematic review and update of UK evidence report. *Chiropractic & manual therapies*. 2014;22(1):12. <http://dx.doi.org/10.1186/2045-709x-22-12>
92. Coelho BAL, Rodrigues HLdN, Almeida GPL, João SMA. Immediate Effect of Ankle Mobilization on Range of Motion, Dynamic Knee Valgus, and Knee Pain in Women With Patellofemoral Pain and Ankle Dorsiflexion

REFERENCE LIST

- Restriction: A Randomized Controlled Trial With 48-Hour Follow-Up. *Journal of Sport Rehabilitation*. 2021;30(5):697-706. <http://dx.doi.org/10.1123/jsr.2020-0183>
93. Collins N, Teys P, Vicenzino B. The initial effects of a Mulligan's mobilization with movement technique on dorsiflexion and pain in subacute ankle sprains. *Manual therapy*. 2004;9(2):77 - 82. [http://dx.doi.org/10.1016/S1356-689X\(03\)00101-2](http://dx.doi.org/10.1016/S1356-689X(03)00101-2)
94. Coombes BK, Bisset L, Brooks P, Khan A, Vicenzino B. Effect of corticosteroid injection, physiotherapy, or both on clinical outcomes in patients with unilateral lateral epicondylalgia: a randomized controlled trial. *Jama*. 2013;309(5):461-469. <http://dx.doi.org/10.1001/jama.2013.129>
95. Coombes BK, Bisset L, Vicenzino B. Management of Lateral Elbow Tendinopathy: One Size Does Not Fit All. *The Journal of orthopaedic and sports physical therapy*. 2015;45(11):938-949. <http://dx.doi.org/10.2519/jospt.2015.5841>
96. Coombes BK, Hams A, Tenbrink R, Love A, Bisset LM. Mobilisation-with-movement induces analgesia during exercise but exercise alone is not analgesic in people with lateral elbow tendinopathy: An assessor blinded, randomised crossover trial. *Musculoskeletal science & practice*. 2025;80(103421). <http://dx.doi.org/10.1016/j.msksp.2025.103421>
97. Copurgensli C, Gur G, Tunay VB. A comparison of the effects of Mulligan's mobilization and Kinesio taping on pain, range of motion, muscle strength, and neck disability in patients with Cervical Spondylosis: a randomized controlled study. *Journal of back and musculoskeletal rehabilitation*. 2017;30(1):51 - 62. <http://dx.doi.org/10.3233/BMR-160713>
98. Creighton D, Krauss J, Pascoe S, Patel H, Pierce J. The effects of tibio-femoral joint traction mobilization on patients with limited passive knee flexion: a case series. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2006;14(3):173-174.
99. Cruz-Díaz D, Lomas Vega R, Osuna-Pérez MC, Hita-Contreras F, Martínez-Amat A. Effects of joint mobilization on chronic ankle instability: a randomized controlled trial. *Disability and rehabilitation*. 2015;37(7):601 - 610. <http://dx.doi.org/10.3109/09638288.2014.935877>
100. Cui X, Zhao P, Guo X, et al. Effectiveness of multimodal active physiotherapy for chronic knee pain: a 12-month randomized controlled trial follow-up study. *Front Physiol*. 2024;15(1451345). <http://dx.doi.org/10.3389/fphys.2024.1451345>
101. da Rocha RCG, Nee R, Hall T, Chopard R. Treatment of persistent knee pain associated with lumbar dysfunction: a case report. *New Zealand Journal of Physiotherapy*. 2006;34(1):31-35.
102. Dabholkar A, Kumari S, Yardi S. Comparative Study of Short Term Response between Maitland Mobilization and Mulligan's Mobilization with Movement of Hip Joint in Osteoarthritis of Knee Patients Identified as Per Clinical Prediction Rule. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(4):6-10. <http://dx.doi.org/10.5958/0973-5674.2014.00002.1>
103. Dalvi S, Shinde S, Mishra SD. Effect of Mobilization With Movement on the Glenohumeral Joint Positional Fault in Subacromial Impingement. *Cureus*. 2024;16(6):e62576. <http://dx.doi.org/10.7759/cureus.62576>
104. Danazumi MS, Bello B, Yakasai AM, Kaka B. Two manual therapy techniques for management of lumbar radiculopathy: a randomized clinical trial. *J Osteopath Med*. 2021;121(4):391-400. <http://dx.doi.org/10.1515/jom-2020-0261>
105. Das MSS, Dowle P, Iyengar R. Effect of spinal mobilization with leg movement as an adjunct to neural mobilization and conventional therapy in patients with lumbar radiculopathy: Randomized controlled trial. *Journal of Medical and Scientific Research*. 2018;6(1):11-19. <http://dx.doi.org/10.17727/jmsr.2018/6-3>

REFERENCE LIST

106. de-la-Morena JM, Alguacil-Diego IM, Molina-Rueda F, Ramiro-González M, Villafaña JH, Fernández-Carnero J. The Mulligan ankle taping does not affect balance performance in healthy subjects: a prospective, randomized blinded trial. *Journal of physical therapy science*. 2015;27(5):1597-1602. <http://dx.doi.org/10.1589/jpts.27.1597>
107. de Castro Silva M, de Marche Baldon R, Lins C, de Andrade GM, de Castro GBB, Felicio LR. Immediate effect of manual therapy techniques on the limitation of ankle dorsiflexion: a randomized, controlled, blind clinical trial protocol. *Trials*. 2021;22(1):886. <http://dx.doi.org/10.1186/s13063-021-05858-6>
108. Delahunt E, Cusack KIM, Wilson L, Doherty C. Joint Mobilization Acutely Improves Landing Kinematics in Chronic Ankle Instability. *Medicine & Science in Sports & Exercise*. 2013;45(3):514-519.
109. Delahunt E, McGrath A, Doran N, Coughlan GF. Effect of taping on actual and perceived dynamic postural stability in persons with chronic ankle instability. *Archives of physical medicine and rehabilitation*. 2010;91(9):1383-1389. <http://dx.doi.org/10.1016/j.apmr.2010.06.023>
110. Delgado-Gil JA, Prado-Robles E, Rodrigues-de-Souza DP, Cleland JA, Fernández-de-las-Peñas C, Alburquerque-Sendín F. Effects of mobilization with movement on pain and range of motion in patients with unilateral shoulder impingement syndrome: a randomized controlled trial. *Journal of manipulative and physiological therapeutics*. 2015;38(4):245 - 252. <http://dx.doi.org/10.1016/j.jmpt.2014.12.008>
111. Demirci S, Kinikli GI, Callaghan MJ, Tunay VB. Comparison of short-term effects of mobilization with movement and Kinesiotaping on pain, function and balance in patellofemoral pain. *Acta orthopaedica ET traumatologica turcica*. 2017;51(6):442 - 447. <http://dx.doi.org/10.1016/j.aott.2017.09.005>
112. Demirkan MY, Oral MA, Cobanoglu G, Guzel NA. Effects of two mobilization with movement techniques to the talocrural joint in individuals with dorsiflexion limitation: clinician vs self-applied. *Physiotherapy theory and practice*. 2025;41(10):2100-2111. <http://dx.doi.org/10.1080/09593985.2025.2496776>
113. Deng F, Adams R, Pranata A, Cui F, Han J. Tibial internal and external rotation taping for improving pain in patients with patellofemoral pain syndrome. *Journal of Science and Medicine in Sport*. 2022;<http://dx.doi.org/10.1016/j.jsams.2022.04.003>
114. Deniz V, Kelle B. Mobilization with movement plus exercise versus exercise alone for patients with central sensitization associated with chronic subacromial pain syndrome: a sham-controlled randomized clinical trial. *BMC Complement Med Ther*. 2025;25(1):289. <http://dx.doi.org/10.1186/s12906-025-05028-0>
115. Desai P, Vinodkumar A. A Comparative Study between Efficacy of Low Level Laser Therapy (LLLT) with Mulligan's Mobilization (MWM) Over Ultrasound Therapy with Mulligan's Mobilization (MWM) in Patients with Acute Supraspinatus Tendinitis. *Indian Journal of Physiotherapy & Occupational Therapy*. 2016;10(3):75-81. <http://dx.doi.org/10.5958/0973-5674.2016.00085.X>
116. Desantis L, Hasson SM. Use of Mobilization with Movement in the Treatment of a Patient with Subacromial Impingement: A Case Report. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2006;14(2):77-87.
117. Desjardins-Charbonneau A, Roy JS, Dionne CE, Fremont P, MacDermid JC, Desmeules F. The efficacy of manual therapy for rotator cuff tendinopathy: a systematic review and meta-analysis. *The Journal of orthopaedic and sports physical therapy*. 2015;45(5):330-350. <http://dx.doi.org/10.2519/jospt.2015.5455>
118. Devi NG, Dutta A. A comparative study on the effect of self SNAGs versus dynamic isometric exercises in desk job people with chronic neck pain. *International Journal of Physiotherapy*. 2015;2(5):<http://dx.doi.org/10.15621/ijphy/2015/v2i5/78232>

REFERENCE LIST

119. Dias D, Neto MG, Sales S, et al. Effect of Mobilization with Movement on Pain, Disability, and Range of Motion in Patients with Shoulder Pain and Movement Impairment: A Systematic Review and Meta-Analysis. *J Clin Med*. 2023;12(23):<http://dx.doi.org/10.3390/jcm12237416>
120. Dinkins EM, Stevens-Lapsley J. Management of symptoms of Restless Legs Syndrome with use of a traction straight leg raise: a preliminary case series. *Man Ther*. 2013;18(4):299-302. <http://dx.doi.org/10.1016/j.math.2012.11.002>
121. Djordjevic OC, Vukicevic D, Katunac L, Jovic S. Mobilization with movement and kinesiotaping compared with a supervised exercise program for painful shoulder: results of a clinical trial. *Journal of manipulative and physiological therapeutics*. 2012;35(6):454 - 463. <http://dx.doi.org/10.1016/j.jmpt.2012.07.006>
122. Doner G, Guven Z, Atalay A, Celiker R. Evaluation of Mulligan's technique for adhesive capsulitis of the shoulder. *Journal of rehabilitation medicine*. 2013;45(1):87 - 91. <http://dx.doi.org/10.2340/16501977-1064>
123. Doweir AM, Mashaal A, Basha SAZ, et al. Effect of modified mobilization with movement and motor learning on volleyball females players with shoulder impingement syndrome. *J Educ Health Promot*. 2025;14(200). http://dx.doi.org/10.4103/jehp.jehp_1834_24
124. Drapeza RC, Jr., Navasca SB, Dones V, 3rd, Rimando CR. The effects of taping on de Quervain's disease: A systematic review and meta-analysis. *Journal of bodywork and movement therapies*. 2022;32(218-227). <http://dx.doi.org/10.1016/j.jbmt.2022.05.004>
125. Duymaz T, Yagci N. Effectiveness of the mulligan mobilization technique in mechanical neck pain. *Journal of clinical and analytical medicine*. 2018;9(4):304 - 309. <http://dx.doi.org/10.4328/JCAM.5715>
126. El-Sodany AM, Alayat MSM, Zafer AMI. Sustained natural apophyseal glides mobilization versus manipulation in the treatment of cervical spine disorders: a randomized controlled trial. *International journal of advanced research*. 2014;2(6):274 - 280.
127. El Gendy MH, Mohamed SR, Taman SE, Hussein HM, Abu El Kasem ST. Short term effect of spinal mobilization with movement (MWM) on pulmonary functions in nonsmokers with thoracic hyperkyphosis: a randomized single-blinded controlled trial. *The Journal of manual & manipulative therapy*. 2023;31(2):64-71. <http://dx.doi.org/10.1080/10669817.2022.2075203>
128. Elabd OM, Etoom M, Jahan AM, Elabd AM, Khedr AM, Elgohary HM. The Efficacy of Muscle Energy and Mulligan Mobilization Techniques for the Upper Extremities and Posture after Breast Cancer Surgery with Axillary Dissection: A Randomized Controlled Trial. *Journal of Clinical Medicine*. 2024;13(4):<http://dx.doi.org/10.3390/jcm13040980>
129. ElMeligie MM, Abdeen HA, Atef H, Marques-Sule E, Karkosha RN. The effectiveness of mulligan mobilization with movement (MWM) on outcomes of patients with ankle sprain: a systematic review and meta-analysis. *BMC Sports Sci Med Rehabil*. 2025;17(1):105. <http://dx.doi.org/10.1186/s13102-025-01121-6>
130. Elrazik RKA, Samir SM, Zaki LA, Koura GA. Mobilisation with movement versus postero-anterior mobilisation in chronic non specific low back pain. *International journal of pharmtech research*. 2016;9(6): (pp 9 - 16), 2016. Date of Publication: 2016.):
131. Elsayed WH, Mohamed AF, El-Monem GA, Ahmed HH. Effect of SNAGS Mulligan Technique on Chronic Cervical Radiculopathy : A Randomized Clinical Trial. 2017.
132. Erol E, Burak M, Elbasan B. Effects of instrument-assisted manipulation and mobilization with movement in chronic non-specific low back pain: A randomized controlled trial. *Journal of back and musculoskeletal rehabilitation*. 2025;38(3):640-650. <http://dx.doi.org/10.1177/10538127241309343>

REFERENCE LIST

133. Eusea J, Nasypany A, Seegmiller J, Baker R. Utilizing Mulligan Sustained Natural Apophyseal Glides Within a Clinical Prediction Rule for Treatment of Low Back Pain in a Secondary School Football Player. *International Journal of Athletic Therapy & Training*. 2015;20(1):18-24.
134. Exelby L. The locked lumbar facet joint: intervention using mobilizations with movement. *Manual Therapy*. 2001;6(2):116-121.
135. Exelby L. Mobilisations with movement: a personal view. *Physiotherapy*. 1995;81(12):724-729.
136. Exelby L. The Mulligan concept: its application in the management of spinal conditions. *Manual Therapy*. 2002;7(2):64-70.
137. Exelby L. Peripheral mobilisations with movement. *Manual Therapy*. 1996;1(3):118-126.
138. Farooq S, Zahid S, Hafeez S, Hassan D. Effectiveness of Mulligan mobilization and Kinesio-taping technique on the anterior innominate dysfunction in females. *J Pak Med Assoc*. 2021;71(7):1716-1719.
<http://dx.doi.org/10.47391/JPMA.828>
139. Fazeli SH, Amiri A, Jamshidi AA, et al. Effect of ankle taping on postural control measures during grasp and release task in patients with chronic ankle instability. *Journal of back and musculoskeletal rehabilitation*. 2018;31(5):881-887. <http://dx.doi.org/10.3233/bmr-171067>
140. Fernandez-Carnero J, Beltran-Alacreu H, Arribas-Romano A, et al. Prediction of Patient Satisfaction after Treatment of Chronic Neck Pain with Mulligan's Mobilization. *Life (Basel)*. 2022;13(1):<http://dx.doi.org/10.3390/life13010048>
141. Fernández-Carnero J, Fernández-de-las-Peñas C, Cleland JA. Mulligan's Mobilization with Movement and Muscle Trigger Point Dry Needling for the Management of Chronic Lateral Epicondylalgia: A Case Report. *Journal of Musculoskeletal Pain*. 2009;17(4):409-415.
142. Folk B. Traumatic thumb injury management using mobilization with movement. *Manual Therapy*. 2001;6(3):178-182.
143. Foster RL, O'Driscoll M. Current concepts in the conservative management of the frozen shoulder. *Physical Therapy Reviews*. 2010;15(5):399-404. <http://dx.doi.org/10.1179/174328810X12786297204710>
144. Fujinawa O, Kondo Y, Tachikawa K, Jigami H, Hirose K, Matsunaga H. Athletic Rehabilitation of a Platform Diver for Return to Competition after a Shoulder Dislocation. *XIth International Symposium for Biomechanics & Medicine in Swimming*. 2010;11):362-364.
145. Ganesh GS, Mohanty P, Pattnaik M, Mishra C. Effectiveness of mobilization therapy and exercises in mechanical neck pain. *Physiotherapy theory and practice*. 2015;31(2):99 - 106.
<http://dx.doi.org/10.3109/09593985.2014.963904>
146. Garcia JD, Arnold S, Tetley K, Voight K, Frank RA. Mobilization and Manipulation of the Cervical Spine in Patients with Cervicogenic Headache: Any Scientific Evidence? *Front Neurol*. 2016;7(40).
<http://dx.doi.org/10.3389/fneur.2016.00040>
147. Gautam R, Dhamija JK, Puri A. Comparison of Maitland and Mulligan Mobilization in Improving Neck Pain, ROM and Disability. *International journal of physiotherapy and research*. 2014;2(482-487).
148. Gebhardt TL, Whitman JM, Smith MB. Mobilization with movement as part of a comprehensive physical therapy program for a patient with shoulder impingement: a case report. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2006;14(3):176-176.
149. Ghadi P, Verma C. Study of the efficacy of the Mulligan's Movement with Mobilization and Taping Technique as an Adjunct to the Conventional Therapy for Lateral Ankle Sprain. *Indian Journal of Physiotherapy & Occupational Therapy*. 2013;7(3):167-171. <http://dx.doi.org/10.5958/j.0973-5674.7.3.086>

REFERENCE LIST

150. Ghafoor F, Ahmad Z, Irfan A, Munawar A, Sabir I, Zulqernain F. Comparison of Mulligan Mobilization Technique versus Mckenzie Exercises among Patient with Sacroiliac Joint Dysfunction: A Randomized Clinical Trial. *Journal of Orthopaedics and Sports Medicine*. 2023;05(01):<http://dx.doi.org/10.26502/josm.511500093>
151. Ghosh Dasm P. Comparative Analysis of Cyriax Approach Versus Mobilization with Movement Approach in the Treatment of Patients with Lateral Epicondylitis. *Indian Journal of Physiotherapy & Occupational Therapy*. 2012;6(1):96-102.
152. Gilbreath JP, Gaven SL, Van Lunen BL, Hoch MC. The effects of Mobilization with Movement on dorsiflexion range of motion, dynamic balance, and self-reported function in individuals with chronic ankle instability. *Manual Therapy*. 2014;19(2):152-157.
153. Gogate N, Satpute K, Hall T. The effectiveness of mobilization with movement on pain, balance and function following acute and sub acute inversion ankle sprain - A randomized, placebo controlled trial. *Phys Ther Sport*. 2021;48(91-100). <http://dx.doi.org/10.1016/j.ptsp.2020.12.016>
154. Gomes MG, Primo AF, De Jesus L, Dionisio VC. Short-term Effects of Mulligan's Mobilization With Movement on Pain, Function, and Emotional Aspects in Individuals With Knee Osteoarthritis: A Prospective Case Series. *Journal of manipulative and physiological therapeutics*. 2020;43(5):437-445. <http://dx.doi.org/10.1016/j.jmpt.2019.04.011>
155. González-Iglesias J, Cleland JA, del Rosario Gutierrez-Vega M, Fernández-de-las-Peñas C. Multimodal management of lateral epicondylalgia in rock climbers: a prospective case series. *Journal of manipulative and physiological therapeutics*. 2011;34(9):635-642. <http://dx.doi.org/10.1016/j.jmpt.2011.09.003>
156. González-Iglesias J, Cleland JA, Neto F, Hall T, Fernández-de-las-Peñas C. Mobilization with movement, thoracic spine manipulation, and dry needling for the management of temporomandibular disorder: A prospective case series. *Physiotherapy Theory & Practice*. 2013;29(8):586-595. <http://dx.doi.org/10.3109/09593985.2013.783895>
157. Grindstaff TL, Hanish MJ, Wheeler TJ, et al. Fibular taping does not alter lower extremity spinal reflex excitability in individuals with chronic ankle instability. *J Electromyogr Kinesiol*. 2015;25(2):253-259. <http://dx.doi.org/10.1016/j.jelekin.2015.01.009>
158. Guimaraes JF, Salvini TF, Siqueira AL, Ribeiro IL, Camargo PR, Albuquerque-Sendin F. Immediate Effects of Mobilization With Movement vs Sham Technique on Range of Motion, Strength, and Function in Patients With Shoulder Impingement Syndrome: randomized Clinical Trial. *Journal of manipulative and physiological therapeutics*. 2016;39(9):605 - 615. <http://dx.doi.org/10.1016/j.jmpt.2016.08.001>
159. Gutiérrez-Espinoza H, Araya-Quintanilla F, Olguín-Huerta C, Valenzuela-Fuenzalida J, Gutiérrez-Monclus R, Moncada-Ramírez V. Effectiveness of manual therapy in patients with distal radius fracture: a systematic review and meta-analysis. *The Journal of manual & manipulative therapy*. 2022;30(1):33-45. <http://dx.doi.org/10.1080/10669817.2021.1992090>
160. Haik MN, Albuquerque-Sendin F, Moreira RF, Pires ED, Camargo PR. Effectiveness of physical therapy treatment of clearly defined subacromial pain: a systematic review of randomised controlled trials. *British journal of sports medicine*. 2016;50(18):1124-1134. <http://dx.doi.org/10.1136/bjsports-2015-095771>
161. Haik MN, Evans K, Smith A, Bisset L. Investigating the effects of mobilization with movement and exercise on pain modulation processes in shoulder pain - a single cohort pilot study with short-term follow up. *The Journal of manual & manipulative therapy*. 2022;1-10. <http://dx.doi.org/10.1080/10669817.2022.2030626>

REFERENCE LIST

162. Hall T, Beyerlein C, Hansson U, Lim HT, Odermark M, Sainsbury D. Mulligan Traction Straight Leg Raise: A Pilot Study to Investigate Effects on Range of Motion in Patients with Low Back Pain. *Journal of Manual & Manipulative Therapy*. 2006;14(2):95-100. <http://dx.doi.org/10.1179/106698106790820782>
163. Hall T, Briffa K, Hopper D. The influence of lower cervical joint pain on range of motion and interpretation of the flexion-rotation test. *The Journal of manual & manipulative therapy*. 2010;18(3):126-131. <http://dx.doi.org/10.1179/106698110X12640740712293>
164. Hall T, Briffa K, Hopper D, Robinson K. Long-Term Stability and Minimal Detectable Change of the Cervical Flexion-Rotation Test. *Journal of Orthopaedic & Sports Physical Therapy*. 2010;40(4):225-229. <http://dx.doi.org/10.2519/jospt.2010.3100>
165. Hall T, Cacho A, McNee C, Riches J, Walsh J. Effects of the Mulligan Traction Straight Leg Raise Technique on Range of Movement. *Journal of Manual & Manipulative Therapy*. 2001;9(3):128-133. <http://dx.doi.org/10.1179/jmt.2001.9.3.128>
166. Hall T, Chan HT, Christensen L, Odenthal B, Wells C, Robinson K. Efficacy of a C1-C2 self-sustained natural apophyseal glide (SNAG) in the management of cervicogenic headache. *Journal of orthopaedic and sports physical therapy*. 2007;37(3):100 - 107. <http://dx.doi.org/10.2519/jospt.2007.2379>
167. Hall T, Hardt S, Schafer A, Wallin L. Mulligan bent leg raise technique--a preliminary randomized trial of immediate effects after a single intervention. *Man Ther*. 2006;11(2):130-135. <http://dx.doi.org/10.1016/j.math.2005.04.009>
168. Hall T, Robinson K. The flexion-rotation test and active cervical mobility--a comparative measurement study in cervicogenic headache. *Man Ther*. 2004;9(4):197-202. <http://dx.doi.org/10.1016/j.math.2004.04.004>
169. Hall T, Robinson K. Mobilisation with movement. *Australian Journal of Physiotherapy*. 1998;(Autumn):16-18.
170. Hall TM, Briffa K, Hopper D, Robinson K. Comparative analysis and diagnostic accuracy of the cervical flexion-rotation test. *The journal of headache and pain*. 2010;11(5):391-397. <http://dx.doi.org/10.1007/s10194-010-0222-3>
171. Hall TM, Briffa K, Hopper D, Robinson KW. The relationship between cervicogenic headache and impairment determined by the flexion-rotation test. *Journal of manipulative and physiological therapeutics*. 2010;33(9):666-671. <http://dx.doi.org/10.1016/j.jmpt.2010.09.002>
172. Hanney W. Immediate Changes in Hip Range of Motion after Mobilization with Movement Versus Static Stretching. *Archives of physical medicine and rehabilitation*. 2022;103(3):e40. <http://dx.doi.org/10.1016/j.apmr.2022.01.111>
173. Hearn A, Rivett DA. Cervical SNAGs: a biomechanical analysis. *Manual Therapy*. 2002;7(2):71-79.
174. Heggannavar A, Gupta R. Quantitative effects of proprioceptive exercises and mulligan's MWM in subjects with osteoarthritis of knee-a randomized clinical trail. *Physiotherapy (united kingdom)*. 2015;101(eS555 - eS556). <http://dx.doi.org/10.1016/j.physio.2015.03.3370>
175. Heiser R, O'Brien VH, Schwartz DA. The use of joint mobilization to improve clinical outcomes in hand therapy: A systematic review of the literature. *Journal of Hand Therapy*. 2013;26(4):297-310. <http://dx.doi.org/10.1016/j.jht.2013.07.004>
176. Heiser RD, O'Brien V, Schwartz DA. Joint Mobilization in the Distal Upper Extremity -- Putting Evidence into Practice. *Journal of Hand Therapy*. 2014;27(3):e5-e5.
177. Hendley C, May J, Wallace JJ, Cheatham SW. The Use of the Mulligan Concept for the Treatment of a First-Degree Sprain of the First Metatarsophalangeal Joint. *Athletic Training & Sports Health Care: The Journal for the Practicing Clinician*. 2021;13(6):e460-e463. <http://dx.doi.org/10.3928/19425864-20210609-01>

REFERENCE LIST

178. Hendry D, Campbell A, Ng L, Grisbrook TL, Hopper DM. Effect of Mulligan's and Kinesio knee taping on adolescent ballet dancers knee and hip biomechanics during landing. *Scand J Med Sci Sports*. 2014;<http://dx.doi.org/10.1111/sms.12302>
179. Herd CR, Meserve BB. A Systematic Review of the Effectiveness of Manipulative Therapy in Treating Lateral Epicondylalgia. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2008;16(4):225-237.
180. Hetherington B. LATERAL LIGAMENT STRAINS OF THE ANKLE, DO THEY EXIST? *Man Ther*. 1996;1(5):274-275. <http://dx.doi.org/10.1054/math.1996.0279>
181. Hickey A, Hopper D, Hall T, Wild CY. The effect of the Mulligan knee taping technique on patellofemoral pain and lower limb biomechanics. *Am J Sports Med*. 2016;44(5):1179-1185. <http://dx.doi.org/10.1177/0363546516629418>
182. Hidalgo B, Hall T, Berwart M, Biernaux E, Detrembleur C. The immediate effects of two manual therapy techniques on ankle musculoarticular stiffness and dorsiflexion range of motion in people with chronic ankle rigidity: A randomized clinical trial. *Journal of Back & Musculoskeletal Rehabilitation*. 2018;31(3):515-524.
183. Hidalgo B, Hall T, Bossert J, Dugeny A, Cagnie B, Pitance L. The efficacy of manual therapy and exercise for treating non-specific neck pain: A systematic review. *Journal of Back & Musculoskeletal Rehabilitation*. 2017;30(6):1149-1169.
184. Hidalgo B, Pitance L, Hall T, Detrembleur C, Nielens H. Short-term effects of Mulligan mobilization with movement on pain, disability, and kinematic spinal movements in patients with nonspecific low back pain: a randomized placebo-controlled trial. *Journal of manipulative and physiological therapeutics*. 2015;38(6):365 - 374. <http://dx.doi.org/10.1016/j.jmpt.2015.06.013>
185. Hing W, Bigelow R, Bremner T. Mulligan's mobilisation with movement: a review of the tenets and prescription of MWMs. *New Zealand Journal of Physiotherapy*. 2008;36(3):144-164.
186. Hing W, Hall T, Mulligan B. *The Mulligan Concept of Manual Therapy: Textbook of Techniques*. 2nd. Chatswood, NSW: Elsevier Australia; 2020.
187. Ho C-YC, Sole G, Munn J. The effectiveness of manual therapy in the management of musculoskeletal disorders of the shoulder: A systematic review. *Manual Therapy*. 2009;14(5):463-474.
188. Ho K-Y, Hsu A-T. Displacement of the head of humerus while performing "mobilization with movements" in glenohumeral joint: A cadaver study. *Manual Therapy*. 2009;14(2):160-166. <http://dx.doi.org/https://doi.org/10.1016/j.math.2008.01.008>
189. Hoch MC, McKeon PO. The effectiveness of mobilization with movement at improving dorsiflexion after ankle sprain. *Journal of sport rehabilitation*. 2010;19(2):226-232. <http://dx.doi.org/10.1123/jsr.19.2.226>
190. Hoogvliet P, Randsdorp MS, Dingemanse R, Koes BW, Huisstede BMA. Does effectiveness of exercise therapy and mobilisation techniques offer guidance for the treatment of lateral and medial epicondylitis? A systematic review. *British Journal of Sports Medicine*. 2013;47(17):1112-1119. <http://dx.doi.org/10.1136/bjsports-2012-091990>
191. Hopper D, Samsson K, Hulenik T, Ng C, Hall T, Robinson K. The influence of Mulligan ankle taping during balance performance in subjects with unilateral chronic ankle instability. *Phys Ther Sport*. 2009;10(4):125-130. <http://dx.doi.org/10.1016/j.ptsp.2009.07.005>
192. Horoz L, Cigdem-Karacay B, Ceylan I, Alkan H. Effectiveness of mobilization with movement in patients operated for distal radius fracture: a single-blinded, randomized controlled study. *Revista da Associação Médica Brasileira*. 2024;70(11):<http://dx.doi.org/10.1590/1806-9282.20241190>

REFERENCE LIST

193. Horton SJ. Acute locked thoracic spine: treatment with a modified SNAG. *Manual Therapy*. 2002;7(2):103-107.
194. Hotwani R, Metgud S, Ganesh BR. Comparison of McConnell patellar taping versus mobilisation with movement in chronic knee osteoarthritis: a randomized clinical trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2010;4(4):132-136.
195. Howe A, Campbell A, Ng L, Hall T, Hopper D. Effects of two different knee tape procedures on lower-limb kinematics and kinetics in recreational runners. *Scand J Med Sci Sports*. 2015;25(4):517-524.
<http://dx.doi.org/10.1111/sms.12269>
196. Howe LP. The acute effects of ankle mobilisations on lower extremity joint kinematics. *Journal of bodywork and movement therapies*. 2017;21(4):775-780. <http://dx.doi.org/10.1016/j.jbmt.2016.11.007>
197. Hsieh CY, Vicenzino B, Yang CH, Hu MH, Yang C. Mulligan's mobilization with movement for the thumb: a single case report using magnetic resonance imaging to evaluate the positional fault hypothesis. *Man Ther*. 2002;7(1):44-49. <http://dx.doi.org/10.1054/math.2001.0434>
198. Huda MN, Haque MO, Urme NA, Halder P. Effectiveness of mobilisation with movement (MWM) along with usual care for knee osteoarthritis: a study protocol for a randomised clinical trial. *BMJ Open Sport Exerc Med*. 2025;11(2):e002735. <http://dx.doi.org/10.1136/bmjsem-2025-002735>
199. Hudson R, Baker RT, May J, Reordan D, Nasypany A. Novel treatment of lateral ankle sprains using the Mulligan concept: an exploratory case series analysis. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2017;25(5):251-259.
200. Hudson R, Richmond A, Sanchez B, et al. An Alternative Approach to the Treatment of Meniscal Pathologies: A Case Series Analysis of the Mulligan Concept "Squeeze" Technique. *International Journal of Sports Physical Therapy*. 2016;11(4):564-574.
201. Hudson R, Richmond A, Sanchez B, et al. Innovative treatment of clinically diagnosed meniscal tears: a randomized sham-controlled trial of the Mulligan concept 'squeeze' technique. *The Journal of manual & manipulative therapy*. 2018;1-10. <http://dx.doi.org/10.1080/10669817.2018.1456614>
202. Hudson RA, Baker RT, Nasypany A, Reordan D. Treatment of Anterior Shoulder Subluxation Using the Mulligan Concept and Reflex Neuromuscular Stabilization: A Case Report. *International Journal of Sports Physical Therapy*. 2017;12(1):155-162.
203. Hussein H, Atteya M, Ansari A, Kamel E. A Systematic Review and Meta-Analysis of the Effectiveness of Mulligan Mobilization with Movement on Pain, Range of Motion, Function, and Flexibility in Patients with Sciatica. *NeuroRehabilitation*. 2025;56(2):83-96. <http://dx.doi.org/10.1177/10538135241301693>
204. Hussein HM, Morsi AA, Abdelraoof NA. The immediate effect of sustained natural apophyseal glide on postural stability and pain in individuals presenting with flexion-dominant chronic low back pain: A randomized single-blinded placebo-controlled trial. *Journal of back and musculoskeletal rehabilitation*. 2021;34(6):1079-1086. <http://dx.doi.org/10.3233/bmr-200217>
205. Hussien HM, Abdel-Raouf NA, Kattabei OM, Ahmed HH. Effect of Mulligan Concept Lumbar SNAG on Chronic Nonspecific Low Back Pain. *Journal of chiropractic medicine*. 2017;16(2):94 - 102.
206. Hyun KH, Cho HY, Lim CG. The effect of knee joint Mulligan taping on balance and gait in subacute stroke patients. *Journal of physical therapy science*. 2015;27(11):3545-3547. <http://dx.doi.org/10.1589/jpts.27.3545>
207. Iqbal S, Khan IA, Khan MK, et al. Therapeutic Utility of Mulligan Traction Straight Leg Raise Stretch and Proprioceptive Exercises in Osteoarthritis Treatment. *Cureus*. 2024;<http://dx.doi.org/10.7759/cureus.74382>

REFERENCE LIST

208. Izaola-Azkona L, Vicenzino B, Olabarrieta-Eguia I, Saez M, Lascurain-Aguirrebeña I. Effectiveness of Mobilization of the Talus and Distal Fibula in the Management of Acute Lateral Ankle Sprain. *Phys Ther.* 2021;101(8):<http://dx.doi.org/10.1093/ptj/pzab111>
209. Jain TK, Sharma NK. The effectiveness of physiotherapeutic interventions in treatment of frozen shoulder/adhesive capsulitis: A systematic review. *Journal of Back & Musculoskeletal Rehabilitation.* 2014;27(3):247-273. <http://dx.doi.org/10.3233/BMR-130443>
210. Jaiswal PR, Ramteke SU, Samal S. Integrative Approach of Conventional Physiotherapy, Mulligan's Mobilisation With Movement, and Plyometric Training in a Young Volleyball Athlete After Anterior Cruciate Ligament (ACL) Reconstruction: A Case Report. *Cureus.* 2024;16(2):e54895. <http://dx.doi.org/10.7759/cureus.54895>
211. Javaid M, Anwar S, Uzair Asghar M, et al. Comparison of Maitland Mobilization and Mulligan Mobilization with movement on pain and hand function in patients having post Colle's Fracture Stiffness. *Pakistan Journal of Medical and Health Sciences.* 2022;16(1):169-171. <http://dx.doi.org/10.53350/pjmhs22161169>
212. Jayaseelan DJ, Kecman M, Alcorn D, Sault JD. Manual therapy and eccentric exercise in the management of Achilles tendinopathy. *Journal of Manual & Manipulative Therapy (Maney Publishing).* 2017;25(2):106-114.
213. Jayaseelan DJ, Scalzitti DA, Palmer G, Immerman A, Courtney CA. The effects of joint mobilization on individuals with patellofemoral pain: a systematic review. *Clinical Rehabilitation.* 2018;32(6):722-733.
214. Jeong-Hyun S, Gi Duck P, Hoo Sung P. The Effect of Sacroiliac Joint Mobilization on Pelvic Deformation and the Static Balance Ability of Female University Students with SI Joint Dysfunction. *Journal of physical therapy science.* 2014;26(6):845-848. <http://dx.doi.org/10.1589/jpts.26.845>
215. Jie H, Lingfeng X, Xiaoling H, Xiaohua H. Effects of mulligan's mobilization with movement combined with stretching therapy in the management of frozen shoulder. *Physiotherapy (united kingdom).* 2015;101(eS683 - eS684). <http://dx.doi.org/10.1016/j.physio.2015.03.3528>
216. Jin X, Du H-G, Kong N, Shen J-L, Chen W-J. Clinical efficacy of the mulligan maneuver for cervicogenic headache: a randomized controlled trial. *Scientific Reports.* 2023;13(1):<http://dx.doi.org/10.1038/s41598-023-48864-1>
217. Kachingwe AF, Phillips B, Sletten E, Plunkett SW. Comparison of manual therapy techniques with therapeutic exercise in the treatment of shoulder impingement: a randomized controlled pilot clinical trial. *The Journal of manual & manipulative therapy.* 2008;16(4):238-247. <http://dx.doi.org/10.1179/106698108790818314>
218. Kakati T, Dutta A. A Comparative Study to Find Out Immediate Effectiveness of Movement With Mobilization Versus Elbow Orthosis on Pain and Grip Strength in Lateral Epicondylitis in Housewives. *International Journal of Physiotherapy.* 2015;2(6):<http://dx.doi.org/10.15621/ijphy/2015/v2i6/80772>
219. Kaneko S, Takasaki H. Forearm pain, diagnosed as intersection syndrome, managed by taping: a case series. *The Journal of orthopaedic and sports physical therapy.* 2011;41(7):514-519. <http://dx.doi.org/10.2519/jospt.2011.3569>
220. Kang MH, Kim JW, Kim MH, Park TJ, Park JH, Oh JS. Influence of walking with talus taping on the ankle dorsiflexion passive range of motion. *Journal of physical therapy science.* 2013;25(8):1011-1013. <http://dx.doi.org/10.1589/jpts.25.1011>
221. Kang MH, Oh JS, Kwon OY, Weon JH, An DH, Yoo WG. Immediate combined effect of gastrocnemius stretching and sustained talocrural joint mobilization in individuals with limited ankle dorsiflexion: a

REFERENCE LIST

- randomized controlled trial. *Manual therapy*. 2015;20(6):827 - 834.
<http://dx.doi.org/10.1016/j.math.2015.03.016>
222. Karanjkar SM, Dhage P. "Mulligan Bent Leg Raise" Technique in Avascular Necrosis. *Cureus*. 2023;15(12):e50727. <http://dx.doi.org/10.7759/cureus.50727>
223. Kashif M, Albalwi A, Alharbi A, Iram H, Manzoor N. Comparison of subtalar mobilisation with conventional physiotherapy treatment for the management of plantar fasciitis. *J Pak Med Assoc*. 2021;71(12):2705-2709. <http://dx.doi.org/10.47391/JPMA.1049>
224. Kashif M, Manzoor N, Safdar R, Khan H, Farooq M, Wassi A. Effectiveness of sustained natural apophyseal glides in females with cervicogenic headache: A randomized controlled trial. *Journal of back and musculoskeletal rehabilitation*. 2022;35(3):597-603. <http://dx.doi.org/10.3233/bmr-210018>
225. Kaya Mutlu E, Ercin E, Razak Ozdincler A, Ones N. A comparison of two manual physical therapy approaches and electrotherapy modalities for patients with knee osteoarthritis: A randomized three arm clinical trial. *Physiotherapy Theory & Practice*. 2018;34(8):600-612. <http://dx.doi.org/10.1080/09593985.2018.1423591>
226. Kaya Mutlu E, Razak Ozdincler A, Ercin E. Comparison of two different mobilization techniques in the management of osteoarthritis of the knee: a randomized clinical trial. *Osteoarthritis and cartilage*. 2015;23(A391 - A392).
227. Kelley MJ, McClure PW, Leggin BG. Frozen shoulder: evidence and a proposed model guiding rehabilitation. *The Journal of orthopaedic and sports physical therapy*. 2009;39(2):135-148. <http://dx.doi.org/10.2519/jospt.2009.2916>
228. Khaki S, Ravanbod R, Ashtiani MN. Mechanical correction in kinesiology and mulligan taping: A comparative study on scapular dyskinesis in computer users. *Journal of back and musculoskeletal rehabilitation*. 2025;38(5):981-994. <http://dx.doi.org/10.1177/10538127251323952>
229. Khalil MA, Alkhozamy H, Fadle S, Hefny AM, Ismail M. Effect of Mulligan upper cervical manual traction in the treatment of cervicogenic headache: a randomized controlled trial. 2019;
230. Khalil R, Tanveer F, Hanif A, Ahmad A. Comparison of Mulligan technique versus muscle energy technique in patients with adhesive capsulitis. *J Pak Med Assoc*. 2022;72(2):211-215. <http://dx.doi.org/10.47391/jpma.1678>
231. Khan M, Ali SS, Soomro RR. Efficacy of C 1-C 2 Sustained Natural Apophyseal Glide (SNAG) Versus Posterior Anterior Vertebral Mobilization (PAVMs) in the Management of Cervicogenic Headache. *Journal of Basic & Applied Sciences*. 2014;10(226-230).
232. Khandaloo A, Taghizadeh Delkhouh C, Paknazar F, Ehsani F, Shokrian Z. A comparison of two mobilization approaches on the acromiohumeral distance in overhead athletes with primary subacromial impingement syndrome: a randomized clinical study. *Journal of Manual & Manipulative Therapy*. 2025;1-14. <http://dx.doi.org/10.1080/10669817.2025.2544288>
233. Khyathi P, Vinod Babu K, Sai Kumar N, Asha D. Comparative Effect of Spencer Technique Versus Mulligan's Technique for Subjects with Frozen Shoulder-A Single Blind Study. *International Journal of Physiotherapy*. 2015;2(2):448. <http://dx.doi.org/10.15621/ijphy/2015/v2i2/65255>
234. Kim J, Cho J. Effectiveness of mid thoracic spine mobilization on postural balance and gait ability in subacute stroke patients: A randomized clinical trial. *Journal of back and musculoskeletal rehabilitation*. 2024;37(1):233-240. <http://dx.doi.org/10.3233/BMR-230144>

REFERENCE LIST

235. Kim LJ, Choi H, Moon D. Improvement of Pain and Functional Activities in Patients with Lateral Epicondylitis of the Elbow by Mobilization with Movement: a Randomized, Placebo-Controlled Pilot Study. *Journal of physical therapy science*. 2012;24(9):787-790.
236. Kim S-Y, Kim N-S, Kim LJ. Effects of cervical sustained natural apophyseal glide on forward head posture and respiratory function. *Journal of physical therapy science*. 2015;27(6):1851-1854.
<http://dx.doi.org/10.1589/jpts.27.1851>
237. Kim SL, Lee BH. The effects of posterior talar glide and dorsiflexion of the ankle plus mobilization with movement on balance and gait function in patient with chronic stroke: a randomized controlled trial. *Journal of neurosciences in rural practice*. 2018;9(1):61 - 67. http://dx.doi.org/10.4103/jnpr.jnpr_382_17
238. Kim SY, Kim KS, Hwang YI. Effects of Manual Lymphatic Drainage with Mobilization and Myofascial Release on Muscle Activities during Dynamic Balance in Adults with Calf Muscle Shortening. *Healthcare (Basel)*. 2024;12(10):<http://dx.doi.org/10.3390/healthcare12101038>
239. Kirkaya AC, Atici E, Aydin G, Surenkok O. Comparing the Effectiveness of Mulligan Movement with Mobilization and Proprioceptive Neuromuscular Facilitation Techniques in Rehabilitation of Rotator Cuff Syndrome: A Randomized Controlled Trial. *Indian Journal of Orthopaedics*. 2025;59(11):1969-1978.
<http://dx.doi.org/10.1007/s43465-025-01435-0>
240. Kirthika S V, K P, Sudhakar S, Kumar M V. Is Mulligan's Sustained Natural Apophyseal Glides (SNAGS) or Muscle Energy Technique is effective in the non-surgical management of cervicogenic headache? A two-group pretest-posttest randomized controlled trial. *Asian Journal of Pharmaceutical and Clinical Research*. 2018;11(9):230-233. <http://dx.doi.org/10.22159/ajpcr.2018.v11i9.26808>
241. Kochar M, Dogra A. Effectiveness of a specific physiotherapy regimen on patients with tennis elbow: clinical study. *Physiotherapy*. 2002;88(6):333 - 341.
242. Komalasari DR, Vongsirinavarat M, Nilmart P. Effectiveness of manipulation with movement and muscle energy technique in elderly with knee osteoarthritis: A double-blind randomized control trial. *Journal of back and musculoskeletal rehabilitation*. 2025;38(6):1352-1361. <http://dx.doi.org/10.1177/10538127251328541>
243. Konstantinos Z. The short and mid-term effects of Mulligan concept in patients with chronic mechanical neck pain. *Journal of Novel Physiotherapy and Rehabilitation*. 2018;022-035.
<http://dx.doi.org/10.29328/journal.jnpr.1001018>
244. Konstantinou K, Foster N, Rushton A, Baxter D. The use and reported effects of mobilization with movement techniques in low back pain management; a cross-sectional descriptive survey of physiotherapists in Britain. *Manual Therapy*. 2002;7(4):206-214.
245. Konstantinou K, Foster N, Rushton A, Baxter D, Wright C, Breen A. Flexion mobilizations with movement techniques: the immediate effects on range of movement and pain in subjects with low back pain. *Journal of manipulative and physiological therapeutics*. 2007;30(3):178 - 185.
<http://dx.doi.org/10.1016/j.jmpt.2007.01.015>
246. Kosik KB, Gribble PA. The Effect of Joint Mobilization on Dynamic Postural Control in Patients With Chronic Ankle Instability: A Critically Appraised Topic. *Journal of Sport Rehabilitation*. 2018;27(1):103-108.
247. Kosik KB, McCann RS, Terada M, Gribble PA. Therapeutic interventions for improving self-reported function in patients with chronic ankle instability: a systematic review. *British journal of sports medicine*. 2017;51(2):105-112. <http://dx.doi.org/10.1136/bjsports-2016-096534>
248. Krzyzanowicz R, Baker R, Nasypany A, Gargano F, Seegmiller J. Patient Outcomes Utilizing the Selective Functional Movement Assessment and Mulligan Mobilizations With Movement on Recreational Dancers

REFERENCE LIST

- With Sacroiliac Joint Pain: A Case Series. *International Journal of Athletic Therapy & Training*. 2015;20(3):31-37.
249. Kubuk BS, Carrasco-Uribarren A, Cabanillas-Barea S, Ceballos-Laita L, Jimenez-Del-Barrio S, Perez-Guillen S. The effects of end-range interventions in the management of primary adhesive capsulitis of the shoulder: a systematic review and meta-analysis. *Disabil Rehabil*. 2023;1-15.
<http://dx.doi.org/10.1080/09638288.2023.2243826>
250. Kumar D. *A Study on the Efficacy of Mulligan Concept in Cervical Spine pain and Stiffness*. Amritsar, India: <http://hdl.handle.net/10603/10445>; 2011.
251. Kumar D, Sandhu JS, Broota A. Efficacy of Mulligan concept (NAGs) on pain at available end range in cervical spine: a randomised controlled trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2011;5(1):154-158.
252. Lawson BL, Williamson JD, Baker R, May J, Larkins L, Nasypany A. Examining the Effect of the Mulligan Concept Fibular Repositioning Taping Technique After a Lateral Ankle Sprain. *Athletic Training & Sports Health Care: The Journal for the Practicing Clinician*. 2018;10(1):41-45.
253. Lehman GJ. The Role and Value of Symptom-Modification Approaches in Musculoskeletal Practice. *The Journal of orthopaedic and sports physical therapy*. 2018;48(6):430-435.
<http://dx.doi.org/10.2519/jospt.2018.0608>
254. Lehr ME, Fink ML, Ulrich E, Butler RJ. Comparison of manual therapy techniques on ankle dorsiflexion range of motion and dynamic single leg balance in collegiate athletes. *Journal of bodywork and movement therapies*. 2022;29(206-214). <http://dx.doi.org/10.1016/j.jbmt.2021.11.004>
255. Lenker C, Larocca N, Lee J, Tucker P. The Use of Thoracic Mobilization With Movement to Treat Shoulder Impingement in Older Adults: A Case Study. *Topics in Geriatric Rehabilitation*. 2012;28(3):195-200.
<http://dx.doi.org/10.1097/TGR.0b013e31825d3834>
256. Lewis C, Diaz R, Lopez G, Marki N, Olivio B. A preliminary study to evaluate postural improvement in subjects with scoliosis: active therapeutic movement version 2 device and home exercises using the Mulligan's mobilization-with-movement concept. *Journal of Manipulative & Physiological Therapeutics*. 2014;37(7):502-509. <http://dx.doi.org/10.1016/j.jmpt.2014.07.005>
257. Lewis JS, Hewitt JS, Billington L, Cole S, Byng J, Karayiannis S. A randomized clinical trial comparing two physiotherapy interventions for chronic low back pain. *Spine*. 2005;30(7):711 - 721.
258. Li L-L, Hu X-J, Di Y-H, Jiao W. Effectiveness of Maitland and Mulligan mobilization methods for adults with knee osteoarthritis: A systematic review and meta-analysis. *World Journal of Clinical Cases*. 2022;10(3):954-965. <http://dx.doi.org/10.12998/wjcc.v10.i3.954>
259. Lin LH, Lin M, Hsieh GJ, Chen HI, Sun SF, Tsai RJ. Mobilization with movement on reducing pain and disability for knee osteoarthritis: a systematic review and meta-analysis of randomized controlled trials. *The Journal of manual & manipulative therapy*. 2025;1-16. <http://dx.doi.org/10.1080/10669817.2025.2495576>
260. Lin Y, Luo X. Therapeutic efficacy of mobilization with movement in early postoperative rehabilitation after unicompartmental knee arthroplasty: a double-blind, randomized controlled trial. *J Orthop Surg Res*. 2025;20(1):660. <http://dx.doi.org/10.1186/s13018-025-06047-w>
261. Lirio Romero C, Torres Lacomba M, Castilla Montoro Y, et al. Mobilization With Movement for Shoulder Dysfunction in Older Adults: A Pilot Trial. *Journal of chiropractic medicine*. 2015;14(4):249-258.
<http://dx.doi.org/10.1016/j.jcm.2015.03.001>

REFERENCE LIST

262. Lopez-Lopez A, Alonso Perez JL, González Gutierrez JL, et al. Mobilization versus manipulations versus sustain apophyseal natural glide techniques and interaction with psychological factors for patients with chronic neck pain: randomized controlled trial. *European journal of physical and rehabilitation medicine*. 2015;51(2):121 - 132.
263. Loudon JK, Reiman MP, Sylvain J. The efficacy of manual joint mobilisation/manipulation in treatment of lateral ankle sprains: a systematic review. *British Journal of Sports Medicine*. 2014;48(5):506-509.
264. Lucado AM, Dale RB, Vincent J, Day JM. Do joint mobilizations assist in the recovery of lateral elbow tendinopathy? A systematic review and meta-analysis. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2018;<http://dx.doi.org/10.1016/j.jht.2018.01.010>
265. Luzenski KL, Chaconas EJ, Dinkins EM. Management of a patient with chronic ankle instability utilizing mobilization with movement combined with neuromuscular re-education and patient self-taping in return to athletic activity. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2010;18(4):230-231.
266. Lystad RP, Bell G, Bonnevie-Svendsen M, Carter CV. Manual therapy with and without vestibular rehabilitation for cervicogenic dizziness: a systematic review. *Chiropractic & manual therapies*. 2011;19(1):21. <http://dx.doi.org/10.1186/2045-709x-19-21>
267. Machado M. The Effects of Mobilizations With Movement Versus Maitland Mobilizations on Range of Motion and Shoulder Function in Patients With Adhesive Capsulitis: A Meta-Analysis. *Effects of Mobilizations With Movement Versus Maitland Mobilizations on Range of Motion & Shoulder Function in Patients With Adhesive Capsulitis: A Meta-Analysis*. 2017;1-1.
268. Mackay GJK, Stearne SM, Wild CY, et al. Mulligan Knee Taping Using Both Elastic and Rigid Tape Reduces Pain and Alters Lower Limb Biomechanics in Female Patients With Patellofemoral Pain. *Orthopaedic Journal of Sports Medicine*. 2020;8(5):232596712092167. <http://dx.doi.org/10.1177/2325967120921673>
269. Malo-Urriés M, Hidalgo-García C, Bueno-Gracia E, Estébanez-de-Miguel E, Lucha-López O, Tricás-Moreno JM. Clinical and ultrasonographic evidence of a proximal positional fault of the radius. A case report. *Manual Therapy*. 2014;19(3):264-269.
270. Manchanda G, Grover D. Effectiveness of movement with mobilization compared with manipulation of wrist in case of lateral epicondylitis. *Indian journal of physiotherapy and occupational therapy*. 2008;2(1):16-21.
271. Mane AS, Yadav T. The Short-Term Efficacy of Mulligan Traction Straight Leg Raise on Low Back Pain Associated With Hamstring Tightness in Young Adults. *Cureus*. 2025;17(3):e80215. <http://dx.doi.org/10.7759/cureus.80215>
272. Manzoor A, Anwar N, Khalid K, Haider R, Saghir M, Javed MA. Comparison of effectiveness of muscle energy technique with Mulligan mobilization in patients with non-specific neck pain. *J Pak Med Assoc*. 2021;71(6):1532-1524. <http://dx.doi.org/10.47391/JPMA.981>
273. Marcolino AM, das Neves LM, Oliveira BG, et al. Multimodal approach to rehabilitation of the patients with lateral epicondylitis: a case series. *SpringerPlus*. 2016;5(1):1718. <http://dx.doi.org/10.1186/s40064-016-3375-y>
274. Marrón-Gómez D, Rodríguez-Fernández Á, Martín-Urrialde JA. The effect of two mobilization techniques on dorsiflexion in people with chronic ankle instability. *Physical therapy in sport*. 2015;16(1):10 - 15. <http://dx.doi.org/10.1016/j.ptsp.2014.02.001>
275. Martinez-Cervera FV, Olteanu TE, Gil-Martinez A, Diaz-Pulido B, Ferrer-Pena R. Influence of expectations plus mobilization with movement in patient with lateral epicondylalgia: a pilot randomized controlled trial. *Journal of exercise rehabilitation*. 2017;13(1):101-109. <http://dx.doi.org/10.12965/jer.1732848.424>

REFERENCE LIST

276. Martinez Pozas O, Cuenca-Zaldivar JN, Gonzalez-Alvarez ME, et al. Effectiveness of mobilization with movement on conditioned pain modulation, mechanical hyperalgesia, and pain intensity in adults with chronic low back pain: A randomized controlled trial. *Musculoskeletal science & practice*. 2025;75(103220). <http://dx.doi.org/10.1016/j.msksp.2024.103220>
277. Matocha MA, Baker RT, Nasypany AM, Seegmiller JG. Effects of Neuromobilization on Tendinopathy: Part II. *International Journal of Athletic Therapy & Training*. 2015;20(2):41-47.
278. Mau H, Baker RT. A MODIFIED MOBILIZATION-WITH-MOVEMENT TO TREAT A LATERAL ANKLE SPRAIN. *International Journal of Sports Physical Therapy*. 2014;9(4):540-548.
279. May J, Krzyzanowicz R, Nasypany A, Baker R, Seegmiller J. Mulligan Concept Use and Clinical Profile From the Perspective of American Certified Mulligan Practitioners. *Journal of Sport Rehabilitation*. 2015;24(4):337-341.
280. May JM. *Analysis of an individual clinician's patient outcomes when applying the Mulligan Concept intervention strategy to treat lateral ankle sprains in an intercollegiate athletic training clinic. A dissertation of clinical practice improvement [thesis]*. University of Idaho; 2014.
281. May JM, Nasypany A, Paolino J, Baker R, Seegmiller J. Patient Outcomes Utilizing the Mulligan Concept of Mobilization With Movement to Treat Intercollegiate Patients Diagnosed With Lateral Ankle Sprain: An a Priori Case Series. *Journal of Sport Rehabilitation*. 2017;26(6):486-496.
282. McDowell J, Mitchell T, Mulligan BR. *Self-treatments for back, neck and limbs: the Mulligan Concept approach*. Revised fourth edition. Invercagill, New Zealand: Plane View Services (2019) Ltd; 2022.
283. McDowell JM, Johnson GM, Hetherington BH. Mulligan Concept manual therapy: Standardizing annotation. *Manual Therapy*. 2014;19(5):499-503.
284. McLean S, Naish R, Reed L, Urry S, Vicenzino B. A pilot study of the manual force levels required to produce manipulation induced hypoalgesia. *Clinical biomechanics (Bristol, Avon)*. 2002;17(4):304-308.
285. McNair PJ, Portero P, Chiquet C, Mawston G, Lavaste F. Acute neck pain: Cervical spine range of motion and position sense prior to and after joint mobilization. *Manual Therapy*. 2007;12(4):390-394.
286. Mehta S, Basu S, Palekar TJ, Davé N. Effect of kinesio taping versus mulligan Taping in treatment of heel pain. *International journal of pharma and bio sciences*. 2017;8(
287. Menek B, Menek MY. The efficacy of Mulligan mobilization and corticosteroid injection on pain, functionality, and proprioception in rotator cuff tears: A randomized controlled trial. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2025;38(3):410-417. <http://dx.doi.org/10.1016/j.jht.2024.12.016>
288. Menek B, Tarakci D, Algun ZC. The effect of Mulligan mobilization on pain and life quality of patients with Rotator cuff syndrome: A randomized controlled trial. *Journal of back and musculoskeletal rehabilitation*. 2019;32(1):171-178. <http://dx.doi.org/10.3233/bmr-181230>
289. Metgud SC, D'Silva PV, Kamat PS. Immediate effect of MWM adductor stretch, myofascial release, and conventional stretching in asymptomatic individuals with hip adductor tightness: A randomized controlled trial. *Journal of bodywork and movement therapies*. 2022;32(213-217). <http://dx.doi.org/10.1016/j.jbmt.2022.04.006>
290. Meyer JE, Rivera MJ, Powden CJ. The Evaluation of Joint Mobilization Dosage on Ankle Range of Motion in Individuals With Decreased Dorsiflexion and a History of Ankle Sprain. *Journal of sport rehabilitation*. 2020;1-6. <http://dx.doi.org/10.1123/jsr.2020-0114>

REFERENCE LIST

291. Mhatre BS, Singh YL, Tembhekar JY, Mehta A. Which is the better method to improve “perceived hamstrings tightness” – Exercises targeting neural tissue mobility or exercises targeting hamstrings muscle extensibility? *International Journal of Osteopathic Medicine*. 2013;16(3):153-162.
<http://dx.doi.org/10.1016/j.ijosm.2013.06.002>
292. Micarelli A, Viziano A, Granito I, et al. Postural and clinical outcomes of sustained natural apophyseal glides treatment in cervicogenic dizziness patients: A randomised controlled trial. *Clin Rehabil*. 2021;35(11):1566-1576. <http://dx.doi.org/10.1177/02692155211012413>
293. Mitchell T, Anderson A, Sault J, Glynn P. Joint-biased interventions for hip and knee pain disorders. In: Mathew B, Courtney CA, Fernandez-de-las-Penas C, eds. *Hip and Knee Pain Disorders: Integrating manual therapy and exercise*. Edinburgh, Scotland: Handspring; 2022:
294. Mittal M, Hameed UA, Chaudhary A, Ruchika. Mulligan's Manual Therapy Treatment Dosing for Subacute Mechanical Neck Pain - A Comparison between Loading and Movement Disorders of Cervical Spine. *Indian Journal of Physiotherapy & Occupational Therapy*. 2011;5(2):89-96.
295. Mohamed AA, Shendy WS, Semary M, et al. Combined use of cervical headache snag and cervical snag half rotation techniques in the treatment of cervicogenic headache. *Journal of physical therapy science*. 2019;31(4):376-381. <http://dx.doi.org/10.1589/jpts.31.376>
296. Moiler K, Hall T, Robinson K. The role of fibular tape in the prevention of ankle injury in basketball: A pilot study. *The Journal of orthopaedic and sports physical therapy*. 2006;36(9):661-668.
<http://dx.doi.org/10.2519/jospt.2006.2259>
297. Moulson A, Watson T. A preliminary investigation into the relationship between cervical snags and sympathetic nervous system activity in the upper limbs of an asymptomatic population. *Man Ther*. 2006;11(3):214-224. <http://dx.doi.org/10.1016/j.math.2006.04.003>
298. Moutzouri M, Billis E, Strimpakos N, Kottika P, Oldham JA. The effects of the Mulligan Sustained Natural Apophyseal Glide (SNAG) mobilisation in the lumbar flexion range of asymptomatic subjects as measured by the Zebris CMS20 3-D motion analysis system. *BMC musculoskeletal disorders*. 2008;9(131).
<http://dx.doi.org/10.1186/1471-2474-9-131>
299. Moutzouri M, Perry J, Joanna P, Billis E, Eudokia B. Investigation of the effects of a centrally applied lumbar sustained natural apophyseal glide mobilization on lower limb sympathetic nervous system activity in asymptomatic subjects. *Journal of manipulative and physiological therapeutics*. 2012;35(4):286 - 294.
<http://dx.doi.org/10.1016/j.jmpt.2012.04.016>
300. Mulligan BR. Manual therapy rounds. Mobilisations with movement (MWMS) for the hip joint to restore internal rotation and flexion. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 1996;4(1):35-36.
301. Mulligan BR. Manual therapy rounds. Spiral mobilizations with leg movement (further mobilizations with movement). *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 1995;3(1):25-27.
302. Mulligan BR. Manual therapy rounds. Update on spinal mobilisations with leg movement. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 1997;5(4):184-187.
303. Mulligan BR. Manual Therapy Rounds: Mobilisations With Movement (MWM'S). *Journal of Manual & Manipulative Therapy*. 1993;1(4):154-156.
304. Mulligan BR. *Manual Therapy: NAGS, SNAGS, MWMS etc*. Revised 7th. Invercagill, New Zealand: Plane View Services 2021 Ltd; 2021.

REFERENCE LIST

305. Mulligan BR. The painful dysfunctional shoulder. A new treatment approach using 'Mobilisation with Movement'. *New Zealand Journal of Physiotherapy*. 2003;31(3):140-142.
306. Mulligan BR. *Self Treatments for Back, Neck and Limbs: A New Approach*. 3rd. Wellington, New Zealand: Plane View Services; 2012.
307. Mulligan BR. Spinal mobilisations with arm movement (further mobilisations with movement). *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 1994;2(2):75-77.
308. Murtza S, Noor R, Bashir MS, Ikram M. Effects of sustained natural apophyseal glides versus rocabado 6 × 6 program in subjects with cervicogenic headache. *BMC musculoskeletal disorders*. 2024;25(1):169. <http://dx.doi.org/10.1186/s12891-024-07290-8>
309. Naik VC, Chitra J, Khatri S. Effectiveness of maitland versus mulligan mobilization technique following post surgical management of colles' - fracture - rct. *Indian journal of physiotherapy and occupational therapy*. 2007;1(4):
310. Nam C-W, Park S-I, Yong M-S, Kim Y-M. Effects of the MWM Technique Accompanied by Trunk Stabilization Exercises on Pain and Physical Dysfunctions Caused by Degenerative Osteoarthritis. *Journal of physical therapy science*. 2013;25(9):1137-1140. <http://dx.doi.org/10.1589/jpts.25.1137>
311. Nascimento LR, Boening A, Ribeiro I, Dos Santos ME, Benevides M, Santuzzi CH. Mobilization with movement is effective for improving ankle range of motion and walking ability in individuals after stroke: A systematic review with meta-analysis. *Pm r*. 2025;17(2):200-209. <http://dx.doi.org/10.1002/pmrj.13259>
312. Nathani HR, Ramteke SU, Jaiswal PR. Physiotherapeutic Management for Acromioclavicular Joint Sprain With Volar Intercalated Segment Instability at the Wrist: A Case Report. *Cureus*. 2024;16(4):e58399. <http://dx.doi.org/10.7759/cureus.58399>
313. Nazir SNB, Rathore FA. Efficacy of Mulligan joint mobilizations and trunk stabilization exercises versus isometric knee strengthening in the management of knee osteoarthritis: a randomized controlled trial. *BMC Sports Sci Med Rehabil*. 2024;16(1):105. <http://dx.doi.org/10.1186/s13102-024-00893-7>
314. Neelapala YVR. Effectiveness of Mulligan's Mobilization with Movement techniques on pain and disability of peripheral joints: a systematic review with meta-analysis between 2008 to 2017. *Physiotherapy*. 2019;105(2):290. <http://dx.doi.org/10.1016/j.physio.2018.11.304>
315. Neelapala YVR, Reddy YRS, Danait R. Effect of Mulligan's posterolateral glide on shoulder rotator strength, scapular upward rotation in shoulder pain subjects - A randomized controlled trial. *Journal of musculoskeletal research*. 2016;19(3):1650014. <http://dx.doi.org/10.1142/S0218957716500147>
316. Nguyen AP, Mahaudens P, Detrembleur C, Hall T, Hidalgo B. Inferior tibiofibular joint mobilization with movement and taping does not improve chronic ankle dorsiflexion stiffness: a randomized placebo-controlled trial. *The Journal of manual & manipulative therapy*. 2020;1-10. <http://dx.doi.org/10.1080/10669817.2020.1805690>
317. Nguyen AP, Pitance L, Mahaudens P, et al. Effects of Mulligan Mobilization with Movement in Subacute Lateral Ankle Sprains: A Pragmatic Randomized Trial. *The Journal of manual & manipulative therapy*. 2021;29(6):341-352. <http://dx.doi.org/10.1080/10669817.2021.1889165>
318. Nigam A, Satpute KH, Hall TM. Long term efficacy of mobilisation with movement on pain and functional status in patients with knee osteoarthritis: a randomised clinical trial. *Clin Rehabil*. 2020;269215520946932. <http://dx.doi.org/10.1177/0269215520946932>
319. Norouzi A, Delkhoush CT, Mirmohammadkhani M, Bagheri R. A comparison of mobilization and mobilization with movement on pain and range of motion in people with lateral ankle sprain: A randomized clinical trial.

REFERENCE LIST

- Journal of bodywork and movement therapies*. 2021;27(654-660).
<http://dx.doi.org/10.1016/j.jbmt.2021.05.006>
320. Noten S, Meeus M, Stassijns G, Van Glabbeek F, Verborgt O, Struyf F. Efficacy of Different Types of Mobilization Techniques in Patients With Primary Adhesive Capsulitis of the Shoulder: A Systematic Review. *Archives of Physical Medicine & Rehabilitation*. 2016;97(5):815-825.
321. Nunes GS, Wolf DF, Dos Santos DA, de Noronha M, Serrão FV. Acute Effects of Hip Mobilization With Movement Technique on Pain and Biomechanics in Females With Patellofemoral Pain: A Randomized, Placebo-Controlled Trial. *Journal of sport rehabilitation*. 2019;1-9. <http://dx.doi.org/10.1123/jsr.2018-0497>
322. Nunez-Cabaleiro P, Leiros-Rodriguez R. Effectiveness of manual therapy in the treatment of cervicogenic headache: A systematic review. *Headache*. 2022;62(3):271-283. <http://dx.doi.org/10.1111/head.14278>
323. O'Brien T, Vicenzino B. A study of the effects of Mulligan's mobilization with movement treatment of lateral ankle pain using a case study design. *Manual Therapy*. 1998;3(2):78-84.
324. Ogince M, Hall T, Robinson K, Blackmore AM. The diagnostic validity of the cervical flexion-rotation test in C1/2-related cervicogenic headache. *Man Ther*. 2007;12(3):256-262.
<http://dx.doi.org/10.1016/j.math.2006.06.016>
325. Oskay D, Altmis H, Duzgun I, Elbasan B. Immediate effects of mulligan's concept mobilization with movement on knee pain and functions in patients with knee osteoarthritis. *Annals of the rheumatic diseases*. 2015;74(1315). <http://dx.doi.org/10.1136/annrheumdis-2015-eular.4743>
326. Özçelep ÖF, Tunalı N, Turhan A, et al. The effect of mobilization with movement on pain, joint distance, effusion area, and inflammation in rheumatoid arthritis: a double-blind randomized controlled clinical trial. *Journal of Orthopaedic Surgery and Research*. 2025;20(1):<http://dx.doi.org/10.1186/s13018-025-06121-3>
327. Ozlu O, Sahin M. The effect of mulligan mobilization technique application in addition to conventional physiotherapy on pain and joint range of motion in people with neck pain. *Journal of bodywork and movement therapies*. 2024;39(225-230). <http://dx.doi.org/10.1016/j.jbmt.2024.02.009>
328. Page MJ, Green S, Kramer S, et al. Manual therapy and exercise for adhesive capsulitis (frozen shoulder). *Cochrane Database of Systematic Reviews*. 2014;8):<http://dx.doi.org/10.1002/14651858.CD011275>
329. Page MJ, Green S, McBain B, et al. Manual therapy and exercise for rotator cuff disease. *Cochrane Database of Systematic Reviews*. 2016;6):<http://dx.doi.org/10.1002/14651858.CD012224>
330. Pagorek S. Effect of Manual Mobilization with Movement on Pain and Strength in Adults with Chronic Lateral Epicondylitis. *Journal of Sport Rehabilitation*. 2009;18(3):448-457.
<http://dx.doi.org/10.1123/jsr.18.3.448>
331. Painter EE, Deyle GD, Allen C, Petersen EJ, Croy T, Rivera KP. Manual Physical Therapy Following Immobilization for Stable Ankle Fracture: A Case Series. *The Journal of orthopaedic and sports physical therapy*. 2015;45(9):665-674. <http://dx.doi.org/10.2519/jospt.2015.5981>
332. Pal A, Misra A. Effectiveness of Snag Mobilization on Computer Professionals with Mechanical Neck Pain and Mobility Deficit. *International Journal of Physiotherapy and Research*. 2019;7(2):3022-3027.
<http://dx.doi.org/10.16965/ijpr.2019.104>
333. Panjwani KD. To Compare the Effect of MWM v/s MWM along with Neural Tissue Mobilization in Case of Cervical Radiculopathy. *Indian Journal of Physiotherapy & Occupational Therapy*. 2016;10(1):42-46.
<http://dx.doi.org/10.5958/0973-5674.2016.00010.1>

REFERENCE LIST

334. Paquin JP, Tousignant-Laflamme Y, Dumas JP. Effects of SNAG mobilization combined with a self-SNAG home-exercise for the treatment of cervicogenic headache: a pilot study. *The Journal of manual & manipulative therapy*. 2021;29(4):244-254. <http://dx.doi.org/10.1080/10669817.2020.1864960>
335. Park D, Cynn H-S, Yi C, Choi WJ, Shim J-H, Oh D-W. Four-week training involving self-ankle mobilization with movement versus calf muscle stretching in patients with chronic stroke: a randomized controlled study. *Topics in stroke rehabilitation*. 2020;27(4):296-304. <http://dx.doi.org/10.1080/10749357.2019.1690831>
336. Park D, Lee JH, Kang TW, Cynn HS. Effects of a 4-Week Self-Ankle Mobilization with Movement Intervention on Ankle Passive Range of Motion, Balance, Gait, and Activities of Daily Living in Patients with Chronic Stroke: A Randomized Controlled Study. *Journal of stroke and cerebrovascular diseases : the official journal of National Stroke Association*. 2018;27(12):3451-3459. <http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2018.08.010>
337. Park D, Lee JH, Kang TW, Cynn HS. Four-week training involving ankle mobilization with movement versus static muscle stretching in patients with chronic stroke: a randomized controlled trial. *Topics in stroke rehabilitation*. 2019;26(2):81-86. <http://dx.doi.org/10.1080/10749357.2018.1550614>
338. Park JT. Evaluation and treatment of cervicogenic headache: a case study using interventions of soft tissue, joint mobilization, and stabilization exercises. *Orthopaedic Physical Therapy Practice*. 2011;23(4):190-196.
339. Park SW, Lee HS, Kim JH. The Effectiveness of Intensive Mobilization Techniques Combined with Capsular Distension for Adhesive Capsulitis of the Shoulder. *Journal of physical therapy science*. 2014;26(11):1767-1770. <http://dx.doi.org/10.1589/jpts.26.1767>
340. Patra RC, Mohanty P, Gautam AP. Effectiveness of C1-C2 sustained natural apophyseal glide combined with dry needling on pressure point threshold and headache disability in cervicogenic headache. *Asian journal of pharmaceutical and clinical research*. 2018;11(1):171 - 174. <http://dx.doi.org/10.22159/ajpcr.2018.v11i1.22349>
341. Paungmali A, O'Leary S, Souvlis T, Vicenzino B. Hypoalgesic and sympathoexcitatory effects of mobilization with movement for lateral epicondylalgia. *Physical Therapy*. 2003;83(4):374-383.
342. Paungmali A, O'Leary S, Souvlis T, Vicenzino B. Naloxone fails to antagonize initial hypoalgesic effect of a manual therapy treatment for lateral epicondylalgia. *Journal of manipulative and physiological therapeutics*. 2004;27(3):180-185. <http://dx.doi.org/10.1016/j.jmpt.2003.12.022>
343. Paungmali A, Vicenzino B, Smith M. Hypoalgesia induced by elbow manipulation in lateral epicondylalgia does not exhibit tolerance. *Journal of Pain*. 2003;4(8):448-454.
344. Pérez HI, Perez JLA, Martinez AG, et al. Is one better than another?: a randomized clinical trial of manual therapy for patients with chronic neck pain. *Manual therapy*. 2014;19(3):215 - 221. <http://dx.doi.org/10.1016/j.math.2013.12.002>
345. Plummer S, Leonard J. Mobilization With Movement as Therapy to Reduce Knee Pain and Increase Knee Range of Motion. *Journal of Sport Rehabilitation*. 2022;31(7):950-953. <http://dx.doi.org/10.1123/jsr.2021-0294>
346. Popescu FG, Vaida MA, Mackay GJK, et al. Successful management of a professional viola player with a complex playing related musculoskeletal disorder. *Romanian Journal of Occupational Medicine*. 2021;72(1):59-65. <http://dx.doi.org/10.2478/rjom-2021-0009>
347. Pourahmadi MR, Mohsenifar H, Dariush M, Aftabi A, Amiri A. Effectiveness of mobilization with movement (Mulligan concept techniques) on low back pain: a systematic review. *Clin Rehabil*. 2018;32(10):1289-1298. <http://dx.doi.org/10.1177/0269215518778321>

REFERENCE LIST

348. Pragassame AS, Kurup MVK. Efficacy of Limited Treatment Frequency of Mulligan's Mobilization with Movement for Frozen Shoulder. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(2):218-223. <http://dx.doi.org/10.5958/j.0973-5674.8.2.089>
349. Qadir W, Waheed A, Niazi R, Mahmood T, Awan IZ. Comparative short-term effects of oscillatory mobilization and mulligan MWM on pain, disability, and range of motion among De Quervain's tenosynovitis patients- a randomized clinical trial. *The Journal of manual & manipulative therapy*. 2025;1-9. <http://dx.doi.org/10.1080/10669817.2025.2557951>
350. Qamar MM, Kiran A, Ijaz MJ, Basharat A, Rasul A, Ahmed W. Comparison of efficacy of mulligan's mobilization with movement with maitland mobilization along with conventional therapy in the patients with knee osteoarthritis: A randomized clinical trial. *Libyan International Medical University Journal*. 2018;3(1):26. http://dx.doi.org/10.4103/liuj.liuj_12_18
351. Rabin A, Israeli T, Kozol Z. Physiotherapy Management of People Diagnosed with de Quervain's Disease: A Case Series. *Physiotherapy Canada. Physiotherapie Canada*. 2015;67(3):263-267. <http://dx.doi.org/10.3138/ptc.2014-47>
352. Racicki S, Gerwin S, DiClaudio S, Reinmann S, Donaldson M. Conservative physical therapy management for the treatment of cervicogenic headache: a systematic review. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2013;21(2):113-124.
353. Ragheb Abushameh RS, Topcu ZG, Tunal AN, Amro A, Arab AA. The effects of ankle mulligan mobilisation in children with cerebral palsy: A randomized single blind control study. *J Pak Med Assoc*. 2024;74(7):1219-1223. <http://dx.doi.org/10.47391/jpma.10328>
354. Rahman H, Charturvedi PA, Apparao P, Srithulasi PR. Effectiveness of Mulligan Mobilisation with Movement Compared to Supervised Exercise Program in Subjects with Lateral Epicondylitis. *International Journal of Physiotherapy and Research*. 2016;4(2):1394-1400. <http://dx.doi.org/10.16965/ijpr.2016.104>
355. Ranganath PNU, Dowle P, Chandrasekhar P. Effectiveness of MWM, Neurodynamics and Conventional Therapy Versus Neurodynamics and Conventional Therapy in Unilateral Cervical Radiculopathy: A Randomized Control Trial. *Indian Journal of Physiotherapy and Occupational Therapy - An International Journal*. 2018;12(3):<http://dx.doi.org/10.5958/0973-5674.2018.00066.7>
356. Ranjana, Sahay P, Banerjee D, Bhushan V, Equebal A. Long Term Efficacy of Maitland Mobilization Versus Mulligan Mobilization in Idiopathic Adhesive Capsulitis of Shoulder: A Randomized Controlled Trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2016;10(4):91-97. <http://dx.doi.org/10.5958/0973-5674.2016.00126.X>
357. Rao RV, Balthillaya G, Prabhu A, Kamath A. Immediate effects of Maitland mobilization versus Mulligan Mobilization with Movement in Osteoarthritis knee- A Randomized Crossover trial. *Journal of bodywork and movement therapies*. 2017;(no pagination)(<http://dx.doi.org/10.1016/j.jbmt.2017.09.017>
358. Razek RA, Shenouda MM. Efficacy of Mulligan's Mobilization with Movement on Pain, Disability, and Range of Motion in Patients with Knee Osteoarthritis: A Randomized Controlled Pilot Study. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(1):242-247. <http://dx.doi.org/10.5958/j.0973-5674.8.1.046>
359. Razzaq A, Nadeem RD, Akhtar M, Ghazanfar M, Aslam N, Nawaz S. Comparing the effects of muscle energy technique and mulligan mobilization with movements on pain, range of motion, and disability in adhesive capsulitis. *J Pak Med Assoc*. 2022;72(1):13-16. <http://dx.doi.org/10.47391/JPMA.1360>

REFERENCE LIST

360. Reep NC, Leverett SN, Heywood RM, Baker RT, Barnes DL, Cheatham SW. The Efficacy of the Mulligan Concept to Treat Meniscal Pathology: A Systematic Review. *Int J Sports Phys Ther.* 2022;17(7):1219-1235. <http://dx.doi.org/10.26603/001c.55540>
361. Rehman M, Riaz H. Comparison of mobilization with movement and Mulligan knee taping on Patellofemoral pain syndrome. *J Pak Med Assoc.* 2021;71(9):2119-2123. <http://dx.doi.org/10.47391/JPMA.04-658>
362. Reid A, Birmingham TB, Alcock G. Efficacy of mobilization with movement for patients with limited dorsiflexion after ankle sprain: a crossover trial. *Physiotherapy Canada.* 2007;59(3):166-172.
363. Reid S, Callister R, Snodgrass S, Katekar M, Rivett D. Long-term outcomes of Mulligan sustained natural apophyseal glides and maitland passive joint mobilisations for chronic cervicogenic dizziness: a randomised trial. *Physiotherapy (united kingdom).* 2015;101(eS1270 - eS1271). <http://dx.doi.org/10.1016/j.physio.2015.03.1180>
364. Reid SA, Andersen JM, Vicenzino B. Adding mobilisation with movement to exercise and advice hastens the improvement in range, pain and function after non-operative cast immobilisation for distal radius fracture: a multicentre, randomised trial. *Journal of Physiotherapy.* 2020;<http://dx.doi.org/10.1016/j.jphys.2020.03.010>
365. Reid SA, Callister R, Katekar MG, Rivett DA. Effects of cervical spine manual therapy on range of motion, head repositioning, and balance in participants with cervicogenic dizziness: a randomized controlled trial. *Archives of physical medicine and rehabilitation.* 2014;95(9):1603 - 1612. <http://dx.doi.org/10.1016/j.apmr.2014.04.009>
366. Reid SA, Callister R, Snodgrass SJ, Katekar MG, Rivett DA. Manual therapy for cervicogenic dizziness: long-term outcomes of a randomised trial. *Manual therapy.* 2015;20(1):148 - 156. <http://dx.doi.org/10.1016/j.math.2014.08.003>
367. Reid SA, Rivett DA, Katekar MG, Callister R. Comparison of mulligan sustained natural apophyseal glides and maitland mobilizations for treatment of cervicogenic dizziness: a randomized controlled trial. *Physical therapy.* 2014;94(4):466 - 476. <http://dx.doi.org/10.2522/ptj.20120483>
368. Reid SA, Rivett DA, Katekar MG, Callister R. Efficacy of manual therapy treatments for people with cervicogenic dizziness and pain: protocol of a randomised controlled trial. *BMC musculoskeletal disorders.* 2012;13(201). <http://dx.doi.org/10.1186/1471-2474-13-201>
369. Reid SA, Rivett DA, Katekar MG, Callister R. Sustained natural apophyseal glides (SNAGs) are an effective treatment for cervicogenic dizziness. *Manual therapy.* 2008;13(4):357 - 366. <http://dx.doi.org/10.1016/j.math.2007.03.006>
370. Reyhan AC, Sindel D, Dereli EE. The effects of Mulligan's mobilization with movement technique in patients with lateral epicondylitis. *Journal of back and musculoskeletal rehabilitation.* 2020;33(1):99-107. <http://dx.doi.org/10.3233/BMR-181135>
371. Rezkallah SS, Abdullah GA. Comparison between sustained natural apophyseal glides (SNAG's) and myofascial release techniques combined with exercises in non specific neck pain. *Physiotherapy Practice & Research.* 2018;39(2):135-145. <http://dx.doi.org/10.3233/PPR-180116>
372. Rhinehart A. Effective Treatment of an Apparent Meniscal Injury Using the Mulligan Concept. *Journal of Sports Medicine and Allied Health Sciences: Official Journal of the Ohio Athletic Trainers Association.* 2015;1(2):<http://dx.doi.org/10.25035/jsmahs.01.02.04>
373. Rhinehart A, Buonopane M. Use of the Mulligan Concept and Positional Release Therapy in the Treatment of a Moderate Grade Acromioclavicular Injury. *Athletic Training & Sports Health Care: The Journal for the Practicing Clinician.* 2016;8(2):82-88.

REFERENCE LIST

374. Ribeiro DC, de Castro MP, Sole G, Vicenzino B. The initial effects of a sustained glenohumeral postero-lateral glide during elevation on shoulder muscle activity: A repeated measures study on asymptomatic shoulders. *Man Ther.* 2016;22(101-108. <http://dx.doi.org/10.1016/j.math.2015.10.014>
375. Ribeiro DC, Sole G, Venkat R, Shemmell J. Differences between clinician- and self-administered shoulder sustained mobilization on scapular and shoulder muscle activity during shoulder abduction: A repeated-measures study on asymptomatic individuals. *Musculoskeletal science & practice.* 2017;30(25-33). <http://dx.doi.org/10.1016/j.msksp.2017.04.010>
376. Richardson CJ. Treatment of cervicogenic headaches using Mulligan 'SNAGS' and postural reeducation: a case report. *Orthopaedic Physical Therapy Practice.* 2009;21(1):33-38.
377. Romero CL, Torres Lacomba M, Montoro YC, et al. Mobilization With Movement for Shoulder Dysfunction in Older Adults: A Pilot Trial. *Journal of Chiropractic Medicine.* 2015;14(4):249-258. <http://dx.doi.org/10.1016/j.jcmm.2015.03.001>
378. Runge N, Sault J, Anderson AM, Thomas. Effectiveness of manual therapy approaches for hip and knee pain disorders: an exercise-based approach. In: Mathew B, Courtney CA, Fernandez-de-las-Penas C, eds. *Hip and Knee Pain Disorders: Integrating manual therapy and exercise.* Edinburgh, Scotland: Handspring; 2022:
379. Sai KV, Kumar JNS. Effects of Mulligan's Mobilisation with Movement on Pain and Range of Motion in Diabetic Frozen Shoulder a Randomized Clinical Trail. *Indian Journal of Physiotherapy & Occupational Therapy.* 2015;9(4):187-193. <http://dx.doi.org/10.5958/0973-5674.2015.00170.7>
380. Said S, Ali OI, Elazm SNA, Abdelraoof NA. Mulligan Self Mobilization Versus Mulligan Snags on Cervical Position Sense. *International Journal of Physiotherapy.* 2017;4(2):93-100.
381. Salamh P, Cook C, Reiman MP, Sheets C. Treatment effectiveness and fidelity of manual therapy to the knee: A systematic review and meta-analysis. *Musculoskeletal care.* 2017;15(3):238-248. <http://dx.doi.org/10.1002/msc.1166>
382. Salik S, Rani S, Hayat R, Manzoor S, Malik AU, Maqbool S. Comparison between Mulligan Sustained natural apophyseal glides (snags) VS McKenzie exercises in Chronic Mechanical Low back pain. *Pakistan Journal of Medical and Health Sciences.* 2022;16(10):141-143. <http://dx.doi.org/10.53350/pjmhs221610141>
383. Samir S, Zak L, Soliman M. Mulligan versus maitland mobilizations in patients with chronic low back dysfunction. *International journal of pharmtech research.* 9 (6) (pp 92-99), 2016. Date of publication: 2016. 2016;
384. Sanchez BJ, Baker RT. Conservative Management of Possible Meniscal Derangement Using the Mulligan Concept: A Case Report. *Journal of Chiropractic Medicine.* 2017;16(4):308-315. <http://dx.doi.org/10.1016/j.jcm.2017.08.005>
385. Sang-Lim KIM, Byoung-Hee LEE. Effect of Mulligan's mobilization with movement technique on gait function in stroke patients. *Journal of physical therapy science.* 2016;28(8):2326-2329.
386. Saptale A, Patrekar S, Aphale S, Shinde S. Effects of Positional Traction Integrated With Mobilization With Movement on Cervical Facet Joint Syndrome. *Cureus.* 2025;17(7):e88276. <http://dx.doi.org/10.7759/cureus.88276>
387. Satpute K, Bedekar N, Hall T. Effect of Mulligan manual therapy and exercise on headache frequency, intensity, disability, and upper cervical joint hypomobility in people with episodic tension-type headache: a randomized clinical trial. *Physiotherapy theory and practice.* 2025;41(11):2271-2287. <http://dx.doi.org/10.1080/09593985.2025.2516765>

REFERENCE LIST

388. Satpute K, Bedekar N, Hall T. Effectiveness of Mulligan manual therapy over exercise on headache frequency, intensity and disability for patients with migraine, tension-type headache and cervicogenic headache - a protocol of a pragmatic randomized controlled trial. *BMC musculoskeletal disorders*. 2021;22(1):243. <http://dx.doi.org/10.1186/s12891-021-04105-y>
389. Satpute K, Bedekar N, Hall T. Headache symptom modification: the relevance of appropriate manual therapy assessment and management of a patient with features of migraine and cervicogenic headache - a case report. *The Journal of manual & manipulative therapy*. 2020;28(3):181-188. <http://dx.doi.org/10.1080/10669817.2019.1662637>
390. Satpute K, Bedekar N, Hall T. Mulligan manual therapy added to exercise improves headache frequency, intensity and disability more than exercise alone in people with cervicogenic headache: a randomised trial. *J Physiother*. 2024;<http://dx.doi.org/10.1016/j.jphys.2024.06.002>
391. Satpute K, Hall T, Bisen R, Lokhande P. The Effect of Spinal Mobilization With Leg Movement in Patients With Lumbar Radiculopathy-A Double-Blind Randomized Controlled Trial. *Archives of physical medicine and rehabilitation*. 2019;100(5):828-836. <http://dx.doi.org/10.1016/j.apmr.2018.11.004>
392. Satpute K, Nalband S, Hall T. The C0-C2 axial rotation test: normal values, intra- and inter-rater reliability and correlation with the flexion rotation test in normal subjects. *The Journal of manual & manipulative therapy*. 2019;27(2):92-98. <http://dx.doi.org/10.1080/10669817.2018.1533195>
393. Satpute K, Reid S, Mitchell T, Mackay G, Hall T. Efficacy of mobilization with movement (MWM) for shoulder conditions: a systematic review and meta-analysis. *The Journal of manual & manipulative therapy*. 2022;30(1):13-32. <http://dx.doi.org/10.1080/10669817.2021.1955181>
394. Satpute KH, Bhandari P, Hall T. Efficacy of Hand Behind Back Mobilization With Movement for Acute Shoulder Pain and Movement Impairment: a Randomized Controlled Trial. *Journal of manipulative and physiological therapeutics*. 2015;38(5):324 - 334. <http://dx.doi.org/10.1016/j.jmpt.2015.04.003>
395. Satpute KH, Parekh K, Hall TM. The C0-C2 axial rotation test – Reliability and correlation with the flexion rotation test in people with cervicogenic headache and migraine. *Musculoskeletal Science and Practice*. 2020;102286. <http://dx.doi.org/10.1016/j.msksp.2020.102286>
396. Schäfer A, Lüdtke K, Breuel F, et al. Validity of eyeball estimation for range of motion during the cervical flexion rotation test compared to an ultrasound-based movement analysis system. *Physiotherapy theory and practice*. 2018;34(8):622-628. <http://dx.doi.org/10.1080/09593985.2017.1423523>
397. Sekeroz S, Telci EA, Buke M, Akkaya N. Comparison of effectiveness of Mulligan mobilization technique and cervical stabilization training in patients with chronic neck pain: a single-blinded randomized controlled trial. *Rehabilitation (Stuttg)*. 2025;64(06):334-343. <http://dx.doi.org/10.1055/a-2618-6281>
398. Seo UH, Kim JH, Lee BH. Effects of Mulligan Mobilization and Low-Level Laser Therapy on Physical Disability, Pain, and Range of Motion in Patients with Chronic Low Back Pain: A Pilot Randomized Controlled Trial. *Healthcare (Basel)*. 2020;8(3):<http://dx.doi.org/10.3390/healthcare8030237>
399. Seo Y, Lee J, Han D. The effects of spinal mobilization with arm movements on shoulder muscle strengthening. *Journal of physical therapy science*. 2015;27(1):11-13. <http://dx.doi.org/10.1589/jpts.27.11>
400. Sevik Kacmaz K, Unver B. Immediate Effects of Mulligan Mobilization on Elbow Proprioception in Healthy Individuals: A Randomized Placebo-Controlled Single-Blind Study. *Journal of manipulative and physiological therapeutics*. 2023;46(1):59-64. <http://dx.doi.org/10.1016/j.jmpt.2023.05.001>

REFERENCE LIST

401. Shadegani R, Khanmohammadi R, Olyaei G. Comparison of effects of Mulligan taping and Kinesio taping on ankle neuromuscular control in response to a sudden inversion perturbation in individuals with chronic ankle instability. *Phys Ther Sport*. 2023;63(58-66). <http://dx.doi.org/10.1016/j.ptsp.2023.07.004>
402. Shafique S, Ahmad S, Shakil-Ur-Rehman S. Effect of Mulligan spinal mobilization with arm movement along with neurodynamics and manual traction in cervical radiculopathy patients: A randomized controlled trial. *J Pak Med Assoc*. 2019;69(11):1601-1604. <http://dx.doi.org/10.5455/JPMA.297956>.
403. Shahid S, Ahmed A, Ahmed U. Effectiveness of Routine Physical Therapy with and Without Pain Release Phenomenon in Patello-Femoral Pain Syndrome. *International Journal of Science and Research (IJSR)*. 2016;5(7):1891-1919. <http://dx.doi.org/10.21275/v5i7.ART2016586>
404. Shedje SS, Ramteke SU, Samal S. Integrated Rehabilitation Approach Utilizing Swiss Ball Training, Mulligan Taping, and Mobilization With Movement for Simultaneous Management of Sacroiliac Joint Dysfunction and Lateral Ankle Sprain in a Badminton Athlete: A Case Study. *Cureus*. 2024;16(3):e56942. <http://dx.doi.org/10.7759/cureus.56942>
405. Shelke A, B AP, M GB, Kumaran SD, G PR. Immediate effect of craniocervical flexion exercise and Mulligan mobilisation in patients with mechanical neck pain — A randomised clinical trial. *Hong Kong Physiotherapy Journal*. 2023;43(02):137-147. <http://dx.doi.org/10.1142/s1013702523500154>
406. Shepherd MH, Shumway J, Salvatori RT, Rhon DI, Young JL. The influence of manual therapy dosing on outcomes in patients with hip osteoarthritis: a systematic review. *Journal of Manual & Manipulative Therapy*. 2022;1-13. <http://dx.doi.org/10.1080/10669817.2022.2037193>
407. Shin EJ, Lee BH. The effect of sustained natural apophyseal glides on headache, duration and cervical function in women with cervicogenic headache. *Journal of exercise rehabilitation*. 2014;10(2):131-135. <http://dx.doi.org/10.12965/jer.140098>
408. Shinde M, Jagtap V. Effect of muscle energy technique and mulligan mobilization in sacroiliac joint dysfunction. *Global Journal for Research Analysis*. 2018;7(3 - March 2018):79-91.
409. Shrivastava A, Shyam AK, Sabnis S, Sancheti P. Randomised controlled study of Mulligan's Vs. Maitland's mobilization technique in adhesive capsulitis of shoulder joint. *Indian Journal of Physiotherapy & Occupational Therapy*. 2011;5(4):12-15.
410. Shumway JD, Vraa D. Short-Term Effect of Manual Therapy & Taping on Subacute Ankle Sprains with Potential Syndesmotom Sprain: A Case Series. *The Journal of manual & manipulative therapy*. 2022;30(2):116-123. <http://dx.doi.org/10.1080/10669817.2021.1974240>
411. Silva JG, Torres DdFM, Chagas CA, Guimarães F. Anatomical Considerations of The Acromioclavicular Joint for the Application of Mobilization-With-Movement: A Narrative Review. *Journal of Physical Therapy*. 2013;6(2):59-66.
412. Silva MC, Ferreira AS, Baldon RM, et al. Immediate Effects of Manual Therapy Techniques on Ankle Dorsiflexion: A Randomized Clinical Trial. *Journal of manipulative and physiological therapeutics*. 2025;48(1-5):166-176. <http://dx.doi.org/10.1016/j.jmpt.2025.09.002>
413. Simsek S, Yagci N. Acute effects of distal fibular taping technique on pain, balance and forward lunge activities in Chronic Ankle Instability. *Journal of back and musculoskeletal rehabilitation*. 2019;32(1):15-20. <http://dx.doi.org/10.3233/bmr-181132>
414. Simsek S, Yagci N, Korkmaz MB. Mid-term Effect of Lumbar Sustained Natural Apophyseal Glides in Patients with Non-specific Chronic Low Back Pain: A Randomized Clinical Trial. *Eurasian J Med*. 2023;55(2):152-157. <http://dx.doi.org/10.5152/eurasianjmed.2023.0202>

REFERENCE LIST

415. Singh D. An Experimental Study on effects of Mulligan Mobilization Technique and Isometric Exercises in Patients with Osteoarthritis Knee. *Indian Journal of Physiotherapy & Occupational Therapy*. 2012;6(4):158-162.
416. Sivakumar S, Reddy CR, Jayabalan P. Combining the Effects of Mobilization With Movement and Cyriax Physiotherapy in Lateral Epicondylitis: A Case Report. *Cureus*. 2025;17(7):e87093.
<http://dx.doi.org/10.7759/cureus.87093>
417. Slater H, Arendt-Nielsen L, Wright A, Graven-Nielsen T. Effects of a manual therapy technique in experimental lateral epicondylalgia. *Manual therapy*. 2006;11(2):107 - 117.
<http://dx.doi.org/10.1016/j.math.2005.04.005>
418. Smith DA, Saranga J, Pritchard A, Kommatas NA, Punnoose SK, Kale ST. Effect of a lateral glide mobilisation with movement of the hip on vibration threshold in healthy volunteers. *Journal of Bodywork and Movement Therapies*. 2018;22(1):13-17. <http://dx.doi.org/https://doi.org/10.1016/j.jbmt.2016.10.001>
419. Smith MD, Vitharana TN, Wallis GM, Vicenzino B. Response profile of fibular repositioning tape on ankle osteokinematics, arthrokinematics, perceived stability and confidence in chronic ankle instability. *Musculoskeletal Science and Practice*. 2020;50(102272).
<http://dx.doi.org/https://doi.org/10.1016/j.msksp.2020.102272>
420. Solanki D, Kage V. A Comparative Study on Immediate effect of Adductor Stretch MWM Versus MET in Subjects with Hip Adductor Tightness - Randomized Clinical Trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2012;6(4):44-47.
421. Somaiya KJ, Samal S, Boob MA. Effectiveness of Recent Physiotherapy Techniques Along With Conventional Physiotherapy Techniques in a Patient With Knee Osteoarthritis: A Case Report. *Cureus*. 2024;16(2):e54872. <http://dx.doi.org/10.7759/cureus.54872>
422. Someeh M, Norasteh AA, Daneshmandi H, Asadi A. Immediate effects of Mulligan's fibular repositioning taping on postural control in athletes with and without chronic ankle instability. *Phys Ther Sport*. 2015;16(2):135-139. <http://dx.doi.org/10.1016/j.ptsp.2014.08.003>
423. Son J-H, Park GD, Park HS. The effect of sacroiliac joint mobilization on pelvic deformation and the static balance ability of female university students with si joint dysfunction. *Journal of physical therapy science*. 2014;26(6):845-848. <http://dx.doi.org/10.1589/jpts.26.845>
424. Srivastava N, Joshi S. Comparison between the Effectiveness of Mobilization with Movement and End Range Mobilization along with Conventional Therapy for Management of Frozen Shoulder. *Indian Journal of Physiotherapy & Occupational Therapy*. 2017;11(4):176-179. <http://dx.doi.org/10.5958/0973-5674.2017.00141.1>
425. Srivastava S, Eapen C, Mittal H. Comparison of Mobilisation with Movement and Cryotherapy in Shoulder Impingement Syndrome-A Randomised Clinical Trial. *Journal of Clinical and Diagnostic Research*. 2018;<http://dx.doi.org/10.7860/jcdr/2018/34624.12091>
426. Stanek JM, Brown B, Barrack J, Parish J. A novel manual therapy technique is effective for short-term increases in tibial internal rotation range of motion. *Journal of exercise rehabilitation*. 2021;17(3):184-191.
<http://dx.doi.org/10.12965/jer.2142228.114>
427. Stanek JM, Pieczynski AE. Effectiveness of clinician- and patient-applied mobilisation with movement technique to increase ankle dorsiflexion range of motion. *International Journal of Therapy and Rehabilitation*. 2020;27(4):1-11. <http://dx.doi.org/10.12968/ijtr.2018.0118>

REFERENCE LIST

428. Stathopoulos N, Dimitriadis Z, Koumantakis GA. Effectiveness of Mulligan's Mobilization with Movement techniques on pain and disability of peripheral joints: A systematic review with meta-analysis between 2008–2017. *Physiotherapy*. 2018;<http://dx.doi.org/10.1016/j.physio.2018.10.001>
429. Stathopoulos N, Dimitriadis Z, Koumantakis GA. Effectiveness of Mulligan's Mobilization With Movement Techniques on Range of Motion in Peripheral Joint Pathologies: A Systematic Review With Meta-analysis Between 2008 and 2018. *Journal of Manipulative and Physiological Therapeutics*. 2019;<http://dx.doi.org/10.1016/j.jmpt.2019.04.001>
430. Syed AU, Haider D, Rana M. The effects of the addition of Mulligan mobilization with movement to exercise on elbow pain and function associated with lateral elbow tendinopathy. *Journal of Bodywork and Movement Therapies*. 2024;<http://dx.doi.org/https://doi.org/10.1016/j.jbmt.2024.06.007>
431. Taghizadeh Delkhoush C, Arzani P, Mirmohammadkhani M, Bagheri R, Norouzi A. The Impact of Ankle Mobilization Techniques on Static Stability in Individuals With Acute Inversion Ankle Sprain: A Randomized Clinical Trial. *Journal of chiropractic medicine*. 2024;23(4):153-161. <http://dx.doi.org/10.1016/j.jcm.2024.08.002>
432. Takasaki H, Hall T, Jull G. Immediate and short-term effects of Mulligan's mobilization with movement on knee pain and disability associated with knee osteoarthritis - A prospective case series. *Physiotherapy Theory & Practice*. 2013;29(2):87-95. <http://dx.doi.org/10.3109/09593985.2012.702854>
433. Takasaki H, Hall T, Kaneko S, Iizawa T, Ikemoto Y. Cervical segmental motion induced by shoulder abduction assessed by magnetic resonance imaging. *Spine*. 2009;34(3):E122-126. <http://dx.doi.org/10.1097/BRS.0b013e31818a26d9>
434. Takasaki H, Hall T, Oshiro S, Kaneko S, Ikemoto Y, Jull G. Normal kinematics of the upper cervical spine during the Flexion-Rotation Test - In vivo measurements using magnetic resonance imaging. *Man Ther*. 2011;16(2):167-171. <http://dx.doi.org/10.1016/j.math.2010.10.002>
435. Tambekar N, Sabnis S, Phadke A, Bedekar N. Effect of Butler's neural tissue mobilization and Mulligan's bent leg raise on pain and straight leg raise in patients of low back ache. *Journal of bodywork and movement therapies*. 2016;20(2):280 - 285. <http://dx.doi.org/10.1016/j.jbmt.2015.08.003>
436. Tank KD, Choks P, Makwana P. To Study the Effect of Muscle Energy Technique Versus Mulligan Snags on Pain, Range of Motion and Functional Disability for Individuals with Mechanical Neck Pain". – a Comparative Study. *International Journal of Physiotherapy and Research*. 2018;6(1):2582-2587. <http://dx.doi.org/10.16965/ijpr.2017.253>
437. Tat AM, Can F, Tat NM, Sasmaz HI, Antmen AB. The effects of manual therapy and exercises on pain, muscle strength, joint health, functionality and quality of life in haemophilic arthropathy of the elbow joint: A randomized controlled pilot study. *Haemophilia*. 2021;27(3):e376-e384. <http://dx.doi.org/https://doi.org/10.1111/hae.14281>
438. Tatsios PI, Grammatopoulou E, Dimitriadis Z, Koumantakis GA. The Effectiveness of Manual Therapy in the Cervical Spine and Diaphragm, in Combination with Breathing Re-Education Exercises, on the Range of Motion and Forward Head Posture in Patients with Non-Specific Chronic Neck Pain: A Randomized Controlled Trial. *Healthcare (Basel)*. 2025;13(14):<http://dx.doi.org/10.3390/healthcare13141765>
439. Taylor A, Wolff AL. The forgotten radial nerve: A conceptual framework for treatment of lateral elbow pain. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2021;34(2):323-329. <http://dx.doi.org/10.1016/j.jht.2021.05.009>

REFERENCE LIST

440. Terada M, Pietrosimone BG, Gribble PA. Therapeutic Interventions for Increasing Ankle Dorsiflexion After Ankle Sprain: A Systematic Review. *Journal of Athletic Training (Allen Press)*. 2013;48(5):696-709.
441. Teys P, Bisset L, Collins N, Coombes B, Vicenzino B. One-week time course of the effects of Mulligan's Mobilisation with Movement and taping in painful shoulders. *Manual therapy*. 2013;18(5):372 - 377. <http://dx.doi.org/10.1016/j.math.2013.01.001>
442. Teys P, Bisset L, Vicenzino B. The initial effects of a Mulligan's mobilization with movement technique on range of movement and pressure pain threshold in pain-limited shoulders. *Manual therapy*. 2008;13(1):37 - 42. <http://dx.doi.org/10.1016/j.math.2006.07.011>
443. Thomaidou E, McCarthy CJ, Tsepis E, Fousekis K, Billis E. Manual Therapy versus Localisation (Tactile, Sensory Training) in Patients with Non-Specific Neck Pain: A Randomised Clinical Pilot Trial. *Healthcare (Basel)*. 2023;11(10):<http://dx.doi.org/10.3390/healthcare11101385>
444. Tikhile P, Patil DS, Jaiswal PR. Management of Low Back Pain With Concurrent Hamstring Tightness: A Case Report Highlighting the Efficacy of Proprioceptive Neuromuscular Facilitation, Mulligan's Two-Leg Rotation Technique, and Exercise Regimen. *Cureus*. 2024;16(4):e58705. <http://dx.doi.org/10.7759/cureus.58705>
445. Tomruk M, Gelecek N, Basçi O, Özkan MH. Effects of early manual therapy on functional outcomes after volar plating of distal radius fractures: A randomized controlled trial. *Hand surgery & rehabilitation*. 2020;39(3):178-185. <http://dx.doi.org/10.1016/j.hansur.2019.12.002>
446. Tomruk M, Soysal Tomruk M, Alkan E, Gelecek N. Immediate Effects of Ankle Joint Mobilization With Movement on Postural Control, Range of Motion, and Muscle Strength in Healthy Individuals: A Randomized, Sham-Controlled Trial. *Journal of sport rehabilitation*. 2019;1-9. <http://dx.doi.org/10.1123/jsr.2019-0198>
447. Torres D, Hanney WJ, Velazquez L, Pabian PS, Pilkington C. The Effect of Mobilization With Movement and Passive Stretching on Hip Range of Motion: A Randomized Controlled Trial. *Orthopaedic Physical Therapy Practice*. 2021;33(3):150-154.
448. Trudel D, Duley J, Zastrow I, Kerr EW, Davidson R, MacDermid JC. Rehabilitation for patients with lateral epicondylitis: a systematic review. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2004;17(2):243-266. <http://dx.doi.org/10.1197/j.jht.2004.02.011>
449. Tul Ain SQ, Shakil Ur Rehman S, Maryam M, Kiani SK. Effects of Sustained Natural Apophyseal Glides with and without thoracic posture correction techniques on mechanical back pain: a randomized control trial. *J Pak Med Assoc*. 2019;69(11):1584-1587. <http://dx.doi.org/10.5455/jpma.274875>.
450. Ughreja RA, Shukla YU. Mulligan's Mobilisation with Movement (MWM) relieves pain and improves functional status in osteoarthritis knee. *Int J Physiother*. 2017;4(2):132-138.
451. Uttamchandani SR, Phansopkar P. Efficacy of PowerBall Versus Mulligan Mobilization With Movement on Pain and Function in Patients With Lateral Epicondylitis: A Randomized Clinical Trial. *Cureus*. 2024;16(3):e56444. <http://dx.doi.org/10.7759/cureus.56444>
452. van der Wees PJ, Lenssen AF, Hendriks EJ, Stomp DJ, Dekker J, de Bie RA. Effectiveness of exercise therapy and manual mobilisation in ankle sprain and functional instability: a systematic review. *The Australian journal of physiotherapy*. 2006;52(1):27-37.
453. Vasseljen O. Physiotherapy interventions improve tennis elbow with superior long-term outcomes to corticosteroid injections. *Australian Journal of Physiotherapy*. 2007;53(1):61-61.

REFERENCE LIST

454. Vicenzino B, Branjerdporn M, Teys P, Jordan K. Initial changes in posterior talar glide and dorsiflexion of the ankle after mobilization with movement in individuals with recurrent ankle sprain. *Journal of orthopaedic and sports physical therapy*. 2006;36(7):464 - 471. <http://dx.doi.org/10.2519/jospt.2006.2265>
455. Vicenzino B, Cleland JA, Bisset L. Joint manipulation in the management of lateral epicondylalgia: a clinical commentary. *The Journal of manual & manipulative therapy*. 2007;15(1):50-56. <http://dx.doi.org/10.1179/106698107791090132>
456. Vicenzino B, Hing W, Rivett D, Hall T. *Mobilisation with Movement: The Art and the Science*. Chatswood: Elsevier Australia; 2011.
457. Vicenzino B, Paungmali A, Teys P. Mulligan's mobilization-with-movement, positional faults and pain relief: current concepts from a critical review of literature. *Man Ther*. 2007;12(2):98-108. <http://dx.doi.org/10.1016/j.math.2006.07.012>
458. Vicenzino B, Smith D, Cleland J, Bisset L. Development of a clinical prediction rule to identify initial responders to mobilisation with movement and exercise for lateral epicondylalgia. *Manual Therapy*. 2009;14(5):550-554.
459. Villafane JH, Langford D, Alguacil-Diego IM, Fernandez-Carnero J. Management of trapeziometacarpal osteoarthritis pain and dysfunction using mobilization with movement technique in combination with kinesiology tape: a case report. *Journal of chiropractic medicine*. 2013;12(2):79-86. <http://dx.doi.org/10.1016/j.jcm.2013.06.001>
460. Villafañe JH, Valdes K. Mobilization with movement and elastic tape application for the conservative management of carpometacarpal joint osteoarthritis. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2015;28(1):82-84; quiz 85. <http://dx.doi.org/10.1016/j.jht.2014.08.001>
461. Wade PG, Franklin CVJ. The Effect of Mobilisation and Core Muscle Strengthening For Cervical Spine in Relieving Cervicogenic Headache. *IOSR Journal of Nursing and Health Science*. 2015;4(5):13-16.
462. Walsh R, Kinsella S. The effects of caudal mobilisation with movement (MWM) and caudal self-mobilisation with movement (SMWM) in relation to restricted internal rotation in the hip: a randomised control pilot study. *Manual therapy*. 2016;22(9 - 15). <http://dx.doi.org/10.1016/j.math.2016.01.007>
463. Wang S, Zeng J, Chapple CM, Mani R, Ribeiro DC. Initial effect of high-volume mobilisation with movement on shoulder range of motion and pain in patients with rotator cuff-related shoulder pain: protocol for a randomised controlled trial (Evolution Trial). *BMJ Open*. 2023;13(8):e069919. <http://dx.doi.org/10.1136/bmjopen-2022-069919>
464. Wang S, Zeng J, Mani R, Chapple CM, Ribeiro DC. The immediate effects of mobilization with movement on shoulder range of motion and pain in patients with rotator cuff-related shoulder pain: A randomized controlled trial (Evolution Trial). *Braz J Phys Ther*. 2024;28(6):101145. <http://dx.doi.org/10.1016/j.bjpt.2024.101145>
465. Wang Y, Wang C, Chen H, Ye X. [Shoulder joint pain of rotator cuff injury treated with electroacupuncture and Mulligan's mobilization: a randomized controlled trial]. *Zhongguo zhen jiu = Chinese acupuncture & moxibustion*. 2018;38(1):17-21. <http://dx.doi.org/10.13703/j.0255-2930.2018.01.004>
466. Waqqar S, Shakil-ur-Rehman S, Ahmad S. Mckenzie treatment versus mulligan sustained natural apophyseal glides for chronic mechanical low back pain. *Pakistan journal of medical sciences*. 2016;32(2):476 - 479. <http://dx.doi.org/10.12669/pjms.322.9127>

REFERENCE LIST

467. Weerasekara I, Deam H, Bamborough N, et al. Effect of Mobilisation with Movement (MWM) on clinical outcomes in lateral ankle sprains: A systematic review and meta-analysis. *Foot (Edinburgh, Scotland)*. 2020;43(101657). <http://dx.doi.org/10.1016/j.foot.2019.101657>
468. Weerasekara I, Osmotherly PG, Snodgrass S, Tessier J, Rivett DA. Is the fibula positioned anteriorly in weight-bearing in individuals with chronic ankle instability? A case control study. *Journal of Manual & Manipulative Therapy*. 2021;29(3):168-175. <http://dx.doi.org/10.1080/10669817.2020.1844852>
469. Weleslassie GG, Temesgen MH, Alamer A, Tsegay GS, Hailemariam TT, Melese H. Effectiveness of Mobilization with Movement on the Management of Knee Osteoarthritis: A Systematic Review of Randomized Controlled Trials. *Pain Res Manag*. 2021;2021(8815682). <http://dx.doi.org/10.1155/2021/8815682>
470. Westad K, Tjoestolvsen F, Hebron C. The effectiveness of Mulligan's mobilisation with movement (MWM) on peripheral joints in musculoskeletal (MSK) conditions: A systematic review. *Musculoskeletal science & practice*. 2019;39(157-163). <http://dx.doi.org/10.1016/j.msksp.2018.12.001>
471. Wheeler TJ, Basnett CR, Hanish MJ, et al. Fibular taping does not influence ankle dorsiflexion range of motion or balance measures in individuals with chronic ankle instability. *Journal of Science and Medicine in Sport*. 2013;16(6):488-492. <http://dx.doi.org/10.1016/j.jsams.2013.02.012>
472. Wikstrom EA, Bagherian S, Allen G, Song K. Anterior-to-Posterior Ankle Joint Mobilizations Improve Dynamic Postural Control in Chronic Ankle Instability Patients: A Critically Appraised Topic. *International Journal of Athletic Therapy & Training*. 2018;23(2):57-61.
473. Wilson E. The Mulligan concept: NAGS, SNAGS and mobilizations with movement. *Journal of Bodywork & Movement Therapies*. 2001;5(2):81-89.
474. Wong CK, Strang BL, Schram GA, Mercer EA, Kesting RS, Deo KS. A pragmatic regional interdependence approach to primary frozen shoulder: a retrospective case series*. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2018;26(2):109-118.
475. Woodman R, Berghorn K, Underhill T, Wolanin M. Utilization of mobilization with movement for an apparent sprain of the posterior talofibular ligament: A case report. *Manual Therapy*. 2013;18(1):e1-e7.
476. Xu X, Ling Y. Comparative safety and efficacy of manual therapy interventions for cervicogenic headache: a systematic review and network meta-analysis. *Front Neurol*. 2025;16(1566764). <http://dx.doi.org/10.3389/fneur.2025.1566764>
477. Yadav S, Nijhawan MA, Panda P. Effectiveness of Spinal Mobilization With Leg Movement (SMWLM) in Patients With Lumbar Radiculopathy (L5 / S1 Nerve Root) in Lumbar Disc Herniation. *International Journal of Physiotherapy and Research*. 2014;2(5):712-718.
478. Yan H, Zhao P, Guo X, Zhou X. The effects of Core Stability Exercises and Mulligan's mobilization with movement techniques on sacroiliac joint dysfunction. *Front Physiol*. 2024;15(1337754). <http://dx.doi.org/10.3389/fphys.2024.1337754>
479. Yang JL, Chang CW, Chen SY, Wang SF, Lin JJ. Mobilization techniques in subjects with frozen shoulder syndrome: randomized multiple-treatment trial. *Physical therapy*. 2007;87(10):1307 - 1315. <http://dx.doi.org/10.2522/ptj.20060295>
480. Yaseen K, Hendrick P, Ismail A, Felemban M, Alshehri MA. The effectiveness of manual therapy in treating cervicogenic dizziness: a systematic review. *Journal of physical therapy science*. 2018;30(1):96-102. <http://dx.doi.org/10.1589/jpts.30.96>

REFERENCE LIST

481. Yıldırım MS, Ozyurek S, Tosun O, Uzer S, Gelecek N. Comparison of effects of static, proprioceptive neuromuscular facilitation and Mulligan stretching on hip flexion range of motion: a randomized controlled trial. *Biology of sport*. 2016;33(1):89-94. <http://dx.doi.org/10.5604/20831862.1194126>
482. Yoon J-Y, An D-H, Oh J-S. Plantarflexor and Dorsiflexor Activation during Inclined Walking with and without Modified Mobilization with Movement Using Tape in Women with Limited Ankle Dorsiflexion. *Journal of physical therapy science*. 2013;25(8):993-995. <http://dx.doi.org/10.1589/jpts.25.993>
483. Yoon J-y, Hwang Y-i, An D-h, Oh J-s. Changes in Kinetic, Kinematic, and Temporal Parameters of Walking in People With Limited Ankle Dorsiflexion: Pre-Post Application of Modified Mobilization With Movement Using Talus Glide Taping. *Journal of Manipulative & Physiological Therapeutics*. 2014;37(5):320-325. <http://dx.doi.org/10.1016/j.jmpt.2014.01.007>
484. Yoon J-y, Oh J-s, An D-h. Three-Dimensional Analysis of Foot Motion After Uphill Walking With Mobilization With Movement Using Tape Applied to the Talocrural Joint in Women With Limited Ankle Dorsiflexion. *Foot & Ankle International*. 2014;35(11):1217-1225.
485. Yoshikawa A, Ogata Y, Yanagihashi R, Fujiwara T, Abe K. Analysis of a Manual Technique for Cervical Rotation using a Small Three Dimensional Strain Meter. *Rigakuryoho Kagaku*. 2011;26(4):507-510.
486. Young SW, Young TW, MacDonald CW. Conservative management of De Quervain's tendinopathy with an orthopedic manual physical therapy approach emphasizing first CMC manipulation: a retrospective case series. *Physiotherapy theory and practice*. 2022;38(4):587-596. <http://dx.doi.org/10.1080/09593985.2020.1771800>
487. Youssef AR. Mulligan Mobilization Is More Effective in Treating Diabetic Frozen Shoulder Than the Maitland Technique. *International Journal of Physiotherapy*. 2015;2(5):<http://dx.doi.org/10.15621/ijphy/2015/v2i5/78238>
488. Zanjani B, Shojaedin SS, Abbasi H. "Investigating the combined effects of scapular-focused training and Mulligan mobilization on shoulder impingement syndrome" a three-arm pilot randomized controlled trial. *BMC musculoskeletal disorders*. 2024;25(1):897. <http://dx.doi.org/10.1186/s12891-024-07966-1>
489. Zemadanis K, Betsos T, Mandalidis D. The short and long-term effect of weight-bearing mobilization-with-movement (MWM) and automobilization-MWM techniques on pain and functional status in patients with hip osteoarthritis. *International Journal of Physiotherapy*. 2017;4(3):<http://dx.doi.org/10.15621/ijphy/2017/v4i3/149068>
490. Zemadanis K, Sykaras E, Athanasopoulos S, Mandalidis D. Mobilization-with-movement prior to exercise provides early pain and functionality improvements in patients with patellofemoral pain syndrome. *International Musculoskeletal Medicine*. 2015;37(3):101-107. <http://dx.doi.org/10.1179/1753615415Y.0000000009>

CATEGORISED BY YEAR OF PUBLICATION

References are ordered as follows:

1. Year published
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3. Title of reference

2025

1. Agyenkwa SK, Mustafaoglu R, Yeldan I. Therapeutic Effects of Kinesiology Taping Versus Self-Mobilization on Neck Pain, Proprioception, Muscle Activity, and Respiratory Muscle Strength Among Prolonged Electronic Device Users. A Randomized Controlled Trial. *Physiotherapy Research International*. 2025;30(2):e70061. <http://dx.doi.org/https://doi.org/10.1002/pri.70061>
2. Amjad F, Asghar H. Comparative effects of gong's mobilization and mobilization with movement in patients with adhesive capsulitis: a randomized clinical trial. *Sci Rep*. 2025;15(1):4272. <http://dx.doi.org/10.1038/s41598-025-88422-5>
3. Analay Akbaba Y, Özdemir AE, Bali K, Yalçın E. Immediate Effects of Mobilization With Movement Technique on Cervical Muscle Stiffness, Pain, and Range of Motion in Individuals With Mechanical Neck Pain: A Double-Blind Randomized Controlled Trial. *Physiotherapy theory and practice*. 2025;41(9):1783-1794. <http://dx.doi.org/10.1080/09593985.2025.2473471>
4. Barbosa-Silva J, Luc A, Sobral de Oliveira-Souza AI, et al. The Effectiveness of Mulligan's Techniques in Non-Specific Neck Pain: A Systematic Review and Meta-Analysis. *Physiotherapy research international : the journal for researchers and clinicians in physical therapy*. 2025;30(3):e70045. <http://dx.doi.org/10.1002/pri.70045>
5. Celik T, Menek B. The effect of Mulligan and Maitland techniques on pain, functionality, proprioception, and quality of life in individuals with rotator cuff lesions. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2025;38(3):574-583. <http://dx.doi.org/10.1016/j.jht.2024.12.018>
6. Coombes BK, Hams A, Tenbrink R, Love A, Bisset LM. Mobilisation-with-movement induces analgesia during exercise but exercise alone is not analgesic in people with lateral elbow tendinopathy: An assessor blinded, randomised crossover trial. *Musculoskeletal science & practice*. 2025;80(103421). <http://dx.doi.org/10.1016/j.msksp.2025.103421>
7. Demirkan MY, Oral MA, Cobanoglu G, Guzel NA. Effects of two mobilization with movement techniques to the talocrural joint in individuals with dorsiflexion limitation: clinician vs self-applied. *Physiotherapy theory and practice*. 2025;41(10):2100-2111. <http://dx.doi.org/10.1080/09593985.2025.2496776>
8. Deniz V, Kelle B. Mobilization with movement plus exercise versus exercise alone for patients with central sensitization associated with chronic subacromial pain syndrome: a sham-controlled randomized clinical trial. *BMC Complement Med Ther*. 2025;25(1):289. <http://dx.doi.org/10.1186/s12906-025-05028-0>
9. Doweir AM, Mashaal A, Basha SAZ, et al. Effect of modified mobilization with movement and motor learning on volleyball females players with shoulder impingement syndrome. *J Educ Health Promot*. 2025;14(200). http://dx.doi.org/10.4103/jehp.jehp_1834_24
10. ElMeligie MM, Abdeen HA, Atef H, Marques-Sule E, Karkosha RN. The effectiveness of mulligan mobilization with movement (MWM) on outcomes of patients with ankle sprain: a systematic review and

REFERENCE LIST

- meta-analysis. *BMC Sports Sci Med Rehabil.* 2025;17(1):105. <http://dx.doi.org/10.1186/s13102-025-01121-6>
11. Erol E, Burak M, Elbasan B. Effects of instrument-assisted manipulation and mobilization with movement in chronic non-specific low back pain: A randomized controlled trial. *Journal of back and musculoskeletal rehabilitation.* 2025;38(3):640-650. <http://dx.doi.org/10.1177/10538127241309343>
 12. Huda MN, Haque MO, Urme NA, Halder P. Effectiveness of mobilisation with movement (MWM) along with usual care for knee osteoarthritis: a study protocol for a randomised clinical trial. *BMJ Open Sport Exerc Med.* 2025;11(2):e002735. <http://dx.doi.org/10.1136/bmjsem-2025-002735>
 13. Hussein H, Atteya M, Ansari A, Kamel E. A Systematic Review and Meta-Analysis of the Effectiveness of Mulligan Mobilization with Movement on Pain, Range of Motion, Function, and Flexibility in Patients with Sciatica. *NeuroRehabilitation.* 2025;56(2):83-96. <http://dx.doi.org/10.1177/10538135241301693>
 14. Khaki S, Ravanbod R, Ashtiani MN. Mechanical correction in kinesiology and mulligan taping: A comparative study on scapular dyskinesis in computer users. *Journal of back and musculoskeletal rehabilitation.* 2025;38(5):981-994. <http://dx.doi.org/10.1177/10538127251323952>
 15. Khandaloo A, Taghizadeh Delkhoush C, Paknazar F, Ehsani F, Shokrian Z. A comparison of two mobilization approaches on the acromiohumeral distance in overhead athletes with primary subacromial impingement syndrome: a randomized clinical study. *Journal of Manual & Manipulative Therapy.* 2025;1-14. <http://dx.doi.org/10.1080/10669817.2025.2544288>
 16. Kirkaya AC, Atici E, Aydin G, Surenkok O. Comparing the Effectiveness of Mulligan Movement with Mobilization and Proprioceptive Neuromuscular Facilitation Techniques in Rehabilitation of Rotator Cuff Syndrome: A Randomized Controlled Trial. *Indian Journal of Orthopaedics.* 2025;59(11):1969-1978. <http://dx.doi.org/10.1007/s43465-025-01435-0>
 17. Komalasari DR, Vongsirinavarat M, Nilmart P. Effectiveness of manipulation with movement and muscle energy technique in elderly with knee osteoarthritis: A double-blind randomized control trial. *Journal of back and musculoskeletal rehabilitation.* 2025;38(6):1352-1361. <http://dx.doi.org/10.1177/10538127251328541>
 18. Lin LH, Lin M, Hsieh GJ, Chen HI, Sun SF, Tsai RJ. Mobilization with movement on reducing pain and disability for knee osteoarthritis: a systematic review and meta-analysis of randomized controlled trials. *The Journal of manual & manipulative therapy.* 2025;1-16. <http://dx.doi.org/10.1080/10669817.2025.2495576>
 19. Lin Y, Luo X. Therapeutic efficacy of mobilization with movement in early postoperative rehabilitation after unicompartmental knee arthroplasty: a double-blind, randomized controlled trial. *J Orthop Surg Res.* 2025;20(1):660. <http://dx.doi.org/10.1186/s13018-025-06047-w>
 20. Mane AS, Yadav T. The Short-Term Efficacy of Mulligan Traction Straight Leg Raise on Low Back Pain Associated With Hamstring Tightness in Young Adults. *Cureus.* 2025;17(3):e80215. <http://dx.doi.org/10.7759/cureus.80215>
 21. Martinez Pozas O, Cuenca-Zaldivar JN, Gonzalez-Alvarez ME, et al. Effectiveness of mobilization with movement on conditioned pain modulation, mechanical hyperalgesia, and pain intensity in adults with chronic low back pain: A randomized controlled trial. *Musculoskeletal science & practice.* 2025;75(103220). <http://dx.doi.org/10.1016/j.msksp.2024.103220>
 22. Menek B, Menek MY. The efficacy of Mulligan mobilization and corticosteroid injection on pain, functionality, and proprioception in rotator cuff tears: A randomized controlled trial. *Journal of hand therapy : official journal of the American Society of Hand Therapists.* 2025;38(3):410-417. <http://dx.doi.org/10.1016/j.jht.2024.12.016>

REFERENCE LIST

23. Nascimento LR, Boening A, Ribeiro I, Dos Santos ME, Benevides M, Santuzzi CH. Mobilization with movement is effective for improving ankle range of motion and walking ability in individuals after stroke: A systematic review with meta-analysis. *Pm r.* 2025;17(2):200-209. <http://dx.doi.org/10.1002/pmrj.13259>
24. Özçelep ÖF, Tunali N, Turhan A, et al. The effect of mobilization with movement on pain, joint distance, effusion area, and inflammation in rheumatoid arthritis: a double-blind randomized controlled clinical trial. *Journal of Orthopaedic Surgery and Research.* 2025;20(1):<http://dx.doi.org/10.1186/s13018-025-06121-3>
25. Qadir W, Waheed A, Niazi R, Mahmood T, Awan IZ. Comparative short-term effects of oscillatory mobilization and mulligan MWM on pain, disability, and range of motion among De Quervain's tenosynovitis patients- a randomized clinical trial. *The Journal of manual & manipulative therapy.* 2025;1-9. <http://dx.doi.org/10.1080/10669817.2025.2557951>
26. Saptale A, Patrekar S, Aphale S, Shinde S. Effects of Positional Traction Integrated With Mobilization With Movement on Cervical Facet Joint Syndrome. *Cureus.* 2025;17(7):e88276. <http://dx.doi.org/10.7759/cureus.88276>
27. Satpute K, Bedekar N, Hall T. Effect of Mulligan manual therapy and exercise on headache frequency, intensity, disability, and upper cervical joint hypomobility in people with episodic tension-type headache: a randomized clinical trial. *Physiotherapy theory and practice.* 2025;41(11):2271-2287. <http://dx.doi.org/10.1080/09593985.2025.2516765>
28. Sekeroz S, Telci EA, Buke M, Akkaya N. Comparison of effectiveness of Mulligan mobilization technique and cervical stabilization training in patients with chronic neck pain: a single-blinded randomized controlled trial. *Rehabilitation (Stuttg).* 2025;64(06):334-343. <http://dx.doi.org/10.1055/a-2618-6281>
29. Silva MC, Ferreira AS, Baldon RM, et al. Immediate Effects of Manual Therapy Techniques on Ankle Dorsiflexion: A Randomized Clinical Trial. *Journal of manipulative and physiological therapeutics.* 2025;48(1-5):166-176. <http://dx.doi.org/10.1016/j.jmpt.2025.09.002>
30. Sivakumar S, Reddy CR, Jayabalan P. Combining the Effects of Mobilization With Movement and Cyriax Physiotherapy in Lateral Epicondylitis: A Case Report. *Cureus.* 2025;17(7):e87093. <http://dx.doi.org/10.7759/cureus.87093>
31. Tatsios PI, Grammatopoulou E, Dimitriadis Z, Koumantakis GA. The Effectiveness of Manual Therapy in the Cervical Spine and Diaphragm, in Combination with Breathing Re-Education Exercises, on the Range of Motion and Forward Head Posture in Patients with Non-Specific Chronic Neck Pain: A Randomized Controlled Trial. *Healthcare (Basel).* 2025;13(14):<http://dx.doi.org/10.3390/healthcare13141765>
32. Xu X, Ling Y. Comparative safety and efficacy of manual therapy interventions for cervicogenic headache: a systematic review and network meta-analysis. *Front Neurol.* 2025;16(1566764). <http://dx.doi.org/10.3389/fneur.2025.1566764>

2024

33. Abu El Kasem ST, Alaa FAA, Abd El-Raouf NA, Abd-Elazeim AS. Efficacy of Mulligan thoracic sustained natural apophyseal glides on sub-acromial pain in patients with sub-acromial impingement syndrome: a single-blinded randomized controlled trial. *Journal of Manual & Manipulative Therapy.* 2024;April):1-10. <http://dx.doi.org/10.1080/10669817.2024.2341453>
34. Akram H, Bashir MS, Zia A, Noor R, Shakeel A. Comparison of muscle energy technique and mobilization with movement to reduce pain and improve functional status in subjects with anterior innominate ilio-sacral

REFERENCE LIST

- dysfunction. *Journal of bodywork and movement therapies*. 2024;40(1336-1341).
<http://dx.doi.org/10.1016/j.jbmt.2022.11.003>
35. Baeske R, Hall T, Dall'Olmo RR, Silva MF. In people with shoulder pain, mobilisation with movement and exercise improves function and pain more than sham mobilisation with movement and exercise: a randomised trial. *J Physiother*. 2024;70(4):288-293. <http://dx.doi.org/10.1016/j.jphys.2024.08.009>
36. Boob MA, Phansopkar P, Somaiya KJ. The Therapeutic Efficacy of Ankle Mobilization and Advance Physiotherapy in Alleviating Heel Spur and Plantar Fasciitis: A Case Report. *Cureus*. 2024;16(4):e57524. <http://dx.doi.org/10.7759/cureus.57524>
37. Buke M, Unver F, Sekeroz S, Oztekin SNS. Effectiveness of Mulligan Mobilization Technique and Core Stabilization Exercises in Female Patients With Knee Osteoarthritis: A Randomized Controlled Single-Blind Study. *Journal of manipulative and physiological therapeutics*. 2024;47(1-4):33-44. <http://dx.doi.org/10.1016/j.jmpt.2024.08.012>
38. Cankaya MS, Pala OO. Outcomes of Mulligan Concept Applications in Obese Individuals with Chronic Mechanical Low Back Pain: A Randomized Controlled Trial. *Life (Basel)*. 2024;14(6):<http://dx.doi.org/10.3390/life14060754>
39. Çelik D, Van Der Veer P, Tiryaki P. The Clinical Significance of Mulligan's Mobilization with Movement in Shoulder Pathologies: A Systematic Review and Meta-Analysis. *Journal of Integrative and Complementary Medicine*. 2024;31(2):134-142. <http://dx.doi.org/10.1089/jicm.2024.0200>
40. Cevik R, Pala OO. Effects of upper thoracic Mulligan mobilization on pain, range of motion and function in patients with mechanical neck pain: A randomized placebo-controlled trial. *PLoS One*. 2024;19(10):e0311206. <http://dx.doi.org/10.1371/journal.pone.0311206>
41. Cui X, Zhao P, Guo X, et al. Effectiveness of multimodal active physiotherapy for chronic knee pain: a 12-month randomized controlled trial follow-up study. *Front Physiol*. 2024;15(1451345). <http://dx.doi.org/10.3389/fphys.2024.1451345>
42. Dalvi S, Shinde S, Mishra SD. Effect of Mobilization With Movement on the Glenohumeral Joint Positional Fault in Subacromial Impingement. *Cureus*. 2024;16(6):e62576. <http://dx.doi.org/10.7759/cureus.62576>
43. Elabd OM, Etoom M, Jahan AM, Elabd AM, Khedr AM, Elgohary HM. The Efficacy of Muscle Energy and Mulligan Mobilization Techniques for the Upper Extremities and Posture after Breast Cancer Surgery with Axillary Dissection: A Randomized Controlled Trial. *Journal of Clinical Medicine*. 2024;13(4):<http://dx.doi.org/10.3390/jcm13040980>
44. Horoz L, Cigdem-Karacay B, Ceylan I, Alkan H. Effectiveness of mobilization with movement in patients operated for distal radius fracture: a single-blinded, randomized controlled study. *Revista da Associação Médica Brasileira*. 2024;70(11):<http://dx.doi.org/10.1590/1806-9282.20241190>
45. Iqbal S, Khan IA, Khan MK, et al. Therapeutic Utility of Mulligan Traction Straight Leg Raise Stretch and Proprioceptive Exercises in Osteoarthritis Treatment. *Cureus*. 2024;<http://dx.doi.org/10.7759/cureus.74382>
46. Jaiswal PR, Ramteke SU, Samal S. Integrative Approach of Conventional Physiotherapy, Mulligan's Mobilisation With Movement, and Plyometric Training in a Young Volleyball Athlete After Anterior Cruciate Ligament (ACL) Reconstruction: A Case Report. *Cureus*. 2024;16(2):e54895. <http://dx.doi.org/10.7759/cureus.54895>
47. Kim J, Cho J. Effectiveness of mid thoracic spine mobilization on postural balance and gait ability in subacute stroke patients: A randomized clinical trial. *Journal of back and musculoskeletal rehabilitation*. 2024;37(1):233-240. <http://dx.doi.org/10.3233/BMR-230144>

REFERENCE LIST

48. Kim SY, Kim KS, Hwang YI. Effects of Manual Lymphatic Drainage with Mobilization and Myofascial Release on Muscle Activities during Dynamic Balance in Adults with Calf Muscle Shortening. *Healthcare (Basel)*. 2024;12(10):<http://dx.doi.org/10.3390/healthcare12101038>
49. Murtza S, Noor R, Bashir MS, Ikram M. Effects of sustained natural apophyseal glides versus rocabado 6 × 6 program in subjects with cervicogenic headache. *BMC musculoskeletal disorders*. 2024;25(1):169. <http://dx.doi.org/10.1186/s12891-024-07290-8>
50. Nathani HR, Ramteke SU, Jaiswal PR. Physiotherapeutic Management for Acromioclavicular Joint Sprain With Volar Intercalated Segment Instability at the Wrist: A Case Report. *Cureus*. 2024;16(4):e58399. <http://dx.doi.org/10.7759/cureus.58399>
51. Nazir SNB, Rathore FA. Efficacy of Mulligan joint mobilizations and trunk stabilization exercises versus isometric knee strengthening in the management of knee osteoarthritis: a randomized controlled trial. *BMC Sports Sci Med Rehabil*. 2024;16(1):105. <http://dx.doi.org/10.1186/s13102-024-00893-7>
52. Ozlu O, Sahin M. The effect of mulligan mobilization technique application in addition to conventional physiotherapy on pain and joint range of motion in people with neck pain. *Journal of bodywork and movement therapies*. 2024;39(225-230). <http://dx.doi.org/10.1016/j.jbmt.2024.02.009>
53. Ragheb Abushameh RS, Topcu ZG, Tunal AN, Amro A, Arab AA. The effects of ankle mulligan mobilisation in children with cerebral palsy: A randomized single blind control study. *J Pak Med Assoc*. 2024;74(7):1219-1223. <http://dx.doi.org/10.47391/jpma.10328>
54. Satpute K, Bedekar N, Hall T. Mulligan manual therapy added to exercise improves headache frequency, intensity and disability more than exercise alone in people with cervicogenic headache: a randomised trial. *J Physiother*. 2024;<http://dx.doi.org/10.1016/j.jphys.2024.06.002>
55. Shedge SS, Ramteke SU, Samal S. Integrated Rehabilitation Approach Utilizing Swiss Ball Training, Mulligan Taping, and Mobilization With Movement for Simultaneous Management of Sacroiliac Joint Dysfunction and Lateral Ankle Sprain in a Badminton Athlete: A Case Study. *Cureus*. 2024;16(3):e56942. <http://dx.doi.org/10.7759/cureus.56942>
56. Somaiya KJ, Samal S, Boob MA. Effectiveness of Recent Physiotherapy Techniques Along With Conventional Physiotherapy Techniques in a Patient With Knee Osteoarthritis: A Case Report. *Cureus*. 2024;16(2):e54872. <http://dx.doi.org/10.7759/cureus.54872>
57. Syed AU, Haider D, Rana M. The effects of the addition of Mulligan mobilization with movement to exercise on elbow pain and function associated with lateral elbow tendinopathy. *Journal of Bodywork and Movement Therapies*. 2024;<http://dx.doi.org/https://doi.org/10.1016/j.jbmt.2024.06.007>
58. Taghizadeh Delkhouh C, Arzani P, Mirmohammadkhani M, Bagheri R, Norouzi A. The Impact of Ankle Mobilization Techniques on Static Stability in Individuals With Acute Inversion Ankle Sprain: A Randomized Clinical Trial. *Journal of chiropractic medicine*. 2024;23(4):153-161. <http://dx.doi.org/10.1016/j.jcm.2024.08.002>
59. Tikhile P, Patil DS, Jaiswal PR. Management of Low Back Pain With Concurrent Hamstring Tightness: A Case Report Highlighting the Efficacy of Proprioceptive Neuromuscular Facilitation, Mulligan's Two-Leg Rotation Technique, and Exercise Regimen. *Cureus*. 2024;16(4):e58705. <http://dx.doi.org/10.7759/cureus.58705>
60. Uttamchandani SR, Phansopkar P. Efficacy of PowerBall Versus Mulligan Mobilization With Movement on Pain and Function in Patients With Lateral Epicondylitis: A Randomized Clinical Trial. *Cureus*. 2024;16(3):e56444. <http://dx.doi.org/10.7759/cureus.56444>

REFERENCE LIST

61. Wang S, Zeng J, Mani R, Chapple CM, Ribeiro DC. The immediate effects of mobilization with movement on shoulder range of motion and pain in patients with rotator cuff-related shoulder pain: A randomized controlled trial (Evolution Trial). *Braz J Phys Ther.* 2024;28(6):101145. <http://dx.doi.org/10.1016/j.bjpt.2024.101145>
62. Yan H, Zhao P, Guo X, Zhou X. The effects of Core Stability Exercises and Mulligan's mobilization with movement techniques on sacroiliac joint dysfunction. *Front Physiol.* 2024;15(1337754). <http://dx.doi.org/10.3389/fphys.2024.1337754>
63. Zanjani B, Shojaedin SS, Abbasi H. "Investigating the combined effects of scapular-focused training and Mulligan mobilization on shoulder impingement syndrome" a three-arm pilot randomized controlled trial. *BMC musculoskeletal disorders.* 2024;25(1):897. <http://dx.doi.org/10.1186/s12891-024-07966-1>

2023

64. Arabzadeh S, Kamali F, Bervis S, Razeghi M. The hip joint mobilization with movement technique improves muscle activity, postural stability, functional and dynamic balance in hemiplegia secondary to chronic stroke: a blinded randomized controlled trial. *BMC Neurol.* 2023;23(1):262. <http://dx.doi.org/10.1186/s12883-023-03315-2>
65. Bagcaci S, Unuvar BS, Gercek H, Ugurlu I, Sert OA, Yilmaz K. A randomized controlled trial on pain, grip strength, and functionality in lateral elbow pain: Mulligan vs muscle energy techniques. *Journal of back and musculoskeletal rehabilitation.* 2023;36(2):419-427. <http://dx.doi.org/10.3233/BMR-220061>
66. Ceylan İ, Büyükturan Ö, Aykanat Ö, Büyükturan B, Şaş S, Ceylan MF. The effectiveness of mobilization with movement on patients with mild and moderate carpal tunnel syndrome: A single-blinded, randomized controlled study. *Journal of hand therapy : official journal of the American Society of Hand Therapists.* 2023;36(4):773-785. <http://dx.doi.org/10.1016/j.jht.2023.02.004>
67. Dias D, Neto MG, Sales S, et al. Effect of Mobilization with Movement on Pain, Disability, and Range of Motion in Patients with Shoulder Pain and Movement Impairment: A Systematic Review and Meta-Analysis. *J Clin Med.* 2023;12(23):<http://dx.doi.org/10.3390/jcm12237416>
68. El Gendy MH, Mohamed SR, Taman SE, Hussein HM, Abu El Kasem ST. Short term effect of spinal mobilization with movement (MWM) on pulmonary functions in nonsmokers with thoracic hyperkyphosis: a randomized single-blinded controlled trial. *The Journal of manual & manipulative therapy.* 2023;31(2):64-71. <http://dx.doi.org/10.1080/10669817.2022.2075203>
69. Ghafoor F, Ahmad Z, Irfan A, Munawar A, Sabir I, Zulqernain F. Comparison of Mulligan Mobilization Technique versus Mckenzie Exercises among Patient with Sacroiliac Joint Dysfunction: A Randomized Clinical Trial. *Journal of Orthopaedics and Sports Medicine.* 2023;05(01):<http://dx.doi.org/10.26502/josm.511500093>
70. Jin X, Du H-G, Kong N, Shen J-L, Chen W-J. Clinical efficacy of the mulligan maneuver for cervicogenic headache: a randomized controlled trial. *Scientific Reports.* 2023;13(1):<http://dx.doi.org/10.1038/s41598-023-48864-1>
71. Karanjkar SM, Dhage P. "Mulligan Bent Leg Raise" Technique in Avascular Necrosis. *Cureus.* 2023;15(12):e50727. <http://dx.doi.org/10.7759/cureus.50727>
72. Kubuk BS, Carrasco-Uribarren A, Cabanillas-Barea S, Ceballos-Laita L, Jimenez-Del-Barrio S, Perez-Guillen S. The effects of end-range interventions in the management of primary adhesive capsulitis of the shoulder:

REFERENCE LIST

a systematic review and meta-analysis. *Disabil Rehabil.* 2023;1-15.

<http://dx.doi.org/10.1080/09638288.2023.2243826>

73. Sevik Kacmaz K, Unver B. Immediate Effects of Mulligan Mobilization on Elbow Proprioception in Healthy Individuals: A Randomized Placebo-Controlled Single-Blind Study. *Journal of manipulative and physiological therapeutics.* 2023;46(1):59-64. <http://dx.doi.org/10.1016/j.jmpt.2023.05.001>
74. Shadegani R, Khanmohammadi R, Olyaei G. Comparison of effects of Mulligan taping and Kinesio taping on ankle neuromuscular control in response to a sudden inversion perturbation in individuals with chronic ankle instability. *Phys Ther Sport.* 2023;63(58-66). <http://dx.doi.org/10.1016/j.ptsp.2023.07.004>
75. Shelke A, B AP, M GB, Kumaran SD, G PR. Immediate effect of craniocervical flexion exercise and Mulligan mobilisation in patients with mechanical neck pain — A randomised clinical trial. *Hong Kong Physiotherapy Journal.* 2023;43(02):137-147. <http://dx.doi.org/10.1142/s1013702523500154>
76. Simsek S, Yagci N, Korkmaz MB. Mid-term Effect of Lumbar Sustained Natural Apophyseal Glides in Patients with Non-specific Chronic Low Back Pain: A Randomized Clinical Trial. *Eurasian J Med.* 2023;55(2):152-157. <http://dx.doi.org/10.5152/eurasianjmed.2023.0202>
77. Thomaidou E, McCarthy CJ, Tsepis E, Fousekis K, Billis E. Manual Therapy versus Localisation (Tactile, Sensory Training) in Patients with Non-Specific Neck Pain: A Randomised Clinical Pilot Trial. *Healthcare (Basel).* 2023;11(10):<http://dx.doi.org/10.3390/healthcare11101385>
78. Wang S, Zeng J, Chapple CM, Mani R, Ribeiro DC. Initial effect of high-volume mobilisation with movement on shoulder range of motion and pain in patients with rotator cuff-related shoulder pain: protocol for a randomised controlled trial (Evolution Trial). *BMJ Open.* 2023;13(8):e069919. <http://dx.doi.org/10.1136/bmjopen-2022-069919>

2022

79. Adnan M, Arsh A, Ali B, Ahmad S. Effectiveness of bent leg raise technique and neurodynamics in patients with radiating low back pain. *Pak J Med Sci.* 2022;38(1):47-51. <http://dx.doi.org/10.12669/pjms.38.1.4010>
80. Athanasiadis D, Dionyssiotis Y, Krumov J, Obretenov V, Panayotov K, Papathanasiou J. The cognitive-behavioral aspects of the Mulligan concept of manual therapy: A systematic review. *Eur J Transl Myol.* 2022;<http://dx.doi.org/10.4081/ejtm.2022.10504>
81. Buyukturan B, Sas S, Kararti C, Ozsoy I, Habibzadeh A, Buyukturan O. Effects of Subtalar Joint Mobilization with Movement on Muscle Strength, Balance, Functional Performance, and Gait Parameters in Patients with Chronic Stroke: A Single-Blind Randomized Controlled Study. *J Am Podiatr Med Assoc.* 2022;112(1):<http://dx.doi.org/10.7547/20-275>
82. Cardoso R, Seixas A, Rodrigues S, et al. The effectiveness of Sustained Natural Apophyseal Glide on Flexion Rotation Test, pain intensity, and functionality in subjects with Cervicogenic Headache: A Systematic Review of Randomized Trials. *Arch Physiother.* 2022;12(1):20. <http://dx.doi.org/10.1186/s40945-022-00144-3>
83. Chitale N, Jr., Patil DS, Phansopkar P. Integrated Neuromuscular Inhibition Technique Versus Mulligan Mobilization on Functional Disability in Subjects With Nonspecific Low Back Pain: A Comparative Study. *Cureus.* 2022;14(10):e30253. <http://dx.doi.org/10.7759/cureus.30253>

REFERENCE LIST

84. Chitale N, Jr., Patil DS, Phansopkar P, Joshi A. A Review on Treatment Approaches for Chronic Low Back Pain via Mulligans Movement With Mobilization and Physical Therapy. *Cureus*. 2022;14(8):e28127. <http://dx.doi.org/10.7759/cureus.28127>
85. Deng F, Adams R, Pranata A, Cui F, Han J. Tibial internal and external rotation taping for improving pain in patients with patellofemoral pain syndrome. *Journal of Science and Medicine in Sport*. 2022;<http://dx.doi.org/10.1016/j.jsams.2022.04.003>
86. Drapeza RC, Jr., Navasca SB, Dones V, 3rd, Rimando CR. The effects of taping on de Quervain's disease: A systematic review and meta-analysis. *Journal of bodywork and movement therapies*. 2022;32(218-227). <http://dx.doi.org/10.1016/j.jbmt.2022.05.004>
87. Fernandez-Carnero J, Beltran-Alacreu H, Arribas-Romano A, et al. Prediction of Patient Satisfaction after Treatment of Chronic Neck Pain with Mulligan's Mobilization. *Life (Basel)*. 2022;13(1):<http://dx.doi.org/10.3390/life13010048>
88. Gutiérrez-Espinoza H, Araya-Quintanilla F, Olguin-Huerta C, Valenzuela-Fuenzalida J, Gutiérrez-Monclus R, Moncada-Ramírez V. Effectiveness of manual therapy in patients with distal radius fracture: a systematic review and meta-analysis. *The Journal of manual & manipulative therapy*. 2022;30(1):33-45. <http://dx.doi.org/10.1080/10669817.2021.1992090>
89. Haik MN, Evans K, Smith A, Bisset L. Investigating the effects of mobilization with movement and exercise on pain modulation processes in shoulder pain - a single cohort pilot study with short-term follow up. *The Journal of manual & manipulative therapy*. 2022;1-10. <http://dx.doi.org/10.1080/10669817.2022.2030626>
90. Hanney W. Immediate Changes in Hip Range of Motion after Mobilization with Movement Versus Static Stretching. *Archives of physical medicine and rehabilitation*. 2022;103(3):e40. <http://dx.doi.org/10.1016/j.apmr.2022.01.111>
91. Javaid M, Anwar S, Uzair Asghar M, et al. Comparison of Maitland Mobilization and Mulligan Mobilization with movement on pain and hand function in patients having post Colle's Fracture Stiffness. *Pakistan Journal of Medical and Health Sciences*. 2022;16(1):169-171. <http://dx.doi.org/10.53350/pjmhs22161169>
92. Kashif M, Manzoor N, Safdar R, Khan H, Farooq M, Wassi A. Effectiveness of sustained natural apophyseal glides in females with cervicogenic headache: A randomized controlled trial. *Journal of back and musculoskeletal rehabilitation*. 2022;35(3):597-603. <http://dx.doi.org/10.3233/bmr-210018>
93. Khalil R, Tanveer F, Hanif A, Ahmad A. Comparison of Mulligan technique versus muscle energy technique in patients with adhesive capsulitis. *J Pak Med Assoc*. 2022;72(2):211-215. <http://dx.doi.org/10.47391/jpma.1678>
94. Lehr ME, Fink ML, Ulrich E, Butler RJ. Comparison of manual therapy techniques on ankle dorsiflexion range of motion and dynamic single leg balance in collegiate athletes. *Journal of bodywork and movement therapies*. 2022;29(206-214). <http://dx.doi.org/10.1016/j.jbmt.2021.11.004>
95. Li L-L, Hu X-J, Di Y-H, Jiao W. Effectiveness of Maitland and Mulligan mobilization methods for adults with knee osteoarthritis: A systematic review and meta-analysis. *World Journal of Clinical Cases*. 2022;10(3):954-965. <http://dx.doi.org/10.12998/wjcc.v10.i3.954>
96. McDowell J, Mitchell T, Mulligan BR. *Self-treatments for back, neck and limbs: the Mulligan Concept approach*. Revised fourth edition. Invercagill, New Zealand: Plane View Services (2019) Ltd; 2022.
97. Metgud SC, D'Silva PV, Kamat PS. Immediate effect of MWM adductor stretch, myofascial release, and conventional stretching in asymptomatic individuals with hip adductor tightness: A randomized controlled

REFERENCE LIST

- trial. *Journal of bodywork and movement therapies*. 2022;32(213-217).
<http://dx.doi.org/10.1016/j.jbmt.2022.04.006>
98. Mitchell T, Anderson A, Sault J, Glynn P. Joint-biased interventions for hip and knee pain disorders. In: Mathew B, Courtney CA, Fernandez-de-las-Penas C, eds. *Hip and Knee Pain Disorders: Integrating manual therapy and exercise*. Edinburgh, Scotland: Handspring; 2022:
99. Nunez-Cabaleiro P, Leiros-Rodriguez R. Effectiveness of manual therapy in the treatment of cervicogenic headache: A systematic review. *Headache*. 2022;62(3):271-283. <http://dx.doi.org/10.1111/head.14278>
100. Plummer S, Leonard J. Mobilization With Movement as Therapy to Reduce Knee Pain and Increase Knee Range of Motion. *Journal of Sport Rehabilitation*. 2022;31(7):950-953. <http://dx.doi.org/10.1123/jsr.2021-0294>
101. Razzaq A, Nadeem RD, Akhtar M, Ghazanfar M, Aslam N, Nawaz S. Comparing the effects of muscle energy technique and mulligan mobilization with movements on pain, range of motion, and disability in adhesive capsulitis. *J Pak Med Assoc*. 2022;72(1):13-16. <http://dx.doi.org/10.47391/JPMA.1360>
102. Reep NC, Leverett SN, Heywood RM, Baker RT, Barnes DL, Cheatham SW. The Efficacy of the Mulligan Concept to Treat Meniscal Pathology: A Systematic Review. *Int J Sports Phys Ther*. 2022;17(7):1219-1235. <http://dx.doi.org/10.26603/001c.55540>
103. Runge N, Sault J, Anderson AM, Thomas. Effectiveness of manual therapy approaches for hip and knee pain disorders: an exercise-based approach. In: Mathew B, Courtney CA, Fernandez-de-las-Penas C, eds. *Hip and Knee Pain Disorders: Integrating manual therapy and exercise*. Edinburgh, Scotland: Handspring; 2022:
104. Salik S, Rani S, Hayat R, Manzoor S, Malik AU, Maqbool S. Comparison between Mulligan Sustained natural apophyseal glides (snags) VS McKenzie exercises in Chronic Mechanical Low back pain. *Pakistan Journal of Medical and Health Sciences*. 2022;16(10):141-143. <http://dx.doi.org/10.53350/pjmhs221610141>
105. Satpute K, Reid S, Mitchell T, Mackay G, Hall T. Efficacy of mobilization with movement (MWM) for shoulder conditions: a systematic review and meta-analysis. *The Journal of manual & manipulative therapy*. 2022;30(1):13-32. <http://dx.doi.org/10.1080/10669817.2021.1955181>
106. Shepherd MH, Shumway J, Salvatori RT, Rhon DI, Young JL. The influence of manual therapy dosing on outcomes in patients with hip osteoarthritis: a systematic review. *Journal of Manual & Manipulative Therapy*. 2022;1-13. <http://dx.doi.org/10.1080/10669817.2022.2037193>
107. Shumway JD, Vraa D. Short-Term Effect of Manual Therapy & Taping on Subacute Ankle Sprains with Potential Syndesmotic Sprain: A Case Series. *The Journal of manual & manipulative therapy*. 2022;30(2):116-123. <http://dx.doi.org/10.1080/10669817.2021.1974240>
108. Young SW, Young TW, MacDonald CW. Conservative management of De Quervain's tendinopathy with an orthopedic manual physical therapy approach emphasizing first CMC manipulation: a retrospective case series. *Physiotherapy theory and practice*. 2022;38(4):587-596.
<http://dx.doi.org/10.1080/09593985.2020.1771800>

REFERENCE LIST

2021

109. Abassi M, Whiteley R. Serial Within-Session Improvements in Ankle Dorsiflexion During Clinical Interventions Including Mobilization-With-Movement and A Novel Manipulation Intervention - A Case Series. *Int J Sports Phys Ther.* 2021;16(4):1158-1168. <http://dx.doi.org/10.26603/001c.25544>
110. Ahmed A, Ibrar M, Arsh A, Wali S, Hayat S, Abass S. Comparing the effectiveness of Mulligan mobilization versus Cyriax approach in the management of patients with subacute lateral epicondylitis. *J Pak Med Assoc.* 2021;71(1(a)):12-15. <http://dx.doi.org/10.47391/jpma.186>
111. Alamer A, Melese H, Getie K, et al. Effect of Ankle Joint Mobilization with Movement on Range of Motion, Balance and Gait Function in Chronic Stroke Survivors: Systematic Review of Randomized Controlled Trials. *Degener Neurol Neuromuscul Dis.* 2021;11(51-60). <http://dx.doi.org/10.2147/DNND.S317865>
112. Alansari SM, Youssef EF, Shanb AA. Efficacy of manual therapy on psychological status and pain in patients with neck pain. A randomized clinical trial. *Saudi Med J.* 2021;42(1):82-90. <http://dx.doi.org/10.15537/smj.2021.1.25589>
113. Alshami AM, AlSadiq AI. Outcomes of scapulothoracic mobilisation in patients with neck pain and scapular dyskinesia: A randomised clinical trial. *J Taibah Univ Med Sci.* 2021;16(4):540-549. <http://dx.doi.org/10.1016/j.jtumed.2021.03.006>
114. Bhat PV, Patel VD, Eapen C, Shenoy M, Milanese S. Myofascial release versus Mulligan sustained natural apophyseal glides' immediate and short-term effects on pain, function, and mobility in non-specific low back pain. *PeerJ.* 2021;9(e10706). <http://dx.doi.org/10.7717/peerj.10706>
115. Buran Çirak Y, Yurdaışık I, Elbaşı ND, Tütüneken YE, Köçer K, Çinar B. Effect of Sustained Natural Apophyseal Glides on Stiffness of Lumbar Stabilizer Muscles in Patients With Nonspecific Low Back Pain: Randomized Controlled Trial. *Journal of Manipulative and Physiological Therapeutics.* 2021;44(6):445-454. <http://dx.doi.org/https://doi.org/10.1016/j.jmpt.2021.06.005>
116. Coelho BAL, Rodrigues HLdN, Almeida GPL, João SMA. Immediate Effect of Ankle Mobilization on Range of Motion, Dynamic Knee Valgus, and Knee Pain in Women With Patellofemoral Pain and Ankle Dorsiflexion Restriction: A Randomized Controlled Trial With 48-Hour Follow-Up. *Journal of Sport Rehabilitation.* 2021;30(5):697-706. <http://dx.doi.org/10.1123/jsr.2020-0183>
117. Danazumi MS, Bello B, Yakasai AM, Kaka B. Two manual therapy techniques for management of lumbar radiculopathy: a randomized clinical trial. *J Osteopath Med.* 2021;121(4):391-400. <http://dx.doi.org/10.1515/jom-2020-0261>
118. de Castro Silva M, de Marche Baldon R, Lins C, de Andrade GM, de Castro GBB, Felicio LR. Immediate effect of manual therapy techniques on the limitation of ankle dorsiflexion: a randomized, controlled, blind clinical trial protocol. *Trials.* 2021;22(1):886. <http://dx.doi.org/10.1186/s13063-021-05858-6>
119. Farooq S, Zahid S, Hafeez S, Hassan D. Effectiveness of Mulligan mobilization and Kinesio-taping technique on the anterior innominate dysfunction in females. *J Pak Med Assoc.* 2021;71(7):1716-1719. <http://dx.doi.org/10.47391/JPMA.828>
120. Gogate N, Satpute K, Hall T. The effectiveness of mobilization with movement on pain, balance and function following acute and sub acute inversion ankle sprain - A randomized, placebo controlled trial. *Phys Ther Sport.* 2021;48(91-100). <http://dx.doi.org/10.1016/j.ptsp.2020.12.016>

REFERENCE LIST

121. Hendley C, May J, Wallace JJ, Cheatham SW. The Use of the Mulligan Concept for the Treatment of a First-Degree Sprain of the First Metatarsophalangeal Joint. *Athletic Training & Sports Health Care: The Journal for the Practicing Clinician*. 2021;13(6):e460-e463. <http://dx.doi.org/10.3928/19425864-20210609-01>
122. Hussein HM, Morsi AA, Abdelraoof NA. The immediate effect of sustained natural apophyseal glide on postural stability and pain in individuals presenting with flexion-dominant chronic low back pain: A randomized single-blinded placebo-controlled trial. *Journal of back and musculoskeletal rehabilitation*. 2021;34(6):1079-1086. <http://dx.doi.org/10.3233/bmr-200217>
123. Izaola-Azkona L, Vicenzino B, Olabarrieta-Eguia I, Saez M, Lascurain-Aguirrebeña I. Effectiveness of Mobilization of the Talus and Distal Fibula in the Management of Acute Lateral Ankle Sprain. *Phys Ther*. 2021;101(8):<http://dx.doi.org/10.1093/ptj/pzab111>
124. Kashif M, Albalwi A, Alharbi A, Iram H, Manzoor N. Comparison of subtalar mobilisation with conventional physiotherapy treatment for the management of plantar fasciitis. *J Pak Med Assoc*. 2021;71(12):2705-2709. <http://dx.doi.org/10.47391/JPMA.1049>
125. Manzoor A, Anwar N, Khalid K, Haider R, Saghir M, Javed MA. Comparison of effectiveness of muscle energy technique with Mulligan mobilization in patients with non-specific neck pain. *J Pak Med Assoc*. 2021;71(6):1532-1524. <http://dx.doi.org/10.47391/JPMA.981>
126. Micarelli A, Viziano A, Granito I, et al. Postural and clinical outcomes of sustained natural apophyseal glides treatment in cervicogenic dizziness patients: A randomised controlled trial. *Clin Rehabil*. 2021;35(11):1566-1576. <http://dx.doi.org/10.1177/02692155211012413>
127. Mulligan BR. *Manual Therapy: NAGS, SNAGS, MWMS etc*. Revised 7th. Invercagill, New Zealand: Plane View Services 2021 Ltd; 2021.
128. Nguyen AP, Pitance L, Mahaudens P, et al. Effects of Mulligan Mobilization with Movement in Subacute Lateral Ankle Sprains: A Pragmatic Randomized Trial. *The Journal of manual & manipulative therapy*. 2021;29(6):341-352. <http://dx.doi.org/10.1080/10669817.2021.1889165>
129. Norouzi A, Delkhoush CT, Mirmohammadkhani M, Bagheri R. A comparison of mobilization and mobilization with movement on pain and range of motion in people with lateral ankle sprain: A randomized clinical trial. *Journal of bodywork and movement therapies*. 2021;27(654-660). <http://dx.doi.org/10.1016/j.jbmt.2021.05.006>
130. Paquin JP, Tousignant-Laflamme Y, Dumas JP. Effects of SNAG mobilization combined with a self-SNAG home-exercise for the treatment of cervicogenic headache: a pilot study. *The Journal of manual & manipulative therapy*. 2021;29(4):244-254. <http://dx.doi.org/10.1080/10669817.2020.1864960>
131. Popescu FG, Vaida MA, Mackay GJK, et al. Successful management of a professional viola player with a complex playing related musculoskeletal disorder. *Romanian Journal of Occupational Medicine*. 2021;72(1):59-65. <http://dx.doi.org/10.2478/rjom-2021-0009>
132. Rehman M, Riaz H. Comparison of mobilization with movement and Mulligan knee taping on Patellofemoral pain syndrome. *J Pak Med Assoc*. 2021;71(9):2119-2123. <http://dx.doi.org/10.47391/JPMA.04-658>
133. Satpute K, Bedekar N, Hall T. Effectiveness of Mulligan manual therapy over exercise on headache frequency, intensity and disability for patients with migraine, tension-type headache and cervicogenic headache - a protocol of a pragmatic randomized controlled trial. *BMC musculoskeletal disorders*. 2021;22(1):243. <http://dx.doi.org/10.1186/s12891-021-04105-y>

REFERENCE LIST

134. Stanek JM, Brown B, Barrack J, Parish J. A novel manual therapy technique is effective for short-term increases in tibial internal rotation range of motion. *Journal of exercise rehabilitation*. 2021;17(3):184-191. <http://dx.doi.org/10.12965/jer.2142228.114>
135. Tat AM, Can F, Tat NM, Sasmaz HI, Antmen AB. The effects of manual therapy and exercises on pain, muscle strength, joint health, functionality and quality of life in haemophilic arthropathy of the elbow joint: A randomized controlled pilot study. *Haemophilia*. 2021;27(3):e376-e384. <http://dx.doi.org/https://doi.org/10.1111/hae.14281>
136. Taylor A, Wolff AL. The forgotten radial nerve: A conceptual framework for treatment of lateral elbow pain. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2021;34(2):323-329. <http://dx.doi.org/10.1016/j.jht.2021.05.009>
137. Torres D, Hanney WJ, Velazquez L, Pabian PS, Pilkington C. The Effect of Mobilization With Movement and Passive Stretching on Hip Range of Motion: A Randomized Controlled Trial. *Orthopaedic Physical Therapy Practice*. 2021;33(3):150-154.
138. Weeraseskara I, Osmotherly PG, Snodgrass S, Tessier J, Rivett DA. Is the fibula positioned anteriorly in weight-bearing in individuals with chronic ankle instability? A case control study. *Journal of Manual & Manipulative Therapy*. 2021;29(3):168-175. <http://dx.doi.org/10.1080/10669817.2020.1844852>
139. Weleslassie GG, Temesgen MH, Alamer A, Tsegay GS, Hailemariam TT, Melese H. Effectiveness of Mobilization with Movement on the Management of Knee Osteoarthritis: A Systematic Review of Randomized Controlled Trials. *Pain Res Manag*. 2021;2021(8815682). <http://dx.doi.org/10.1155/2021/8815682>
140. Akaras E, Guzel NA, Kafa N, Özdemir YA. The acute effects of two different rigid taping methods in patients with hallux valgus deformity. *Journal of back and musculoskeletal rehabilitation*. 2020;33(1):91-98. <http://dx.doi.org/10.3233/bmr-181150>

2020

141. Alsiri NF, Alhadhoud MA, Al-Mukaimi A, Palmer S. The effect of Mulligan's mobilization with movement following total knee arthroplasty: Protocol of a single-blind randomized controlled trial. *Musculoskeletal care*. 2020;<http://dx.doi.org/10.1002/msc.1503>
142. Baeske R, Hall T, Silva MF. The inclusion of mobilisation with movement to a standard exercise programme for patients with rotator cuff related pain: a randomised, placebo-controlled protocol trial. *BMC musculoskeletal disorders*. 2020;21(1):744. <http://dx.doi.org/10.1186/s12891-020-03765-6>
143. Baeske R, Silva MF, Hall T. The clinical decision making process in the use of mobilisation with movement - A Delphi survey. *Musculoskeletal science & practice*. 2020;49(October 2020):102212. <http://dx.doi.org/10.1016/j.msksp.2020.102212>
144. Bhagat M, Neelapala YVR, Gangavelli R. Immediate effects of Mulligan's techniques on pain and functional mobility in individuals with knee osteoarthritis: A randomized control trial. *Physiotherapy research international : the journal for researchers and clinicians in physical therapy*. 2020;25(1):e1812. <http://dx.doi.org/10.1002/pri.1812>
145. Gomes MG, Primo AF, De Jesus L, Dionisio VC. Short-term Effects of Mulligan's Mobilization With Movement on Pain, Function, and Emotional Aspects in Individuals With Knee Osteoarthritis: A Prospective

REFERENCE LIST

- Case Series. *Journal of manipulative and physiological therapeutics*. 2020;43(5):437-445.
<http://dx.doi.org/10.1016/j.jmpt.2019.04.011>
146. Hing W, Hall T, Mulligan B. *The Mulligan Concept of Manual Therapy: Textbook of Techniques*. 2nd. Chatswood, NSW: Elsevier Australia; 2020.
147. Mackay GJK, Stearne SM, Wild CY, et al. Mulligan Knee Taping Using Both Elastic and Rigid Tape Reduces Pain and Alters Lower Limb Biomechanics in Female Patients With Patellofemoral Pain. *Orthopaedic Journal of Sports Medicine*. 2020;8(5):232596712092167. <http://dx.doi.org/10.1177/2325967120921673>
148. Meyer JE, Rivera MJ, Powden CJ. The Evaluation of Joint Mobilization Dosage on Ankle Range of Motion in Individuals With Decreased Dorsiflexion and a History of Ankle Sprain. *Journal of sport rehabilitation*. 2020;1-6. <http://dx.doi.org/10.1123/jsr.2020-0114>
149. Nguyen AP, Mahaudens P, Detrembleur C, Hall T, Hidalgo B. Inferior tibiofibular joint mobilization with movement and taping does not improve chronic ankle dorsiflexion stiffness: a randomized placebo-controlled trial. *The Journal of manual & manipulative therapy*. 2020;1-10.
<http://dx.doi.org/10.1080/10669817.2020.1805690>
150. Nigam A, Satpute KH, Hall TM. Long term efficacy of mobilisation with movement on pain and functional status in patients with knee osteoarthritis: a randomised clinical trial. *Clin Rehabil*. 2020;269215520946932.
<http://dx.doi.org/10.1177/0269215520946932>
151. Park D, Cynn H-S, Yi C, Choi WJ, Shim J-H, Oh D-W. Four-week training involving self-ankle mobilization with movement versus calf muscle stretching in patients with chronic stroke: a randomized controlled study. *Topics in stroke rehabilitation*. 2020;27(4):296-304. <http://dx.doi.org/10.1080/10749357.2019.1690831>
152. Reid SA, Andersen JM, Vicenzino B. Adding mobilisation with movement to exercise and advice hastens the improvement in range, pain and function after non-operative cast immobilisation for distal radius fracture: a multicentre, randomised trial. *Journal of Physiotherapy*. 2020;<http://dx.doi.org/10.1016/j.jphys.2020.03.010>
153. Reyhan AC, Sindel D, Dereli EE. The effects of Mulligan's mobilization with movement technique in patients with lateral epicondylitis. *Journal of back and musculoskeletal rehabilitation*. 2020;33(1):99-107.
<http://dx.doi.org/10.3233/BMR-181135>
154. Satpute K, Bedekar N, Hall T. Headache symptom modification: the relevance of appropriate manual therapy assessment and management of a patient with features of migraine and cervicogenic headache - a case report. *The Journal of manual & manipulative therapy*. 2020;28(3):181-188.
<http://dx.doi.org/10.1080/10669817.2019.1662637>
155. Satpute KH, Parekh K, Hall TM. The C0–C2 axial rotation test – Reliability and correlation with the flexion rotation test in people with cervicogenic headache and migraine. *Musculoskeletal Science and Practice*. 2020;102286. <http://dx.doi.org/10.1016/j.msksp.2020.102286>
156. Seo UH, Kim JH, Lee BH. Effects of Mulligan Mobilization and Low-Level Laser Therapy on Physical Disability, Pain, and Range of Motion in Patients with Chronic Low Back Pain: A Pilot Randomized Controlled Trial. *Healthcare (Basel)*. 2020;8(3):<http://dx.doi.org/10.3390/healthcare8030237>
157. Smith MD, Vitharana TN, Wallis GM, Vicenzino B. Response profile of fibular repositioning tape on ankle osteokinematics, arthrokinematics, perceived stability and confidence in chronic ankle instability. *Musculoskeletal Science and Practice*. 2020;50(102272).
<http://dx.doi.org/https://doi.org/10.1016/j.msksp.2020.102272>

REFERENCE LIST

158. Stanek JM, Pieczynski AE. Effectiveness of clinician- and patient-applied mobilisation with movement technique to increase ankle dorsiflexion range of motion. *International Journal of Therapy and Rehabilitation*. 2020;27(4):1-11. <http://dx.doi.org/10.12968/ijtr.2018.0118>
159. Tomruk M, Gelecek N, Basçi O, Özkan MH. Effects of early manual therapy on functional outcomes after volar plating of distal radius fractures: A randomized controlled trial. *Hand surgery & rehabilitation*. 2020;39(3):178-185. <http://dx.doi.org/10.1016/j.hansur.2019.12.002>
160. Weerasekara I, Deam H, Bamborough N, et al. Effect of Mobilisation with Movement (MWM) on clinical outcomes in lateral ankle sprains: A systematic review and meta-analysis. *Foot (Edinburgh, Scotland)*. 2020;43(101657). <http://dx.doi.org/10.1016/j.foot.2019.101657>

2019

161. Albertin ES, Miley EN, May J, Baker RT, Reordan D. The Effects of Hip Mobilizations on Patient Outcomes: A Critically Appraised Topic. *Journal of sport rehabilitation*. 2019;28(4):390-394. <http://dx.doi.org/10.1123/jsr.2016-0238>
162. Ali MN, Sethi K, Noohu MM. Comparison of two mobilization techniques in management of chronic non-specific low back pain. *Journal of bodywork and movement therapies*. 2019;23(4):918-923. <http://dx.doi.org/10.1016/j.jbmt.2019.02.020>
163. Alkhwajah HA, Alshami AM. The effect of mobilization with movement on pain and function in patients with knee osteoarthritis: a randomized double-blind controlled trial. *BMC musculoskeletal disorders*. 2019;20(1):452. <http://dx.doi.org/10.1186/s12891-019-2841-4>
164. Baglan-Yentur S, Mete O, Tuna Z, Tufan A, Oskay D. The effects of the Mulligan concept in ankylosing spondylitis: a report of two cases. *International Journal of Therapy & Rehabilitation*. 2019;26(5):1-10. <http://dx.doi.org/10.12968/ijtr.2018.0068>
165. Bello B, Danazumi MS, Kaka B. Comparative Effectiveness of 2 Manual Therapy Techniques in the Management of Lumbar Radiculopathy: A Randomized Clinical Trial. *Journal of chiropractic medicine*. 2019;18(4):253-260. <http://dx.doi.org/10.1016/j.jcm.2019.10.006>
166. Bhosale N, Kanase SB, Bathia K. Effect of Mulligan's Pain Release Phenomenon with Kinesiotaping in Chronic Patellofemoral Osteoarthritis. *Indian Journal of Public Health Research & Development*. 2019;10(4):324. <http://dx.doi.org/10.5958/0976-5506.2019.00712.5>
167. Bianco L, Fermin S, Oates R, May J, Cheatham SW, Nasypany A. Use of the Mulligan concept in the treatment of lateral ankle sprains in the active population: an exploratory prospective case series. *The Journal of the Canadian Chiropractic Association*. 2019;63(3):154-161.
168. Khalil MA, Alkhozamy H, Fadle S, Hefny AM, Ismail M. Effect of Mulligan upper cervical manual traction in the treatment of cervicogenic headache: a randomized controlled trial. 2019;
169. Menek B, Tarakci D, Algun ZC. The effect of Mulligan mobilization on pain and life quality of patients with Rotator cuff syndrome: A randomized controlled trial. *Journal of back and musculoskeletal rehabilitation*. 2019;32(1):171-178. <http://dx.doi.org/10.3233/bmr-181230>
170. Mohamed AA, Shendy WS, Semary M, et al. Combined use of cervical headache snag and cervical snag half rotation techniques in the treatment of cervicogenic headache. *Journal of physical therapy science*. 2019;31(4):376-381. <http://dx.doi.org/10.1589/jpts.31.376>

REFERENCE LIST

171. Neelapala YVR. Effectiveness of Mulligan's Mobilization with Movement techniques on pain and disability of peripheral joints: a systematic review with meta-analysis between 2008 to 2017. *Physiotherapy*. 2019;105(2):290. <http://dx.doi.org/10.1016/j.physio.2018.11.304>
172. Nunes GS, Wolf DF, Dos Santos DA, de Noronha M, Serrão FV. Acute Effects of Hip Mobilization With Movement Technique on Pain and Biomechanics in Females With Patellofemoral Pain: A Randomized, Placebo-Controlled Trial. *Journal of sport rehabilitation*. 2019;1-9. <http://dx.doi.org/10.1123/jsr.2018-0497>
173. Pal A, Misra A. Effectiveness of Snag Mobilization on Computer Professionals with Mechanical Neck Pain and Mobility Deficit. *International Journal of Physiotherapy and Research*. 2019;7(2):3022-3027. <http://dx.doi.org/10.16965/ijpr.2019.104>
174. Park D, Lee JH, Kang TW, Cynn HS. Four-week training involving ankle mobilization with movement versus static muscle stretching in patients with chronic stroke: a randomized controlled trial. *Topics in stroke rehabilitation*. 2019;26(2):81-86. <http://dx.doi.org/10.1080/10749357.2018.1550614>
175. Satpute K, Hall T, Bisen R, Lokhande P. The Effect of Spinal Mobilization With Leg Movement in Patients With Lumbar Radiculopathy-A Double-Blind Randomized Controlled Trial. *Archives of physical medicine and rehabilitation*. 2019;100(5):828-836. <http://dx.doi.org/10.1016/j.apmr.2018.11.004>
176. Satpute K, Nalband S, Hall T. The C0-C2 axial rotation test: normal values, intra- and inter-rater reliability and correlation with the flexion rotation test in normal subjects. *The Journal of manual & manipulative therapy*. 2019;27(2):92-98. <http://dx.doi.org/10.1080/10669817.2018.1533195>
177. Shafique S, Ahmad S, Shakil-Ur-Rehman S. Effect of Mulligan spinal mobilization with arm movement along with neurodynamics and manual traction in cervical radiculopathy patients: A randomized controlled trial. *J Pak Med Assoc*. 2019;69(11):1601-1604. <http://dx.doi.org/10.5455/JPMA.297956>.
178. Simsek S, Yagci N. Acute effects of distal fibular taping technique on pain, balance and forward lunge activities in Chronic Ankle Instability. *Journal of back and musculoskeletal rehabilitation*. 2019;32(1):15-20. <http://dx.doi.org/10.3233/bmr-181132>
179. Stathopoulos N, Dimitriadis Z, Koumantakis GA. Effectiveness of Mulligan's Mobilization With Movement Techniques on Range of Motion in Peripheral Joint Pathologies: A Systematic Review With Meta-analysis Between 2008 and 2018. *Journal of Manipulative and Physiological Therapeutics*. 2019;<http://dx.doi.org/10.1016/j.jmpt.2019.04.001>
180. Tomruk M, Soysal Tomruk M, Alkan E, Gelecek N. Immediate Effects of Ankle Joint Mobilization With Movement on Postural Control, Range of Motion, and Muscle Strength in Healthy Individuals: A Randomized, Sham-Controlled Trial. *Journal of sport rehabilitation*. 2019;1-9. <http://dx.doi.org/10.1123/jsr.2019-0198>
181. Tul Ain SQ, Shakil Ur Rehman S, Maryam M, Kiani SK. Effects of Sustained Natural Apophyseal Glides with and without thoracic posture correction techniques on mechanical back pain: a randomized control trial. *J Pak Med Assoc*. 2019;69(11):1584-1587. <http://dx.doi.org/10.5455/jpma.274875>.
182. Westad K, Tjoestolvsen F, Hebron C. The effectiveness of Mulligan's mobilisation with movement (MWM) on peripheral joints in musculoskeletal (MSK) conditions: A systematic review. *Musculoskeletal science & practice*. 2019;39(157-163. <http://dx.doi.org/10.1016/j.msksp.2018.12.001>

REFERENCE LIST

2018

183. Altmis H, Oskay D, Elbasan B, Duzgun I, Tuna Z. Mobilization with movement and kinesiio taping in knee arthritis-evaluation and outcomes. *International orthopaedics*. 2018;42(12):2807-2815.
<http://dx.doi.org/10.1007/s00264-018-3938-3>
184. Alves Y, Ribeiro F, Silva AG. Effect of fibular repositioning taping in adult basketball players with chronic ankle instability: a randomized, placebo-controlled, crossover trial. *The Journal of sports medicine and physical fitness*. 2018;58(10):1465-1473. <http://dx.doi.org/10.23736/s0022-4707.17.07472-2>
185. Anandkumar S. Effect of a novel mobilization with movement procedure on anterolateral ankle impingement - A case report. *Physiotherapy Theory & Practice*. 2018;34(7):569-577.
<http://dx.doi.org/10.1080/09593985.2017.1422822>
186. Anandkumar S, Miller J, J. Werstine R, Young S. Effect of mobilization with movement on lateral knee pain due to proximal tibiofibular joint hypomobility. *Physiotherapy Theory & Practice*. 2018;34(10):813-820.
<http://dx.doi.org/10.1080/09593985.2018.1424979>
187. Andrews DP, Odland-Wolf KB, May J, Baker R, Nasypany A. The Utilization of Mulligan Concept Thoracic Sustained Natural Apophyseal Glides on Patients Classified with Secondary Impingement Syndrome: A Multi-Site Case Series. *International Journal of Sports Physical Therapy*. 2018;13(1):121-130.
188. Andrews DP, Odland-Wolf KB, May J, Baker R, Nasypany A, Dinkins EM. Immediate and short-term effects of mulligan concept positional sustained natural apophyseal glides on an athletic young-adult population classified with mechanical neck pain: an exploratory investigation. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2018;26(4):203-211. <http://dx.doi.org/10.1080/10669817.2018.1460965>
189. Anwer S, Alghadir A, Zafar H, Brismée J-M. Effects of orthopaedic manual therapy in knee osteoarthritis: a systematic review and meta-analysis. *Physiotherapy*. 2018;104(3):264-276.
190. Balasundaram AP, Sreerama Rajan S. Short-term effects of mobilisation with movement in patients with post-traumatic stiffness of the knee joint. *Journal of bodywork and movement therapies*. 2018;22(2):498-501. <http://dx.doi.org/10.1016/j.jbmt.2017.06.007>
191. Buyukturan O, Buyukturan B, Sas S, Kararti C, Ceylan I. The Effect of Mulligan Mobilization Technique in Older Adults with Neck Pain: A Randomized Controlled, Double-Blind Study. *Pain Res Manag*. 2018;2018(2856375). <http://dx.doi.org/10.1155/2018/2856375>
192. Das MSS, Dowle P, Iyengar R. Effect of spinal mobilization with leg movement as an adjunct to neural mobilization and conventional therapy in patients with lumbar radiculopathy: Randomized controlled trial. *Journal of Medical and Scientific Research*. 2018;6(1):11-19. <http://dx.doi.org/10.17727/jmsr.2018/6-3>
193. Duymaz T, Yagci N. Effectiveness of the mulligan mobilization technique in mechanical neck pain. *Journal of clinical and analytical medicine*. 2018;9(4):304 - 309. <http://dx.doi.org/10.4328/JCAM.5715>
194. Fazeli SH, Amiri A, Jamshidi AA, et al. Effect of ankle taping on postural control measures during grasp and release task in patients with chronic ankle instability. *Journal of back and musculoskeletal rehabilitation*. 2018;31(5):881-887. <http://dx.doi.org/10.3233/bmr-171067>
195. Hidalgo B, Hall T, Berwart M, Biernaux E, Detrembleur C. The immediate effects of two manual therapy techniques on ankle musculoarticular stiffness and dorsiflexion range of motion in people with chronic ankle rigidity: A randomized clinical trial. *Journal of Back & Musculoskeletal Rehabilitation*. 2018;31(3):515-524.

REFERENCE LIST

196. Hudson R, Richmond A, Sanchez B, et al. Innovative treatment of clinically diagnosed meniscal tears: a randomized sham-controlled trial of the Mulligan concept 'squeeze' technique. *The Journal of manual & manipulative therapy*. 2018;1-10. <http://dx.doi.org/10.1080/10669817.2018.1456614>
197. Jayaseelan DJ, Scalzitti DA, Palmer G, Immerman A, Courtney CA. The effects of joint mobilization on individuals with patellofemoral pain: a systematic review. *Clinical Rehabilitation*. 2018;32(6):722-733.
198. Kaya Mutlu E, Ercin E, Razak Ozdincler A, Ones N. A comparison of two manual physical therapy approaches and electrotherapy modalities for patients with knee osteoarthritis: A randomized three arm clinical trial. *Physiotherapy Theory & Practice*. 2018;34(8):600-612.
<http://dx.doi.org/10.1080/09593985.2018.1423591>
199. Kim SL, Lee BH. The effects of posterior talar glide and dorsiflexion of the ankle plus mobilization with movement on balance and gait function in patient with chronic stroke: a randomized controlled trial. *Journal of neurosciences in rural practice*. 2018;9(1):61 - 67. http://dx.doi.org/10.4103/jnpr.jnpr_382_17
200. Kirthika S V, K P, Sudhakar S, Kumar M V. Is Mulligan's Sustained Natural Apophyseal Glides (SNAGS) or Muscle Energy Technique is effective in the non-surgical management of cervicogenic headache? A two-group pretest-posttest randomized controlled trial. *Asian Journal of Pharmaceutical and Clinical Research*. 2018;11(9):230-233. <http://dx.doi.org/10.22159/ajpcr.2018.v11i9.26808>
201. Konstantinos Z. The short and mid-term effects of Mulligan concept in patients with chronic mechanical neck pain. *Journal of Novel Physiotherapy and Rehabilitation*. 2018;022-035.
<http://dx.doi.org/10.29328/journal.jnpr.1001018>
202. Kosik KB, Gribble PA. The Effect of Joint Mobilization on Dynamic Postural Control in Patients With Chronic Ankle Instability: A Critically Appraised Topic. *Journal of Sport Rehabilitation*. 2018;27(1):103-108.
203. Lawson BL, Williamson JD, Baker R, May J, Larkins L, Nasypany A. Examining the Effect of the Mulligan Concept Fibular Repositioning Taping Technique After a Lateral Ankle Sprain. *Athletic Training & Sports Health Care: The Journal for the Practicing Clinician*. 2018;10(1):41-45.
204. Lehman GJ. The Role and Value of Symptom-Modification Approaches in Musculoskeletal Practice. *The Journal of orthopaedic and sports physical therapy*. 2018;48(6):430-435.
<http://dx.doi.org/10.2519/jospt.2018.0608>
205. Lucado AM, Dale RB, Vincent J, Day JM. Do joint mobilizations assist in the recovery of lateral elbow tendinopathy? A systematic review and meta-analysis. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2018;<http://dx.doi.org/10.1016/j.jht.2018.01.010>
206. Park D, Lee JH, Kang TW, Cynn HS. Effects of a 4-Week Self-Ankle Mobilization with Movement Intervention on Ankle Passive Range of Motion, Balance, Gait, and Activities of Daily Living in Patients with Chronic Stroke: A Randomized Controlled Study. *Journal of stroke and cerebrovascular diseases : the official journal of National Stroke Association*. 2018;27(12):3451-3459.
<http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2018.08.010>
207. Patra RC, Mohanty P, Gautam AP. Effectiveness of C1-C2 sustained natural apophyseal glide combined with dry needling on pressure point threshold and headache disability in cervicogenic headache. *Asian journal of pharmaceutical and clinical research*. 2018;11(1):171 - 174.
<http://dx.doi.org/10.22159/ajpcr.2018.v11i1.22349>
208. Pourahmadi MR, Mohsenifar H, Dariush M, Aftabi A, Amiri A. Effectiveness of mobilization with movement (Mulligan concept techniques) on low back pain: a systematic review. *Clin Rehabil*. 2018;32(10):1289-1298.
<http://dx.doi.org/10.1177/0269215518778321>

REFERENCE LIST

209. Qamar MM, Kiran A, Ijaz MJ, Basharat A, Rasul A, Ahmed W. Comparison of efficacy of mulligan's mobilization with movement with maitland mobilization along with conventional therapy in the patients with knee osteoarthritis: A randomized clinical trial. *Libyan International Medical University Journal*. 2018;3(1):26. http://dx.doi.org/10.4103/liuj.liuj_12_18
210. Ranganath PNU, Dowle P, Chandrasekhar P. Effectiveness of MWM, Neurodynamics and Conventional Therapy Versus Neurodynamics and Conventional Therapy in Unilateral Cervical Radiculopathy: A Randomized Control Trial. *Indian Journal of Physiotherapy and Occupational Therapy - An International Journal*. 2018;12(3):<http://dx.doi.org/10.5958/0973-5674.2018.00066.7>
211. Rezkallah SS, Abdullah GA. Comparison between sustained natural apophyseal glides (SNAG's) and myofascial release techniques combined with exercises in non specific neck pain. *Physiotherapy Practice & Research*. 2018;39(2):135-145. <http://dx.doi.org/10.3233/PPR-180116>
212. Schäfer A, Lüdtke K, Breuel F, et al. Validity of eyeball estimation for range of motion during the cervical flexion rotation test compared to an ultrasound-based movement analysis system. *Physiotherapy theory and practice*. 2018;34(8):622-628. <http://dx.doi.org/10.1080/09593985.2017.1423523>
213. Shinde M, Jagtap V. Effect of muscle energy technique and mulligan mobilization in sacroiliac joint dysfunction. *Global Journal for Research Analysis*. 2018;7(3 - March 2018):79-91.
214. Smith DA, Saranga J, Pritchard A, Kommatas NA, Punnoose SK, Kale ST. Effect of a lateral glide mobilisation with movement of the hip on vibration threshold in healthy volunteers. *Journal of Bodywork and Movement Therapies*. 2018;22(1):13-17. <http://dx.doi.org/https://doi.org/10.1016/j.jbmt.2016.10.001>
215. Srivastava S, Eapen C, Mittal H. Comparison of Mobilisation with Movement and Cryotherapy in Shoulder Impingement Syndrome-A Randomised Clinical Trial. *Journal of Clinical and Diagnostic Research*. 2018;<http://dx.doi.org/10.7860/jcdr/2018/34624.12091>
216. Stathopoulos N, Dimitriadis Z, Koumantakis GA. Effectiveness of Mulligan's Mobilization with Movement techniques on pain and disability of peripheral joints: A systematic review with meta-analysis between 2008–2017. *Physiotherapy*. 2018;<http://dx.doi.org/10.1016/j.physio.2018.10.001>
217. Tank KD, Choks P, Makwana P. To Study the Effect of Muscle Energy Technique Versus Mulligan Snags on Pain, Range of Motion and Functional Disability for Individuals with Mechanical Neck Pain". – a Comparative Study. *International Journal of Physiotherapy and Research*. 2018;6(1):2582-2587. <http://dx.doi.org/10.16965/ijpr.2017.253>
218. Wang Y, Wang C, Chen H, Ye X. [Shoulder joint pain of rotator cuff injury treated with electroacupuncture and Mulligan's mobilization: a randomized controlled trial]. *Zhongguo zhen jiu = Chinese acupuncture & moxibustion*. 2018;38(1):17-21. <http://dx.doi.org/10.13703/j.0255-2930.2018.01.004>
219. Wikstrom EA, Bagherian S, Allen G, Song K. Anterior-to-Posterior Ankle Joint Mobilizations Improve Dynamic Postural Control in Chronic Ankle Instability Patients: A Critically Appraised Topic. *International Journal of Athletic Therapy & Training*. 2018;23(2):57-61.
220. Wong CK, Strang BL, Schram GA, Mercer EA, Kesting RS, Deo KS. A pragmatic regional interdependence approach to primary frozen shoulder: a retrospective case series*. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2018;26(2):109-118.
221. Yaseen K, Hendrick P, Ismail A, Felemban M, Alshehri MA. The effectiveness of manual therapy in treating cervicogenic dizziness: a systematic review. *Journal of physical therapy science*. 2018;30(1):96-102. <http://dx.doi.org/10.1589/jpts.30.96>

REFERENCE LIST

2017

222. Alkady SME, Kamel RM, AbuTaleb E, Lasheen Y, Alshaarawy FA. Efficacy of Mulligan Mobilization Versus Muscle Energy Technique in Chronic Sacroiliac Joint Dysfunction. *International Journal of Physiotherapy*. 2017;4(5):<http://dx.doi.org/10.15621/ijphy/2017/v4i5/159427>
223. An CM, Jo SO. Effects of Talocrural Mobilization with Movement on Ankle Strength, Mobility, and Weight-Bearing Ability in Hemiplegic Patients with Chronic Stroke: A Randomized Controlled Trial. *Journal of stroke and cerebrovascular diseases : the official journal of National Stroke Association*. 2017;26(1):169-176. <http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2016.09.005>
224. Andrews D. Utilizing Manual Therapy within a Regional Interdependence Model for the Treatment of Cervicothoracic Dysfunction: A Dissertation of Clinical Practice Improvement. *Utilizing Manual Therapy within a Regional Interdependence Model for the Treatment of Cervicothoracic Dysfunction: A Dissertation of Clinical Practice Improvement*. 2017;1-1.
225. Bowler N, Browning P, Lascurain-Aguirrebena I. The effects of cervical sustained natural apophyseal glides on neck range of movement and sympathetic nervous system activity. *International journal of osteopathic medicine. (no pagination), 2017*. 2017;Date of Publication: June 04(<http://dx.doi.org/10.1016/j.ijosm.2017.02.003>)
226. Christian N. Comparative Study to Find the Effect of Mulligans SNAG Technique (C1-C2) Versus Maitlands Technique (C1-C2) in Cervicogenic Headache Among Information Technology Professionals. *International Journal of Physiotherapy*. 2017;4(3):178-183. <http://dx.doi.org/10.15621/ijphy/2017/v4i3/149071>
227. Copurgensli C, Gur G, Tunay VB. A comparison of the effects of Mulligan's mobilization and Kinesio taping on pain, range of motion, muscle strength, and neck disability in patients with Cervical Spondylosis: a randomized controlled study. *Journal of back and musculoskeletal rehabilitation*. 2017;30(1):51 - 62. <http://dx.doi.org/10.3233/BMR-160713>
228. Demirci S, Kinikli GI, Callaghan MJ, Tunay VB. Comparison of short-term effects of mobilization with movement and Kinesiotaping on pain, function and balance in patellofemoral pain. *Acta orthopaedica ET traumatologica turcica*. 2017;51(6):442 - 447. <http://dx.doi.org/10.1016/j.aott.2017.09.005>
229. Elsayed WH, Mohamed AF, El-Monem GA, Ahmed HH. Effect of SNAGS Mulligan Technique on Chronic Cervical Radiculopathy : A Randomized Clinical Trial. 2017.
230. Hidalgo B, Hall T, Bossert J, Dugeny A, Cagnie B, Pitance L. The efficacy of manual therapy and exercise for treating non-specific neck pain: A systematic review. *Journal of Back & Musculoskeletal Rehabilitation*. 2017;30(6):1149-1169.
231. Howe LP. The acute effects of ankle mobilisations on lower extremity joint kinematics. *Journal of bodywork and movement therapies*. 2017;21(4):775-780. <http://dx.doi.org/10.1016/j.jbmt.2016.11.007>
232. Hudson R, Baker RT, May J, Reordan D, Nasypany A. Novel treatment of lateral ankle sprains using the Mulligan concept: an exploratory case series analysis. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2017;25(5):251-259.
233. Hudson RA, Baker RT, Nasypany A, Reordan D. Treatment of Anterior Shoulder Subluxation Using the Mulligan Concept and Reflex Neuromuscular Stabilization: A Case Report. *International Journal of Sports Physical Therapy*. 2017;12(1):155-162.
234. Hussien HM, Abdel-Raouf NA, Kattabei OM, Ahmed HH. Effect of Mulligan Concept Lumbar SNAG on Chronic Nonspecific Low Back Pain. *Journal of chiropractic medicine*. 2017;16(2):94 - 102.

REFERENCE LIST

235. Jayaseelan DJ, Kecman M, Alcorn D, Sault JD. Manual therapy and eccentric exercise in the management of Achilles tendinopathy. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2017;25(2):106-114.
236. Kosik KB, McCann RS, Terada M, Gribble PA. Therapeutic interventions for improving self-reported function in patients with chronic ankle instability: a systematic review. *British journal of sports medicine*. 2017;51(2):105-112. <http://dx.doi.org/10.1136/bjsports-2016-096534>
237. Machado M. The Effects of Mobilizations With Movement Versus Maitland Mobilizations on Range of Motion and Shoulder Function in Patients With Adhesive Capsulitis: A Meta-Analysis. *Effects of Mobilizations With Movement Versus Maitland Mobilizations on Range of Motion & Shoulder Function in Patients With Adhesive Capsulitis: A Meta-Analysis*. 2017;1-1.
238. Martinez-Cervera FV, Olteanu TE, Gil-Martinez A, Diaz-Pulido B, Ferrer-Pena R. Influence of expectations plus mobilization with movement in patient with lateral epicondylalgia: a pilot randomized controlled trial. *Journal of exercise rehabilitation*. 2017;13(1):101-109. <http://dx.doi.org/10.12965/jer.1732848.424>
239. May JM, Nasypany A, Paolino J, Baker R, Seegmiller J. Patient Outcomes Utilizing the Mulligan Concept of Mobilization With Movement to Treat Intercollegiate Patients Diagnosed With Lateral Ankle Sprain: An a Priori Case Series. *Journal of Sport Rehabilitation*. 2017;26(6):486-496.
240. Mehta S, Basu S, Palekar TJ, Davé N. Effect of kinesio taping versus mulligan Taping in treatment of heel pain. *International journal of pharma and bio sciences*. 2017;8(
241. Rao RV, Balthillaya G, Prabhu A, Kamath A. Immediate effects of Maitland mobilization versus Mulligan Mobilization with Movement in Osteoarthritis knee- A Randomized Crossover trial. *Journal of bodywork and movement therapies*. 2017;(no pagination)(<http://dx.doi.org/10.1016/j.jbmt.2017.09.017>
242. Ribeiro DC, Sole G, Venkat R, Shemmell J. Differences between clinician- and self-administered shoulder sustained mobilization on scapular and shoulder muscle activity during shoulder abduction: A repeated-measures study on asymptomatic individuals. *Musculoskeletal science & practice*. 2017;30(25-33). <http://dx.doi.org/10.1016/j.msksp.2017.04.010>
243. Said S, Ali OI, Elazm SNA, Abdelraoof NA. Mulligan Self Mobilization Versus Mulligan Snags on Cervical Position Sense. *International Journal of Physiotherapy*. 2017;4(2):93-100.
244. Salamh P, Cook C, Reiman MP, Sheets C. Treatment effectiveness and fidelity of manual therapy to the knee: A systematic review and meta-analysis. *Musculoskeletal care*. 2017;15(3):238-248. <http://dx.doi.org/10.1002/msc.1166>
245. Sanchez BJ, Baker RT. Conservative Management of Possible Meniscal Derangement Using the Mulligan Concept: A Case Report. *Journal of Chiropractic Medicine*. 2017;16(4):308-315. <http://dx.doi.org/10.1016/j.jcm.2017.08.005>
246. Srivastava N, Joshi S. Comparison between the Effectiveness of Mobilization with Movement and End Range Mobilization along with Conventional Therapy for Management of Frozen Shoulder. *Indian Journal of Physiotherapy & Occupational Therapy*. 2017;11(4):176-179. <http://dx.doi.org/10.5958/0973-5674.2017.00141.1>
247. Ughreja RA, Shukla YU. Mulligan's Mobilisation with Movement (MWM) relieves pain and improves functional status in osteoarthritis knee. *Int J Physiother*. 2017;4(2):132-138.
248. Zemadanis K, Betsos T, Mandalidis D. The short and long-term effect of weight-bearing mobilization-with-movement (MWM) and automobilization-MWM techniques on pain and functional status in patients with hip osteoarthritis. *International Journal of Physiotherapy*. 2017;4(3):<http://dx.doi.org/10.15621/ijphy/2017/v4i3/149068>

REFERENCE LIST

2016

249. Afzal MW, Ahmad A, Waqas MS, Ahmad U. Effectiveness of Therapeutic Ultrasound With and Without Mulligan Mobilization In Lateral Epicondylitis. *Annals of King Edward Medical University*. 2016;22(1):47. <http://dx.doi.org/10.21649/akemu.v22i1.798>
250. An CM, Won JI. Effects of ankle joint mobilization with movement and weight-bearing exercise on knee strength, ankle range of motion, and gait velocity in patients with stroke: a pilot study. *Journal of physical therapy science*. 2016;28(2):689 - 694.
251. Beselga C, Neto F, Albuquerque-Sendin F, Hall T, Oliveira-Campelo N. Immediate effects of hip mobilization with movement in patients with hip osteoarthritis: a randomised controlled trial. *Manual therapy*. 2016;22(80 - 85). <http://dx.doi.org/10.1016/j.math.2015.10.007>
252. Chaconas E, Gray S, Kempfert D. Mobilization with movement symptom modification procedure for a 38 year old male with patella femoral pain syndrome. *Manual Therapy*. 2016;25(e63-e64).
253. Channak S, Saelee W, Narongrittikai N, et al. The effects of the T6 sustained natural apophyseal glide (SNAG) with rotation in mechanical chronic thoracic spine pain: a randomized controlled trial. *Journal of medical technology*. 2016;28(80-91).
254. Desai P, Vinodkumar A. A Comparative Study between Efficacy of Low Level Laser Therapy (LLLT) with Mulligan's Mobilization (MWM) Over Ultrasound Therapy with Mulligan's Mobilization (MWM) in Patients with Acute Supraspinatus Tendinitis. *Indian Journal of Physiotherapy & Occupational Therapy*. 2016;10(3):75-81. <http://dx.doi.org/10.5958/0973-5674.2016.00085.X>
255. Elrazik RKA, Samir SM, Zaki LA, Koura GA. Mobilisation with movement versus postero-anterior mobilisation in chronic non specific low back pain. *International journal of pharmtech research*. 2016;9(6):(pp 9 - 16), 2016. Date of Publication: 2016.):
256. Garcia JD, Arnold S, Tetley K, Voight K, Frank RA. Mobilization and Manipulation of the Cervical Spine in Patients with Cervicogenic Headache: Any Scientific Evidence? *Front Neurol*. 2016;7(40). <http://dx.doi.org/10.3389/fneur.2016.00040>
257. Guimaraes JF, Salvini TF, Siqueira AL, Ribeiro IL, Camargo PR, Albuquerque-Sendin F. Immediate Effects of Mobilization With Movement vs Sham Technique on Range of Motion, Strength, and Function in Patients With Shoulder Impingement Syndrome: randomized Clinical Trial. *Journal of manipulative and physiological therapeutics*. 2016;39(9):605 - 615. <http://dx.doi.org/10.1016/j.jmpt.2016.08.001>
258. Haik MN, Albuquerque-Sendin F, Moreira RF, Pires ED, Camargo PR. Effectiveness of physical therapy treatment of clearly defined subacromial pain: a systematic review of randomised controlled trials. *British journal of sports medicine*. 2016;50(18):1124-1134. <http://dx.doi.org/10.1136/bjsports-2015-095771>
259. Hickey A, Hopper D, Hall T, Wild CY. The effect of the Mulligan knee taping technique on patellofemoral pain and lower limb biomechanics. *Am J Sports Med*. 2016;44(5):1179-1185. <http://dx.doi.org/10.1177/0363546516629418>
260. Hudson R, Richmond A, Sanchez B, et al. An Alternative Approach to the Treatment of Meniscal Pathologies: A Case Series Analysis of the Mulligan Concept "Squeeze" Technique. *International Journal of Sports Physical Therapy*. 2016;11(4):564-574.

REFERENCE LIST

261. Marcolino AM, das Neves LM, Oliveira BG, et al. Multimodal approach to rehabilitation of the patients with lateral epicondylitis: a case series. *SpringerPlus*. 2016;5(1):1718. <http://dx.doi.org/10.1186/s40064-016-3375-y>
262. Neelapala YVR, Reddy YRS, Danait R. Effect of Mulligan's posterolateral glide on shoulder rotator strength, scapular upward rotation in shoulder pain subjects - A randomized controlled trial. *Journal of musculoskeletal research*. 2016;19(3):1650014. <http://dx.doi.org/10.1142/S0218957716500147>
263. Noten S, Meeus M, Stassijns G, Van Glabbeek F, Verborgt O, Struyf F. Efficacy of Different Types of Mobilization Techniques in Patients With Primary Adhesive Capsulitis of the Shoulder: A Systematic Review. *Archives of Physical Medicine & Rehabilitation*. 2016;97(5):815-825.
264. Page MJ, Green S, McBain B, et al. Manual therapy and exercise for rotator cuff disease. *Cochrane Database of Systematic Reviews*. 2016;6):<http://dx.doi.org/10.1002/14651858.CD012224>
265. Panjwani KD. To Compare the Effect of MWM v/s MWM along with Neural Tissue Mobilization in Case of Cervical Radiculopathy. *Indian Journal of Physiotherapy & Occupational Therapy*. 2016;10(1):42-46. <http://dx.doi.org/10.5958/0973-5674.2016.00010.1>
266. Rahman H, Charturvedi PA, Apparao P, Srithulasi PR. Effectiveness of Mulligan Mobilisation with Movement Compared to Supervised Exercise Program in Subjects with Lateral Epicondylitis. *International Journal of Physiotherapy and Research*. 2016;4(2):1394-1400. <http://dx.doi.org/10.16965/ijpr.2016.104>
267. Ranjana, Sahay P, Banerjee D, Bhushan V, Equebal A. Long Term Efficacy of Maitland Mobilization Versus Mulligan Mobilization in Idiopathic Adhesive Capsulitis of Shoulder: A Randomized Controlled Trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2016;10(4):91-97. <http://dx.doi.org/10.5958/0973-5674.2016.00126.X>
268. Rhinehart A, Buonopane M. Use of the Mulligan Concept and Positional Release Therapy in the Treatment of a Moderate Grade Acromioclavicular Injury. *Athletic Training & Sports Health Care: The Journal for the Practicing Clinician*. 2016;8(2):82-88.
269. Ribeiro DC, de Castro MP, Sole G, Vicenzino B. The initial effects of a sustained glenohumeral postero-lateral glide during elevation on shoulder muscle activity: A repeated measures study on asymptomatic shoulders. *Man Ther*. 2016;22(101-108. <http://dx.doi.org/10.1016/j.math.2015.10.014>
270. Samir S, Zak L, Soliman M. Mulligan versus maitland mobilizations in patients with chronic low back dysfunction. *International journal of pharmtech research*. 9 (6) (pp 92-99), 2016. Date of publication: 2016. 2016;
271. Sang-Lim KIM, Byoung-Hee LEE. Effect of Mulligan's mobilization with movement technique on gait function in stroke patients. *Journal of physical therapy science*. 2016;28(8):2326-2329.
272. Shahid S, Ahmed A, Ahmed U. Effectiveness of Routine Physical Therapy with and Without Pain Release Phenomenon in Patello-Femoral Pain Syndrome. *International Journal of Science and Research (IJSR)*. 2016;5(7):1891-1919. <http://dx.doi.org/10.21275/v5i7.ART2016586>
273. Tambekar N, Sabnis S, Phadke A, Bedekar N. Effect of Butler's neural tissue mobilization and Mulligan's bent leg raise on pain and straight leg raise in patients of low back ache. *Journal of bodywork and movement therapies*. 2016;20(2):280 - 285. <http://dx.doi.org/10.1016/j.jbmt.2015.08.003>
274. Walsh R, Kinsella S. The effects of caudal mobilisation with movement (MWM) and caudal self-mobilisation with movement (SMWM) in relation to restricted internal rotation in the hip: a randomised control pilot study. *Manual therapy*. 2016;22(9 - 15. <http://dx.doi.org/10.1016/j.math.2016.01.007>

REFERENCE LIST

275. Waqqar S, Shakil-ur-Rehman S, Ahmad S. McKenzie treatment versus mulligan sustained natural apophyseal glides for chronic mechanical low back pain. *Pakistan journal of medical sciences*. 2016;32(2):476 - 479. <http://dx.doi.org/10.12669/pjms.322.9127>
276. Yıldırım MS, Ozyurek S, Tosun O, Uzer S, Gelecek N. Comparison of effects of static, proprioceptive neuromuscular facilitation and Mulligan stretching on hip flexion range of motion: a randomized controlled trial. *Biology of sport*. 2016;33(1):89-94. <http://dx.doi.org/10.5604/20831862.1194126>

2015

277. Abdelgalil AA, Balbaa AA, Elazizi HM, Abdelaal AAM. High Velocity Low Amplitude Manipulation versus Sustained Apophyseal Glides on Pain and Range of Motion in Patients with Mechanical Neck Pain: An Immediate Effect. *International Journal of Advanced Research*. 2015;3(June):503-514.
278. Anandkumar S. The effect of sustained natural apophyseal glide (SNAG) combined with neurodynamics in the management of a patient with cervical radiculopathy: a case report. *Physiotherapy Theory & Practice*. 2015;31(2):140-145. <http://dx.doi.org/10.3109/09593985.2014.971922>
279. Arshad HS, Shah IH, Nasir RH. Comparison of Mulligan Mobilization with Movement and End-Range Mobilization Following Maitland Techniques in Patients with Frozen Shoulder in Improving Range of Motion. *International Journal of Science and Research (IJSR)*. 2015;4(4):2761-2767.
280. Baeske R. Mobilisation with movement: a step towards understanding the importance of peripheral mechanoreceptors. *Physical Therapy Reviews*. 2015;20(5/6):299-305. <http://dx.doi.org/10.1080/10833196.2015.1121014>
281. Boruah L, Dutta A, Deka P, Roy J. To Study the Effect of Scapular Mobilization Versus Mobilization With Movement to Reduce Pain and Improve Gleno-humeral Range of Motion in Adhesive Capsulitis of Shoulder: A Comparative Study. *International Journal of Physiotherapy*. 2015;2(5):<http://dx.doi.org/10.15621/ijphy/2015/v2i5/78239>
282. Brody K, Baker RT, Nasypany A, Seegmiller J, Piccininni JJ. Treatment of Meniscal Lesions Using the Mulligan "Squeeze" Technique: A Case Series. *International Journal of Athletic Therapy and Training*. 2015;20(6):24-31. <http://dx.doi.org/10.1123/ijatt.2014-0135>
283. Buonopane MP. Case Study: A Nontraditional Treatment Approach to Acute Acromioclavicular Joint Injury Care. *International Journal of Athletic Therapy & Training*. 2015;20(5):6-10. <http://dx.doi.org/https://doi.org/10.1123/ijatt.2014-0108>
284. Coombes BK, Bisset L, Vicenzino B. Management of Lateral Elbow Tendinopathy: One Size Does Not Fit All. *The Journal of orthopaedic and sports physical therapy*. 2015;45(11):938-949. <http://dx.doi.org/10.2519/jospt.2015.5841>
285. Cruz-Díaz D, Lomas Vega R, Osuna-Pérez MC, Hita-Contreras F, Martínez-Amat A. Effects of joint mobilization on chronic ankle instability: a randomized controlled trial. *Disability and rehabilitation*. 2015;37(7):601 - 610. <http://dx.doi.org/10.3109/09638288.2014.935877>
286. de-la-Morena JM, Alguacil-Diego IM, Molina-Rueda F, Ramiro-González M, Villafañe JH, Fernández-Carnero J. The Mulligan ankle taping does not affect balance performance in healthy subjects: a prospective, randomized blinded trial. *Journal of physical therapy science*. 2015;27(5):1597-1602. <http://dx.doi.org/10.1589/jpts.27.1597>

REFERENCE LIST

287. Delgado-Gil JA, Prado-Robles E, Rodrigues-de-Souza DP, Cleland JA, Fernández-de-las-Peñas C, Alburquerque-Sendín F. Effects of mobilization with movement on pain and range of motion in patients with unilateral shoulder impingement syndrome: a randomized controlled trial. *Journal of manipulative and physiological therapeutics*. 2015;38(4):245 - 252. <http://dx.doi.org/10.1016/j.jmpt.2014.12.008>
288. Desjardins-Charbonneau A, Roy JS, Dionne CE, Fremont P, MacDermid JC, Desmeules F. The efficacy of manual therapy for rotator cuff tendinopathy: a systematic review and meta-analysis. *The Journal of orthopaedic and sports physical therapy*. 2015;45(5):330-350. <http://dx.doi.org/10.2519/jospt.2015.5455>
289. Devi NG, Dutta A. A comparative study on the effect of self SNAGs versus dynamic isometric exercises in desk job people with chronic neck pain. *International Journal of Physiotherapy*. 2015;2(5):<http://dx.doi.org/10.15621/ijphy/2015/v2i5/78232>
290. Eusea J, Nasypany A, Seegmiller J, Baker R. Utilizing Mulligan Sustained Natural Apophyseal Glides Within a Clinical Prediction Rule for Treatment of Low Back Pain in a Secondary School Football Player. *International Journal of Athletic Therapy & Training*. 2015;20(1):18-24.
291. Ganesh GS, Mohanty P, Pattnaik M, Mishra C. Effectiveness of mobilization therapy and exercises in mechanical neck pain. *Physiotherapy theory and practice*. 2015;31(2):99 - 106. <http://dx.doi.org/10.3109/09593985.2014.963904>
292. Grindstaff TL, Hanish MJ, Wheeler TJ, et al. Fibular taping does not alter lower extremity spinal reflex excitability in individuals with chronic ankle instability. *J Electromyogr Kinesiol*. 2015;25(2):253-259. <http://dx.doi.org/10.1016/j.jelekin.2015.01.009>
293. Heggannavar A, Gupta R. Quantitative effects of proprioceptive exercises and mulligan's MWM in subjects with osteoarthritis of knee—a randomized clinical trail. *Physiotherapy (united kingdom)*. 2015;101(eS555 - eS556). <http://dx.doi.org/10.1016/j.physio.2015.03.3370>
294. Hidalgo B, Pitance L, Hall T, Detrembleur C, Nielens H. Short-term effects of Mulligan mobilization with movement on pain, disability, and kinematic spinal movements in patients with nonspecific low back pain: a randomized placebo-controlled trial. *Journal of manipulative and physiological therapeutics*. 2015;38(6):365 - 374. <http://dx.doi.org/10.1016/j.jmpt.2015.06.013>
295. Howe A, Campbell A, Ng L, Hall T, Hopper D. Effects of two different knee tape procedures on lower-limb kinematics and kinetics in recreational runners. *Scand J Med Sci Sports*. 2015;25(4):517-524. <http://dx.doi.org/10.1111/sms.12269>
296. Hyun KH, Cho HY, Lim CG. The effect of knee joint Mulligan taping on balance and gait in subacute stroke patients. *Journal of physical therapy science*. 2015;27(11):3545-3547. <http://dx.doi.org/10.1589/jpts.27.3545>
297. Jie H, Lingfeng X, Xiaoling H, Xiaohua H. Effects of mulligan's mobilization with movement combined with stretching therapy in the management of frozen shoulder. *Physiotherapy (united kingdom)*. 2015;101(eS683 - eS684). <http://dx.doi.org/10.1016/j.physio.2015.03.3528>
298. Kakati T, Dutta A. A Comparative Study to Find Out Immediate Effectiveness of Movement With Mobilization Versus Elbow Orthosis on Pain and Grip Strength in Lateral Epicondylitis in Housewives. *International Journal of Physiotherapy*. 2015;2(6):<http://dx.doi.org/10.15621/ijphy/2015/v2i6/80772>
299. Kang MH, Oh JS, Kwon OY, Weon JH, An DH, Yoo WG. Immediate combined effect of gastrocnemius stretching and sustained talocrural joint mobilization in individuals with limited ankle dorsiflexion: a randomized controlled trial. *Manual therapy*. 2015;20(6):827 - 834. <http://dx.doi.org/10.1016/j.math.2015.03.016>

REFERENCE LIST

300. Kaya Mutlu E, Razak Ozdincler A, Ercin E. Comparison of two different mobilization techniques in the management of osteoarthritis of the knee: a randomized clinical trial. *Osteoarthritis and cartilage*. 2015;23(A391 - A392).
301. Khyathi P, Vinod Babu K, Sai Kumar N, Asha D. Comparative Effect of Spencer Technique Versus Mulligan's Technique for Subjects with Frozen Shoulder-A Single Blind Study. *International Journal of Physiotherapy*. 2015;2(2):448. <http://dx.doi.org/10.15621/ijphy/2015/v2i2/65255>
302. Kim S-Y, Kim N-S, Kim LJ. Effects of cervical sustained natural apophyseal glide on forward head posture and respiratory function. *Journal of physical therapy science*. 2015;27(6):1851-1854. <http://dx.doi.org/10.1589/jpts.27.1851>
303. Krzyzanowicz R, Baker R, Nasypany A, Gargano F, Seegmiller J. Patient Outcomes Utilizing the Selective Functional Movement Assessment and Mulligan Mobilizations With Movement on Recreational Dancers With Sacroiliac Joint Pain: A Case Series. *International Journal of Athletic Therapy & Training*. 2015;20(3):31-37.
304. Lirio Romero C, Torres Lacomba M, Castilla Montoro Y, et al. Mobilization With Movement for Shoulder Dysfunction in Older Adults: A Pilot Trial. *Journal of chiropractic medicine*. 2015;14(4):249-258. <http://dx.doi.org/10.1016/j.jcm.2015.03.001>
305. Lopez-Lopez A, Alonso Perez JL, González Gutierrez JL, et al. Mobilization versus manipulations versus sustain apophyseal natural glide techniques and interaction with psychological factors for patients with chronic neck pain: randomized controlled trial. *European journal of physical and rehabilitation medicine*. 2015;51(2):121 - 132.
306. Marrón-Gómez D, Rodríguez-Fernández Á, Martín-Urrialde JA. The effect of two mobilization techniques on dorsiflexion in people with chronic ankle instability. *Physical therapy in sport*. 2015;16(1):10 - 15. <http://dx.doi.org/10.1016/j.ptsp.2014.02.001>
307. Matocha MA, Baker RT, Nasypany AM, Seegmiller JG. Effects of Neuromobilization on Tendinopathy: Part II. *International Journal of Athletic Therapy & Training*. 2015;20(2):41-47.
308. May J, Krzyzanowicz R, Nasypany A, Baker R, Seegmiller J. Mulligan Concept Use and Clinical Profile From the Perspective of American Certified Mulligan Practitioners. *Journal of Sport Rehabilitation*. 2015;24(4):337-341.
309. Oskay D, Altmis H, Duzgun I, Elbasan B. Immediate effects of mulligan's concept mobilization with movement on knee pain and functions in patients with knee osteoarthritis. *Annals of the rheumatic diseases*. 2015;74(1315). <http://dx.doi.org/10.1136/annrheumdis-2015-eular.4743>
310. Painter EE, Deyle GD, Allen C, Petersen EJ, Croy T, Rivera KP. Manual Physical Therapy Following Immobilization for Stable Ankle Fracture: A Case Series. *The Journal of orthopaedic and sports physical therapy*. 2015;45(9):665-674. <http://dx.doi.org/10.2519/jospt.2015.5981>
311. Rabin A, Israeli T, Kozol Z. Physiotherapy Management of People Diagnosed with de Quervain's Disease: A Case Series. *Physiotherapy Canada. Physiotherapie Canada*. 2015;67(3):263-267. <http://dx.doi.org/10.3138/ptc.2014-47>
312. Reid S, Callister R, Snodgrass S, Katekar M, Rivett D. Long-term outcomes of Mulligan sustained natural apophyseal glides and maitland passive joint mobilisations for chronic cervicogenic dizziness: a randomised trial. *Physiotherapy (united kingdom)*. 2015;101(eS1270 - eS1271). <http://dx.doi.org/10.1016/j.physio.2015.03.1180>

REFERENCE LIST

313. Reid SA, Callister R, Snodgrass SJ, Katekar MG, Rivett DA. Manual therapy for cervicogenic dizziness: long-term outcomes of a randomised trial. *Manual therapy*. 2015;20(1):148 - 156.
<http://dx.doi.org/10.1016/j.math.2014.08.003>
314. Rhinehart A. Effective Treatment of an Apparent Meniscal Injury Using the Mulligan Concept. *Journal of Sports Medicine and Allied Health Sciences: Official Journal of the Ohio Athletic Trainers Association*. 2015;1(2):<http://dx.doi.org/10.25035/jsmahs.01.02.04>
315. Romero CL, Torres Lacomba M, Montoro YC, et al. Mobilization With Movement for Shoulder Dysfunction in Older Adults: A Pilot Trial. *Journal of Chiropractic Medicine*. 2015;14(4):249-258.
<http://dx.doi.org/10.1016/j.jcm.2015.03.001>
316. Sai KV, Kumar JNS. Effects of Mulligan's Mobilisation with Movement on Pain and Range of Motion in Diabetic Frozen Shoulder a Randomized Clinical Trail. *Indian Journal of Physiotherapy & Occupational Therapy*. 2015;9(4):187-193. <http://dx.doi.org/10.5958/0973-5674.2015.00170.7>
317. Satpute KH, Bhandari P, Hall T. Efficacy of Hand Behind Back Mobilization With Movement for Acute Shoulder Pain and Movement Impairment: a Randomized Controlled Trial. *Journal of manipulative and physiological therapeutics*. 2015;38(5):324 - 334. <http://dx.doi.org/10.1016/j.jmpt.2015.04.003>
318. Seo Y, Lee J, Han D. The effects of spinal mobilization with arm movements on shoulder muscle strengthening. *Journal of physical therapy science*. 2015;27(1):11-13. <http://dx.doi.org/10.1589/jpts.27.11>
319. Someeh M, Norasteh AA, Daneshmandi H, Asadi A. Immediate effects of Mulligan's fibular repositioning taping on postural control in athletes with and without chronic ankle instability. *Phys Ther Sport*. 2015;16(2):135-139. <http://dx.doi.org/10.1016/j.ptsp.2014.08.003>
320. Villafaña JH, Valdes K. Mobilization with movement and elastic tape application for the conservative management of carpometacarpal joint osteoarthritis. *Journal of hand therapy : official journal of the American Society of Hand Therapists*. 2015;28(1):82-84; quiz 85. <http://dx.doi.org/10.1016/j.jht.2014.08.001>
321. Wade PG, Franklin CVJ. The Effect of Mobilisation and Core Muscle Strengthening For Cervical Spine in Relieving Cervicogenic Headache. *IOSR Journal of Nursing and Health Science*. 2015;4(5):13-16.
322. Youssef AR. Mulligan Mobilization Is More Effective in Treating Diabetic Frozen Shoulder Than the Maitland Technique. *International Journal of Physiotherapy*. 2015;2(5):<http://dx.doi.org/10.15621/ijphy/2015/v2i5/78238>
323. Zemadanis K, Sykaras E, Athanasopoulos S, Mandalidis D. Mobilization-with-movement prior to exercise provides early pain and functionality improvements in patients with patellofemoral pain syndrome. *International Musculoskeletal Medicine*. 2015;37(3):101-107.
<http://dx.doi.org/10.1179/1753615415Y.0000000009>

2014

324. Ali A, Shakil-ur-Rehman S, Sibtain F. The efficacy of sustained natural apophyseal glides with and without isometric exercise training in non-specific neck pain. *Pakistan journal of medical sciences*. 2014;30(4):<http://dx.doi.org/10.12669/pjms.304.5148>
325. Bindra S. Hip Rotation MWM for Sacroiliac Joint Dysfunction: A Case Report. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(3):8-11. <http://dx.doi.org/10.5958/0973-5674.2014.00346.3>

REFERENCE LIST

326. Bonnery K. Manipulation of the cervico-thoracic junction accompanied by mobilisation with movement and exercise in a patient with medial epicondylalgia. *Manuelle Therapie*. 2014;18(1):29-37.
<http://dx.doi.org/10.1055/s-0034-1368804>
327. Clar C, Tsertsvadze A, Court R, Hundt GL, Clarke A, Sutcliffe P. Clinical effectiveness of manual therapy for the management of musculoskeletal and non-musculoskeletal conditions: systematic review and update of UK evidence report. *Chiropractic & manual therapies*. 2014;22(1):12. <http://dx.doi.org/10.1186/2045-709x-22-12>
328. Dabholkar A, Kumari S, Yardi S. Comparative Study of Short Term Response between Maitland Mobilization and Mulligan's Mobilization with Movement of Hip Joint in Osteoarthritis of Knee Patients Identified as Per Clinical Prediction Rule. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(4):6-10.
<http://dx.doi.org/10.5958/0973-5674.2014.00002.1>
329. El-Sodany AM, Alayat MSM, Zafer AMI. Sustained natural apophyseal glides mobilization versus manipulation in the treatment of cervical spine disorders: a randomized controlled trial. *International journal of advanced research*. 2014;2(6):274 - 280.
330. Gautam R, Dhamija JK, Puri A. Comparison of Maitland and Mulligan Mobilization in Improving Neck Pain, ROM and Disability. *International journal of physiotherapy and research*. 2014;2(482-487).
331. Gilbreath JP, Gaven SL, Van Lunen BL, Hoch MC. The effects of Mobilization with Movement on dorsiflexion range of motion, dynamic balance, and self-reported function in individuals with chronic ankle instability. *Manual Therapy*. 2014;19(2):152-157.
332. Heiser RD, O'Brien V, Schwartz DA. Joint Mobilization in the Distal Upper Extremity -- Putting Evidence into Practice. *Journal of Hand Therapy*. 2014;27(3):e5-e5.
333. Hendry D, Campbell A, Ng L, Grisbrook TL, Hopper DM. Effect of Mulligan's and Kinesio knee taping on adolescent ballet dancers knee and hip biomechanics during landing. *Scand J Med Sci Sports*. 2014;<http://dx.doi.org/10.1111/sms.12302>
334. Jain TK, Sharma NK. The effectiveness of physiotherapeutic interventions in treatment of frozen shoulder/adhesive capsulitis: A systematic review. *Journal of Back & Musculoskeletal Rehabilitation*. 2014;27(3):247-273. <http://dx.doi.org/10.3233/BMR-130443>
335. Jeong-Hyun S, Gi Duck P, Hoo Sung P. The Effect of Sacroiliac Joint Mobilization on Pelvic Deformation and the Static Balance Ability of Female University Students with SI Joint Dysfunction. *Journal of physical therapy science*. 2014;26(6):845-848. <http://dx.doi.org/10.1589/jpts.26.845>
336. Khan M, Ali SS, Soomro RR. Efficacy of C 1-C 2 Sustained Natural Apophyseal Glide (SNAG) Versus Posterior Anterior Vertebral Mobilization (PAVMs) in the Management of Cervicogenic Headache. *Journal of Basic & Applied Sciences*. 2014;10(226-230).
337. Lewis C, Diaz R, Lopez G, Marki N, Olivio B. A preliminary study to evaluate postural improvement in subjects with scoliosis: active therapeutic movement version 2 device and home exercises using the Mulligan's mobilization-with-movement concept. *Journal of Manipulative & Physiological Therapeutics*. 2014;37(7):502-509. <http://dx.doi.org/10.1016/j.jmpt.2014.07.005>
338. Loudon JK, Reiman MP, Sylvain J. The efficacy of manual joint mobilisation/manipulation in treatment of lateral ankle sprains: a systematic review. *British Journal of Sports Medicine*. 2014;48(5):506-509.
339. Malo-Urriés M, Hidalgo-García C, Bueno-Gracia E, Estébanez-de-Miguel E, Lucha-López O, Tricás-Moreno JM. Clinical and ultrasonographic evidence of a proximal positional fault of the radius. A case report. *Manual Therapy*. 2014;19(3):264-269.

REFERENCE LIST

340. Mau H, Baker RT. A MODIFIED MOBILIZATION-WITH-MOVEMENT TO TREAT A LATERAL ANKLE SPRAIN. *International Journal of Sports Physical Therapy*. 2014;9(4):540-548.
341. May JM. *Analysis of an individual clinician's patient outcomes when applying the Mulligan Concept intervention strategy to treat lateral ankle sprains in an intercollegiate athletic training clinic. A dissertation of clinical practice improvement [thesis]*. University of Idaho; 2014.
342. McDowell JM, Johnson GM, Hetherington BH. Mulligan Concept manual therapy: Standardizing annotation. *Manual Therapy*. 2014;19(5):499-503.
343. Page MJ, Green S, Kramer S, et al. Manual therapy and exercise for adhesive capsulitis (frozen shoulder). *Cochrane Database of Systematic Reviews*. 2014;8):<http://dx.doi.org/10.1002/14651858.CD011275>
344. Park SW, Lee HS, Kim JH. The Effectiveness of Intensive Mobilization Techniques Combined with Capsular Distension for Adhesive Capsulitis of the Shoulder. *Journal of physical therapy science*. 2014;26(11):1767-1770. <http://dx.doi.org/10.1589/jpts.26.1767>
345. Pérez HI, Perez JLA, Martinez AG, et al. Is one better than another?: a randomized clinical trial of manual therapy for patients with chronic neck pain. *Manual therapy*. 2014;19(3):215 - 221. <http://dx.doi.org/10.1016/j.math.2013.12.002>
346. Pragassame AS, Kurup MVK. Efficacy of Limited Treatment Frequency of Mulligan's Mobilization with Movement for Frozen Shoulder. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(2):218-223. <http://dx.doi.org/10.5958/j.0973-5674.8.2.089>
347. Razek RA, Shenouda MM. Efficacy of Mulligan's Mobilization with Movement on Pain, Disability, and Range of Motion in Patients with Knee Osteoarthritis: A Randomized Controlled Pilot Study. *Indian Journal of Physiotherapy & Occupational Therapy*. 2014;8(1):242-247. <http://dx.doi.org/10.5958/j.0973-5674.8.1.046>
348. Reid SA, Callister R, Katekar MG, Rivett DA. Effects of cervical spine manual therapy on range of motion, head repositioning, and balance in participants with cervicogenic dizziness: a randomized controlled trial. *Archives of physical medicine and rehabilitation*. 2014;95(9):1603 - 1612. <http://dx.doi.org/10.1016/j.apmr.2014.04.009>
349. Reid SA, Rivett DA, Katekar MG, Callister R. Comparison of mulligan sustained natural apophyseal glides and maitland mobilizations for treatment of cervicogenic dizziness: a randomized controlled trial. *Physical therapy*. 2014;94(4):466 - 476. <http://dx.doi.org/10.2522/ptj.20120483>
350. Shin EJ, Lee BH. The effect of sustained natural apophyseal glides on headache, duration and cervical function in women with cervicogenic headache. *Journal of exercise rehabilitation*. 2014;10(2):131-135. <http://dx.doi.org/10.12965/jer.140098>
351. Son J-H, Park GD, Park HS. The effect of sacroiliac joint mobilization on pelvic deformation and the static balance ability of female university students with si joint dysfunction. *Journal of physical therapy science*. 2014;26(6):845-848. <http://dx.doi.org/10.1589/jpts.26.845>
352. Yadav S, Nijhawan MA, Panda P. Effectiveness of Spinal Mobilization With Leg Movement (SMWLM) in Patients With Lumbar Radiculopathy (L5 / S1 Nerve Root) in Lumbar Disc Herniation. *International Journal of Physiotherapy and Research*. 2014;2(5):712-718.
353. Yoon J-y, Hwang Y-i, An D-h, Oh J-s. Changes in Kinetic, Kinematic, and Temporal Parameters of Walking in People With Limited Ankle Dorsiflexion: Pre-Post Application of Modified Mobilization With Movement Using Talus Glide Taping. *Journal of Manipulative & Physiological Therapeutics*. 2014;37(5):320-325. <http://dx.doi.org/10.1016/j.jmpt.2014.01.007>

REFERENCE LIST

354. Yoon J-y, Oh J-s, An D-h. Three-Dimensional Analysis of Foot Motion After Uphill Walking With Mobilization With Movement Using Tape Applied to the Talocrural Joint in Women With Limited Ankle Dorsiflexion. *Foot & Ankle International*. 2014;35(11):1217-1225.

2013

355. Aiken DL, Vaughn D. The use of functional and traditional mobilization interventions in a patient with chronic thoracic pain: a case report. *The Journal of manual & manipulative therapy*. 2013;21(3):134-141. <http://dx.doi.org/10.1179/2042618612y.0000000024>
356. Baker RT, Nasypany A, Seegmiller JG, Baker JG, Turner T. The Mulligan Concept: Mobilizations With Movement. *International Journal of Athletic Therapy & Training*. 2013;18(1):30-34.
357. Chan-Woo N, Sang-In P, Min-Sik Y, Young-Min K. Effects of the MWM Technique Accompanied by Trunk Stabilization Exercises on Pain and Physical Dysfunctions Caused by Degenerative Osteoarthritis. *Journal of physical therapy science*. 2013;25(9):1137-1140. <http://dx.doi.org/10.1589/jpts.25.1137>
358. Cherian K, Cherian N, Cook C, Kaltenbach JA. Improving tinnitus with mechanical treatment of the cervical spine and jaw. *J Am Acad Audiol*. 2013;24(7):544-555. <http://dx.doi.org/10.3766/jaaa.24.7.3>
359. Choung S-D, Kwon O-Y, Park K-N, Kim S-H, Cynn H-S. Short-term effects of self-mobilization with a strap on pain and range of motion of the wrist joint in patients with dorsal wrist pain when weight bearing through the hand: A case series. *Manual Therapy*. 2013;18(6):568-572.
360. Coombes BK, Bisset L, Brooks P, Khan A, Vicenzino B. Effect of corticosteroid injection, physiotherapy, or both on clinical outcomes in patients with unilateral lateral epicondylalgia: a randomized controlled trial. *Jama*. 2013;309(5):461-469. <http://dx.doi.org/10.1001/jama.2013.129>
361. Delahunt E, Cusack KIM, Wilson L, Doherty C. Joint Mobilization Acutely Improves Landing Kinematics in Chronic Ankle Instability. *Medicine & Science in Sports & Exercise*. 2013;45(3):514-519.
362. Dinkins EM, Stevens-Lapsley J. Management of symptoms of Restless Legs Syndrome with use of a traction straight leg raise: a preliminary case series. *Man Ther*. 2013;18(4):299-302. <http://dx.doi.org/10.1016/j.math.2012.11.002>
363. Doner G, Guven Z, Atalay A, Celiker R. Evaluation of Mulligan's technique for adhesive capsulitis of the shoulder. *Journal of rehabilitation medicine*. 2013;45(1):87 - 91. <http://dx.doi.org/10.2340/16501977-1064>
364. Ghadi P, Verma C. Study of the efficacy of the Mulligan's Movement with Mobilization and Taping Technique as an Adjunct to the Conventional Therapy for Lateral Ankle Sprain. *Indian Journal of Physiotherapy & Occupational Therapy*. 2013;7(3):167-171. <http://dx.doi.org/10.5958/j.0973-5674.7.3.086>
365. González-Iglesias J, Cleland JA, Neto F, Hall T, Fernández-de-las-Peñas C. Mobilization with movement, thoracic spine manipulation, and dry needling for the management of temporomandibular disorder: A prospective case series. *Physiotherapy Theory & Practice*. 2013;29(8):586-595. <http://dx.doi.org/10.3109/09593985.2013.783895>
366. Heiser R, O'Brien VH, Schwartz DA. The use of joint mobilization to improve clinical outcomes in hand therapy: A systematic review of the literature. *Journal of Hand Therapy*. 2013;26(4):297-310. <http://dx.doi.org/10.1016/j.jht.2013.07.004>
367. Hoogvliet P, Randsdorp MS, Dingemanse R, Koes BW, Huisstede BMA. Does effectiveness of exercise therapy and mobilisation techniques offer guidance for the treatment of lateral and medial epicondylitis? A

REFERENCE LIST

- systematic review. *British Journal of Sports Medicine*. 2013;47(17):1112-1119.
<http://dx.doi.org/10.1136/bjsports-2012-091990>
368. Kang MH, Kim JW, Kim MH, Park TJ, Park JH, Oh JS. Influence of walking with talus taping on the ankle dorsiflexion passive range of motion. *Journal of physical therapy science*. 2013;25(8):1011-1013.
<http://dx.doi.org/10.1589/jpts.25.1011>
369. Mhatre BS, Singh YL, Tembhekar JY, Mehta A. Which is the better method to improve “perceived hamstrings tightness” – Exercises targeting neural tissue mobility or exercises targeting hamstrings muscle extensibility? *International Journal of Osteopathic Medicine*. 2013;16(3):153-162.
<http://dx.doi.org/10.1016/j.ijosm.2013.06.002>
370. Nam C-W, Park S-I, Yong M-S, Kim Y-M. Effects of the MWM Technique Accompanied by Trunk Stabilization Exercises on Pain and Physical Dysfunctions Caused by Degenerative Osteoarthritis. *Journal of physical therapy science*. 2013;25(9):1137-1140. <http://dx.doi.org/10.1589/jpts.25.1137>
371. Racicki S, Gerwin S, Diclaudio S, Reinmann S, Donaldson M. Conservative physical therapy management for the treatment of cervicogenic headache: a systematic review. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2013;21(2):113-124.
372. Silva JG, Torres DdFM, Chagas CA, Guimarães F. Anatomical Considerations of The Acromioclavicular Joint for the Application of Mobilization-With-Movement: A Narrative Review. *Journal of Physical Therapy*. 2013;6(2):59-66.
373. Takasaki H, Hall T, Jull G. Immediate and short-term effects of Mulligan's mobilization with movement on knee pain and disability associated with knee osteoarthritis - A prospective case series. *Physiotherapy Theory & Practice*. 2013;29(2):87-95. <http://dx.doi.org/10.3109/09593985.2012.702854>
374. Terada M, Pietrosimone BG, Gribble PA. Therapeutic Interventions for Increasing Ankle Dorsiflexion After Ankle Sprain: A Systematic Review. *Journal of Athletic Training (Allen Press)*. 2013;48(5):696-709.
375. Teys P, Bisset L, Collins N, Coombes B, Vicenzino B. One-week time course of the effects of Mulligan's Mobilisation with Movement and taping in painful shoulders. *Manual therapy*. 2013;18(5):372 - 377.
<http://dx.doi.org/10.1016/j.math.2013.01.001>
376. Villafane JH, Langford D, Alguacil-Diego IM, Fernandez-Carnero J. Management of trapeziometacarpal osteoarthritis pain and dysfunction using mobilization with movement technique in combination with kinesiology tape: a case report. *Journal of chiropractic medicine*. 2013;12(2):79-86.
<http://dx.doi.org/10.1016/j.jcm.2013.06.001>
377. Wheeler TJ, Basnett CR, Hanish MJ, et al. Fibular taping does not influence ankle dorsiflexion range of motion or balance measures in individuals with chronic ankle instability. *Journal of Science and Medicine in Sport*. 2013;16(6):488-492. <http://dx.doi.org/10.1016/j.jsams.2013.02.012>
378. Woodman R, Berghorn K, Underhill T, Wolanin M. Utilization of mobilization with movement for an apparent sprain of the posterior talofibular ligament: A case report. *Manual Therapy*. 2013;18(1):e1-e7.
379. Yoon J-Y, An D-H, Oh J-S. Plantarflexor and Dorsiflexor Activation during Inclined Walking with and without Modified Mobilization with Movement Using Tape in Women with Limited Ankle Dorsiflexion. *Journal of physical therapy science*. 2013;25(8):993-995. <http://dx.doi.org/10.1589/jpts.25.993>

REFERENCE LIST

2012

380. Djordjevic OC, Vukicevic D, Katunac L, Jovic S. Mobilization with movement and kinesiotopeing compared with a supervised exercise program for painful shoulder: results of a clinical trial. *Journal of manipulative and physiological therapeutics*. 2012;35(6):454 - 463. <http://dx.doi.org/10.1016/j.jmpt.2012.07.006>
381. Ghosh Dasm P. Comparative Analysis of Cyriax Approach Versus Mobilization with Movement Approach in the Treatment of Patients with Lateral Epicondylitis. *Indian Journal of Physiotherapy & Occupational Therapy*. 2012;6(1):96-102.
382. Kim LJ, Choi H, Moon D. Improvement of Pain and Functional Activities in Patients with Lateral Epicondylitis of the Elbow by Mobilization with Movement: a Randomized, Placebo-Controlled Pilot Study. *Journal of physical therapy science*. 2012;24(9):787-790.
383. Lenker C, Larocca N, Lee J, Tucker P. The Use of Thoracic Mobilization With Movement to Treat Shoulder Impingement in Older Adults: A Case Study. *Topics in Geriatric Rehabilitation*. 2012;28(3):195-200. <http://dx.doi.org/10.1097/TGR.0b013e31825d3834>
384. Moutzouri M, Perry J, Joanna P, Billis E, Eudokia B. Investigation of the effects of a centrally applied lumbar sustained natural apophyseal glide mobilization on lower limb sympathetic nervous system activity in asymptomatic subjects. *Journal of manipulative and physiological therapeutics*. 2012;35(4):286 - 294. <http://dx.doi.org/10.1016/j.jmpt.2012.04.016>
385. Mulligan BR. *Self Treatments for Back, Neck and Limbs: A New Approach*. 3rd. Wellington, New Zealand: Plane View Services; 2012.
386. Reid SA, Rivett DA, Katekar MG, Callister R. Efficacy of manual therapy treatments for people with cervicogenic dizziness and pain: protocol of a randomised controlled trial. *BMC musculoskeletal disorders*. 2012;13(201). <http://dx.doi.org/10.1186/1471-2474-13-201>
387. Singh D. An Experimental Study on effects of Mulligan Mobilization Technique and Isometric Exercises in Patients with Osteoarthritis Knee. *Indian Journal of Physiotherapy & Occupational Therapy*. 2012;6(4):158-162.
388. Solanki D, Kage V. A Comparative Study on Immediate effect of Adductor Stretch MWM Versus MET in Subjects with Hip Adductor Tightness - Randomized Clinical Trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2012;6(4):44-47.
389. Bhardwaj P, Dhawan A. The relative efficacy of mobilization with movement versus Cyriax physiotherapy in the treatment of lateral epicondylitis. *Indian Journal of Physiotherapy & Occupational Therapy*. 2011;5(1):142-146.
390. Bisset L, Hing W, Vicenzino B. The efficacy of mobilisations with movement treatment on musculoskeletal pain: a systematic review and meta-analysis. *Physiotherapy (united kingdom)*. 2011;97(eS134). <http://dx.doi.org/10.1016/j.physio.2011.04.002>
391. Bisset L, Hing W, Vicenzino B. A systematic review of the efficacy of MWM. In: Vicenzino B, Hing W, Rivett D, Hall T, eds. *Mobilisation With Movement: The Art and the Science*. Chatswood, NSW: Churchill Livingstone Australia; 2011:26-64.
392. Browning P, Gangwal K. The effect of a cervical rotational snag on median nerve extensibility in an asymptomatic population, a within subjects randomised design. *Physiotherapy (united kingdom)*. 2011;97(eS162 - eS163). <http://dx.doi.org/10.1016/j.physio.2011.04.002>

REFERENCE LIST

393. Carrasco NM, Bergas MJT, Sánchez CO, Blanco MVV. Effects of Mulligan's technique on a burn patient. A case report. *Revista Iberoamericana de Fisioterapia y Kinesiología*. 2011;14(2):90-93.
394. González-Iglesias J, Cleland JA, del Rosario Gutierrez-Vega M, Fernández-de-las-Peñas C. Multimodal management of lateral epicondylalgia in rock climbers: a prospective case series. *Journal of manipulative and physiological therapeutics*. 2011;34(9):635-642. <http://dx.doi.org/10.1016/j.jmpt.2011.09.003>
395. Kaneko S, Takasaki H. Forearm pain, diagnosed as intersection syndrome, managed by taping: a case series. *The Journal of orthopaedic and sports physical therapy*. 2011;41(7):514-519. <http://dx.doi.org/10.2519/jospt.2011.3569>
396. Kumar D. *A Study on the Efficacy of Mulligan Concept in Cervical Spine pain and Stiffness*. Amritsar, India: <http://hdl.handle.net/10603/10445>; 2011.
397. Kumar D, Sandhu JS, Broota A. Efficacy of Mulligan concept (NAGs) on pain at available end range in cervical spine: a randomised controlled trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2011;5(1):154-158.
398. Lystad RP, Bell G, Bonnevie-Svendsen M, Carter CV. Manual therapy with and without vestibular rehabilitation for cervicogenic dizziness: a systematic review. *Chiropractic & manual therapies*. 2011;19(1):21. <http://dx.doi.org/10.1186/2045-709x-19-21>
399. Mittal M, Hameed UA, Chaudhary A, Ruchika. Mulligan's Manual Therapy Treatment Dosing for Subacute Mechanical Neck Pain - A Comparison between Loading and Movement Disorders of Cervical Spine. *Indian Journal of Physiotherapy & Occupational Therapy*. 2011;5(2):89-96.
400. Park JT. Evaluation and treatment of cervicogenic headache: a case study using interventions of soft tissue, joint mobilization, and stabilization exercises. *Orthopaedic Physical Therapy Practice*. 2011;23(4):190-196.
401. Shrivastava A, Shyam AK, Sabnis S, Sancheti P. Randomised controlled study of Mulligan's Vs. Maitland's mobilization technique in adhesive capsulitis of shoulder joint. *Indian Journal of Physiotherapy & Occupational Therapy*. 2011;5(4):12-15.
402. Takasaki H, Hall T, Oshiro S, Kaneko S, Ikemoto Y, Jull G. Normal kinematics of the upper cervical spine during the Flexion-Rotation Test - In vivo measurements using magnetic resonance imaging. *Man Ther*. 2011;16(2):167-171. <http://dx.doi.org/10.1016/j.math.2010.10.002>
403. Vicenzino B, Hing W, Rivett D, Hall T. *Mobilisation with Movement: The Art and the Science*. Chatswood: Elsevier Australia; 2011.
404. Yoshikawa A, Ogata Y, Yanagihashi R, Fujiwara T, Abe K. Analysis of a Manual Technique for Cervical Rotation using a Small Three Dimensional Strain Meter. *Rigakuryoho Kagaku*. 2011;26(4):507-510.

2010

405. Ahuja D. Efficacy of mobilization with movement (MWM) in lateral epicondylalgia: role of pain mechanisms- a narrative review. *Journal of Physical Therapy*. 2010;2(1):19-34.
406. Amro A, Diener I, Bdair WO, Hamed IM, Shalabi AI, Ilyyan DI. The effects of Mulligan mobilisation with movement and taping techniques on pain, grip strength, and function in patients with lateral epicondylitis. *Hong kong physiotherapy journal*. 2010;28(1):19 - 23. <http://dx.doi.org/10.1016/j.hkpj.2010.11.004>
407. Delahunt E, McGrath A, Doran N, Coughlan GF. Effect of taping on actual and perceived dynamic postural stability in persons with chronic ankle instability. *Archives of physical medicine and rehabilitation*. 2010;91(9):1383-1389. <http://dx.doi.org/10.1016/j.apmr.2010.06.023>

REFERENCE LIST

408. Foster RL, O'Driscoll M. Current concepts in the conservative management of the frozen shoulder. *Physical Therapy Reviews*. 2010;15(5):399-404. <http://dx.doi.org/10.1179/174328810X12786297204710>
409. Fujinawa O, Kondo Y, Tachikawa K, Jigami H, Hirose K, Matsunaga H. Athletic Rehabilitation of a Platform Diver for Return to Competition after a Shoulder Dislocation. *XIth International Symposium for Biomechanics & Medicine in Swimming*. 2010;11):362-364.
410. Hall T, Briffa K, Hopper D. The influence of lower cervical joint pain on range of motion and interpretation of the flexion-rotation test. *The Journal of manual & manipulative therapy*. 2010;18(3):126-131. <http://dx.doi.org/10.1179/106698110X12640740712293>
411. Hall T, Briffa K, Hopper D, Robinson K. Long-Term Stability and Minimal Detectable Change of the Cervical Flexion-Rotation Test. *Journal of Orthopaedic & Sports Physical Therapy*. 2010;40(4):225-229. <http://dx.doi.org/10.2519/jospt.2010.3100>
412. Hall TM, Briffa K, Hopper D, Robinson K. Comparative analysis and diagnostic accuracy of the cervical flexion-rotation test. *The journal of headache and pain*. 2010;11(5):391-397. <http://dx.doi.org/10.1007/s10194-010-0222-3>
413. Hall TM, Briffa K, Hopper D, Robinson KW. The relationship between cervicogenic headache and impairment determined by the flexion-rotation test. *Journal of manipulative and physiological therapeutics*. 2010;33(9):666-671. <http://dx.doi.org/10.1016/j.jmpt.2010.09.002>
414. Hoch MC, McKeon PO. The effectiveness of mobilization with movement at improving dorsiflexion after ankle sprain. *Journal of sport rehabilitation*. 2010;19(2):226-232. <http://dx.doi.org/10.1123/jsr.19.2.226>
415. Hotwani R, Metgud S, Ganesh BR. Comparison of McConnell patellar taping versus mobilisation with movement in chronic knee osteoarthritis: a randomized clinical trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2010;4(4):132-136.
416. Luzenski KL, Chaconas EJ, Dinkins EM. Management of a patient with chronic ankle instability utilizing mobilization with movement combined with neuromuscular re-education and patient self-taping in return to athletic activity. *Journal of Manual & Manipulative Therapy (Maney Publishing)*. 2010;18(4):230-231.

2009

417. Fernández-Carnero J, Fernández-de-las-Peñas C, Cleland JA. Mulligan's Mobilization with Movement and Muscle Trigger Point Dry Needling for the Management of Chronic Lateral Epicondylalgia: A Case Report. *Journal of Musculoskeletal Pain*. 2009;17(4):409-415.
418. Ho C-YC, Sole G, Munn J. The effectiveness of manual therapy in the management of musculoskeletal disorders of the shoulder: A systematic review. *Manual Therapy*. 2009;14(5):463-474.
419. Ho K-Y, Hsu A-T. Displacement of the head of humerus while performing "mobilization with movements" in glenohumeral joint: A cadaver study. *Manual Therapy*. 2009;14(2):160-166. <http://dx.doi.org/https://doi.org/10.1016/j.math.2008.01.008>
420. Hopper D, Samsson K, Hulenik T, Ng C, Hall T, Robinson K. The influence of Mulligan ankle taping during balance performance in subjects with unilateral chronic ankle instability. *Phys Ther Sport*. 2009;10(4):125-130. <http://dx.doi.org/10.1016/j.ptsp.2009.07.005>
421. Kelley MJ, McClure PW, Leggin BG. Frozen shoulder: evidence and a proposed model guiding rehabilitation. *The Journal of orthopaedic and sports physical therapy*. 2009;39(2):135-148. <http://dx.doi.org/10.2519/jospt.2009.2916>

REFERENCE LIST

422. Pagorek S. Effect of Manual Mobilization with Movement on Pain and Strength in Adults with Chronic Lateral Epicondylitis. *Journal of Sport Rehabilitation*. 2009;18(3):448-457.
<http://dx.doi.org/10.1123/jsr.18.3.448>
423. Richardson CJ. Treatment of cervicogenic headaches using Mulligan 'SNAGS' and postural reeducation: a case report. *Orthopaedic Physical Therapy Practice*. 2009;21(1):33-38.
424. Takasaki H, Hall T, Kaneko S, Iizawa T, Ikemoto Y. Cervical segmental motion induced by shoulder abduction assessed by magnetic resonance imaging. *Spine*. 2009;34(3):E122-126.
<http://dx.doi.org/10.1097/BRS.0b013e31818a26d9>
425. Vicenzino B, Smith D, Cleland J, Bisset L. Development of a clinical prediction rule to identify initial responders to mobilisation with movement and exercise for lateral epicondylalgia. *Manual Therapy*. 2009;14(5):550-554.

2008

426. Ambarish AA, Chitra J, Subhash KM. Comparative effectiveness of Mulligan's mobilization in weight bearing and non-weight bearing in the treatment of ankle sprains- a randomized clinical trial. *Indian Journal of Physiotherapy & Occupational Therapy*. 2008;2(4):1-4.
427. Bleakley CM, McDonough SM, MacAuley DC. Some conservative strategies are effective when added to controlled mobilisation with external support after acute ankle sprain: a systematic review. *Australian Journal of Physiotherapy*. 2008;54(1):7-20.
428. Carpenter G. The effects of hip mobilization and mobilization with movement in the physical therapy management of a person with lateral hip pain: a case report. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2008;16(3):170-170.
429. Herd CR, Meserve BB. A Systematic Review of the Effectiveness of Manipulative Therapy in Treating Lateral Epicondylalgia. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2008;16(4):225-237.
430. Hing W, Bigelow R, Bremner T. Mulligan's mobilisation with movement: a review of the tenets and prescription of MWMs. *New Zealand Journal of Physiotherapy*. 2008;36(3):144-164.
431. Kachingwe AF, Phillips B, Sletten E, Plunkett SW. Comparison of manual therapy techniques with therapeutic exercise in the treatment of shoulder impingement: a randomized controlled pilot clinical trial. *The Journal of manual & manipulative therapy*. 2008;16(4):238-247.
<http://dx.doi.org/10.1179/106698108790818314>
432. Manchanda G, Grover D. Effectiveness of movement with mobilization compared with manipulation of wrist in case of lateral epicondylitis. *Indian journal of physiotherapy and occupational therapy*. 2008;2(1):16-21.
433. Moutzouri M, Billis E, Strimpakos N, Kottika P, Oldham JA. The effects of the Mulligan Sustained Natural Apophyseal Glide (SNAG) mobilisation in the lumbar flexion range of asymptomatic subjects as measured by the Zebris CMS20 3-D motion analysis system. *BMC musculoskeletal disorders*. 2008;9(131).
<http://dx.doi.org/10.1186/1471-2474-9-131>
434. Reid SA, Rivett DA, Katekar MG, Callister R. Sustained natural apophyseal glides (SNAGs) are an effective treatment for cervicogenic dizziness. *Manual therapy*. 2008;13(4):357 - 366.
<http://dx.doi.org/10.1016/j.math.2007.03.006>

REFERENCE LIST

435. Teys P, Bisset L, Vicenzino B. The initial effects of a Mulligan's mobilization with movement technique on range of movement and pressure pain threshold in pain-limited shoulders. *Manual therapy*. 2008;13(1):37 - 42. <http://dx.doi.org/10.1016/j.math.2006.07.011>

2007

436. Hall T, Chan HT, Christensen L, Odenthal B, Wells C, Robinson K. Efficacy of a C1-C2 self-sustained natural apophyseal glide (SNAG) in the management of cervicogenic headache. *Journal of orthopaedic and sports physical therapy*. 2007;37(3):100 - 107. <http://dx.doi.org/10.2519/jospt.2007.2379>
437. Konstantinou K, Foster N, Rushton A, Baxter D, Wright C, Breen A. Flexion mobilizations with movement techniques: the immediate effects on range of movement and pain in subjects with low back pain. *Journal of manipulative and physiological therapeutics*. 2007;30(3):178 - 185. <http://dx.doi.org/10.1016/j.jmpt.2007.01.015>
438. McNair PJ, Portero P, Chiquet C, Mawston G, Lavaste F. Acute neck pain: Cervical spine range of motion and position sense prior to and after joint mobilization. *Manual Therapy*. 2007;12(4):390-394.
439. Naik VC, Chitra J, Khatri S. Effectiveness of maitland versus mulligan mobilization technique following post surgical management of colles' - fracture - rct. *Indian journal of physiotherapy and occupational therapy*. 2007;1(4):
440. Ogince M, Hall T, Robinson K, Blackmore AM. The diagnostic validity of the cervical flexion-rotation test in C1/2-related cervicogenic headache. *Man Ther*. 2007;12(3):256-262. <http://dx.doi.org/10.1016/j.math.2006.06.016>
441. Reid A, Birmingham TB, Alcock G. Efficacy of mobilization with movement for patients with limited dorsiflexion after ankle sprain: a crossover trial. *Physiotherapy Canada*. 2007;59(3):166-172.
442. Vasseljen O. Physiotherapy interventions improve tennis elbow with superior long-term outcomes to corticosteroid injections. *Australian Journal of Physiotherapy*. 2007;53(1):61-61.
443. Vicenzino B, Cleland JA, Bisset L. Joint manipulation in the management of lateral epicondylalgia: a clinical commentary. *The Journal of manual & manipulative therapy*. 2007;15(1):50-56. <http://dx.doi.org/10.1179/106698107791090132>
444. Vicenzino B, Paungmali A, Teys P. Mulligan's mobilization-with-movement, positional faults and pain relief: current concepts from a critical review of literature. *Man Ther*. 2007;12(2):98-108. <http://dx.doi.org/10.1016/j.math.2006.07.012>
445. Yang JL, Chang CW, Chen SY, Wang SF, Lin JJ. Mobilization techniques in subjects with frozen shoulder syndrome: randomized multiple-treatment trial. *Physical therapy*. 2007;87(10):1307 - 1315. <http://dx.doi.org/10.2522/ptj.20060295>

2006

446. Bisset L, Beller E, Jull G, Brooks P, Darnell R, Vicenzino B. Mobilisation with movement and exercise, corticosteroid injection, or wait and see for tennis elbow: randomised trial. *BMJ (clinical research ed.)*. 2006;333(7575):939. <http://dx.doi.org/10.1136/bmj.38961.584653.AE>

REFERENCE LIST

447. Creighton D, Krauss J, Pascoe S, Patel H, Pierce J. The effects of tibio-femoral joint traction mobilization on patients with limited passive knee flexion: a case series. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2006;14(3):173-174.
448. da Rocha RCG, Nee R, Hall T, Chopard R. Treatment of persistent knee pain associated with lumbar dysfunction: a case report. *New Zealand Journal of Physiotherapy*. 2006;34(1):31-35.
449. Desantis L, Hasson SM. Use of Mobilization with Movement in the Treatment of a Patient with Subacromial Impingement: A Case Report. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2006;14(2):77-87.
450. Gebhardt TL, Whitman JM, Smith MB. Mobilization with movement as part of a comprehensive physical therapy program for a patient with shoulder impingement: a case report. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 2006;14(3):176-176.
451. Hall T, Beyerlein C, Hansson U, Lim HT, Odermark M, Sainsbury D. Mulligan Traction Straight Leg Raise: A Pilot Study to Investigate Effects on Range of Motion in Patients with Low Back Pain. *Journal of Manual & Manipulative Therapy*. 2006;14(2):95-100. <http://dx.doi.org/10.1179/106698106790820782>
452. Hall T, Hardt S, Schafer A, Wallin L. Mulligan bent leg raise technique--a preliminary randomized trial of immediate effects after a single intervention. *Man Ther*. 2006;11(2):130-135. <http://dx.doi.org/10.1016/j.math.2005.04.009>
453. Moiler K, Hall T, Robinson K. The role of fibular tape in the prevention of ankle injury in basketball: A pilot study. *The Journal of orthopaedic and sports physical therapy*. 2006;36(9):661-668. <http://dx.doi.org/10.2519/jospt.2006.2259>
454. Moulson A, Watson T. A preliminary investigation into the relationship between cervical snags and sympathetic nervous system activity in the upper limbs of an asymptomatic population. *Man Ther*. 2006;11(3):214-224. <http://dx.doi.org/10.1016/j.math.2006.04.003>
455. Slater H, Arendt-Nielsen L, Wright A, Graven-Nielsen T. Effects of a manual therapy technique in experimental lateral epicondylalgia. *Manual therapy*. 2006;11(2):107 - 117. <http://dx.doi.org/10.1016/j.math.2005.04.005>
456. van der Wees PJ, Lenssen AF, Hendriks EJ, Stomp DJ, Dekker J, de Bie RA. Effectiveness of exercise therapy and manual mobilisation in ankle sprain and functional instability: a systematic review. *The Australian journal of physiotherapy*. 2006;52(1):27-37.
457. Vicenzino B, Branjerdporn M, Teys P, Jordan K. Initial changes in posterior talar glide and dorsiflexion of the ankle after mobilization with movement in individuals with recurrent ankle sprain. *Journal of orthopaedic and sports physical therapy*. 2006;36(7):464 - 471. <http://dx.doi.org/10.2519/jospt.2006.2265>

2005

458. Lewis JS, Hewitt JS, Billington L, Cole S, Byng J, Karayiannis S. A randomized clinical trial comparing two physiotherapy interventions for chronic low back pain. *Spine*. 2005;30(7):711 - 721.

2004

459. Collins N, Teys P, Vicenzino B. The initial effects of a Mulligan's mobilization with movement technique on dorsiflexion and pain in subacute ankle sprains. *Manual therapy*. 2004;9(2):77 - 82. [http://dx.doi.org/10.1016/S1356-689X\(03\)00101-2](http://dx.doi.org/10.1016/S1356-689X(03)00101-2)

REFERENCE LIST

460. Hall T, Robinson K. The flexion-rotation test and active cervical mobility--a comparative measurement study in cervicogenic headache. *Man Ther.* 2004;9(4):197-202. <http://dx.doi.org/10.1016/j.math.2004.04.004>
461. Paungmali A, O'Leary S, Souvlis T, Vicenzino B. Naloxone fails to antagonize initial hypoalgesic effect of a manual therapy treatment for lateral epicondylalgia. *Journal of manipulative and physiological therapeutics.* 2004;27(3):180-185. <http://dx.doi.org/10.1016/j.jmpt.2003.12.022>
462. Trudel D, Duley J, Zastrow I, Kerr EW, Davidson R, MacDermid JC. Rehabilitation for patients with lateral epicondylitis: a systematic review. *Journal of hand therapy : official journal of the American Society of Hand Therapists.* 2004;17(2):243-266. <http://dx.doi.org/10.1197/j.jht.2004.02.011>

2003

463. Mulligan BR. The painful dysfunctional shoulder. A new treatment approach using 'Mobilisation with Movement'. *New Zealand Journal of Physiotherapy.* 2003;31(3):140-142.
464. Paungmali A, O'Leary S, Souvlis T, Vicenzino B. Hypoalgesic and sympathoexcitatory effects of mobilization with movement for lateral epicondylalgia. *Physical Therapy.* 2003;83(4):374-383.
465. Paungmali A, Vicenzino B, Smith M. Hypoalgesia induced by elbow manipulation in lateral epicondylalgia does not exhibit tolerance. *Journal of Pain.* 2003;4(8):448-454.

2002

466. Backstrom KM. Mobilization with movement as an adjunct intervention in a patient with complicated De Quervain's tenosynovitis: a case report...including commentary by LaStayo P with author response. *Journal of Orthopaedic & Sports Physical Therapy.* 2002;32(3):86-97.
467. Exelby L. The Mulligan concept: its application in the management of spinal conditions. *Manual Therapy.* 2002;7(2):64-70.
468. Hearn A, Rivett DA. Cervical SNAGs: a biomechanical analysis. *Manual Therapy.* 2002;7(2):71-79.
469. Horton SJ. Acute locked thoracic spine: treatment with a modified SNAG. *Manual Therapy.* 2002;7(2):103-107.
470. Hsieh CY, Vicenzino B, Yang CH, Hu MH, Yang C. Mulligan's mobilization with movement for the thumb: a single case report using magnetic resonance imaging to evaluate the positional fault hypothesis. *Man Ther.* 2002;7(1):44-49. <http://dx.doi.org/10.1054/math.2001.0434>
471. Kochar M, Dogra A. Effectiveness of a specific physiotherapy regimen on patients with tennis elbow: clinical study. *Physiotherapy.* 2002;88(6):333 - 341.
472. Konstantinou K, Foster N, Rushton A, Baxter D. The use and reported effects of mobilization with movement techniques in low back pain management; a cross-sectional descriptive survey of physiotherapists in Britain. *Manual Therapy.* 2002;7(4):206-214.
473. McLean S, Naish R, Reed L, Urry S, Vicenzino B. A pilot study of the manual force levels required to produce manipulation induced hypoalgesia. *Clinical biomechanics (Bristol, Avon).* 2002;17(4):304-308.

2001

474. Abbott JH. Mobilization with movement applied to the elbow affects shoulder range of movement in subjects with lateral epicondylalgia. *Manual therapy.* 2001;6(3):170 - 177. <http://dx.doi.org/10.1054/math.2001.0407>

REFERENCE LIST

475. Abbott JH, Patla CE, Jensen RH. The initial effects of an elbow mobilization with movement technique on grip strength in subjects with lateral epicondylalgia. *Manual therapy*. 2001;6(3):163 - 169.
<http://dx.doi.org/10.1054/math.2001.0408>
476. Exelby L. The locked lumbar facet joint: intervention using mobilizations with movement. *Manual Therapy*. 2001;6(2):116-121.
477. Folk B. Traumatic thumb injury management using mobilization with movement. *Manual Therapy*. 2001;6(3):178-182.
478. Hall T, Cacho A, McNee C, Riches J, Walsh J. Effects of the Mulligan Traction Straight Leg Raise Technique on Range of Movement. *Journal of Manual & Manipulative Therapy*. 2001;9(3):128-133.
<http://dx.doi.org/10.1179/jmt.2001.9.3.128>
479. Wilson E. The Mulligan concept: NAGS, SNAGS and mobilizations with movement. *Journal of Bodywork & Movement Therapies*. 2001;5(2):81-89.

1993-1999

480. Carson PA. The rehabilitation of a competitive swimmer with an asymmetrical breaststroke movement pattern. *Manual Therapy*. 1999;4(2):100-106.
481. Hall T, Robinson K. Mobilisation with movement. *Australian Journal of Physiotherapy*. 1998;Autumn):16-18.
482. O'Brien T, Vicenzino B. A study of the effects of Mulligan's mobilization with movement treatment of lateral ankle pain using a case study design. *Manual Therapy*. 1998;3(2):78-84.
483. Mulligan BR. Manual therapy rounds. Update on spinal mobilisations with leg movement. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 1997;5(4):184-187.
484. Exelby L. Peripheral mobilisations with movement. *Manual Therapy*. 1996;1(3):118-126.
485. Hetherington B. LATERAL LIGAMENT STRAINS OF THE ANKLE, DO THEY EXIST? *Man Ther*. 1996;1(5):274-275. <http://dx.doi.org/10.1054/math.1996.0279>
486. Mulligan BR. Manual therapy rounds. Mobilisations with movement (MWMS) for the hip joint to restore internal rotation and flexion. *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 1996;4(1):35-36.
487. Exelby L. Mobilisations with movement: a personal view. *Physiotherapy*. 1995;81(12):724-729.
488. Mulligan BR. Manual therapy rounds. Spiral mobilizations with leg movement (further mobilizations with movement). *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 1995;3(1):25-27.
489. Mulligan BR. Spinal mobilisations with arm movement (further mobilisations with movement). *Journal of Manual & Manipulative Therapy (Journal of Manual & Manipulative Therapy)*. 1994;2(2):75-77.
490. Mulligan BR. Manual Therapy Rounds: Mobilisations With Movement (MWM'S). *Journal of Manual & Manipulative Therapy*. 1993;1(4):154-156.