

# Effectiveness of McKenzie Exercises versus Mulligan Mobilisation in Treatment of Cervicogenic Headache: A Systematic Review of Randomised Controlled Trials

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## ABSTRACT

**Introduction:** Cervicogenic Headache (CGH) is a secondary headache due to dysfunction of the cervical spine and its associated structures. Various physiotherapy interventions have shown good results in treating cervicogenic headache. Mulligan Mobilisation techniques showed good efficacy in many experimental studies. On the other hand, McKenzie exercises, based on the principle of centralisation of pain, have also shown good effectiveness for treating cervical dysfunction, resulting in decreasing cervicogenic headache intensity and frequency.

**Aim:** Many comparative studies have been done to find the effectiveness of physiotherapy interventions on the treatment of cervicogenic headache, but there are very few studies available comparing the McKenzie exercise protocol versus Mulligan Mobilisation Techniques. The review aims to systematically review different randomised controlled trials done to evaluate the treatment efficiency of Mulligan Mobilisation and McKenzie Protocol and to find out the most effective physiotherapy intervention.

**Materials and Methods:** A literature search was performed on research databases like Scopus, Web of Science, PubMed, Cochrane and search engines such as Google Scholar using MeSH

keywords. This systematic review was done in accordance with the PRISMA guidelines and suitable articles were included following the PICOS model. The quality of articles, internal validity, and data statistics of included studies were assessed using the PEDro Scale.

**Results:** Out of the reviewed articles, 15 Randomised Controlled Trials (RCTs) were found suitable as per PICOS criteria, with a total sample of 1079 participants. All included trials had random allocation and baseline comparability. The blinding of participants was achieved in three studies, while the blinding of therapists was only achieved in two studies. All trials have reported between-group comparisons and point estimates with measures of variability, indicating adequate statistical reporting.

**Conclusion:** Mulligan Mobilisation provided immediate pain relief and is particularly beneficial in acute symptom management, whereas the McKenzie protocol provided long-term benefits, focusing on posture correction and patient-led self-management of cervicogenic headache.

**Keywords:** Acute symptom, Internal validity, Physiotherapy intervention.

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