

PHYSIOTHERAPY OF KNEE OSTEOARTHRITIS WITH MECHANICAL TRACTION IN A NUREMBERG SUSPENSION GRID

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OBJECTIVES

The aim of the study was to investigate the extent to which passive treatments, complemented by active movement therapy, affect the physical function of patients with knee osteoarthritis.

METHODS

The study was conducted between February 2021 and February 2023 at a rehabilitation department in the city of Harkany, Hungary and investigated the extent of improvement in patients with knee osteoarthritis when mechanical joint traction and active mobility therapy were used together. A total of 45 people (n=45) with knee osteoarthritis were separated into 3 groups: 15 patients were assigned to a mechanical traction mobility therapy group (MT+ATCs), 15 patients received active mobility therapy (ATCs) and 15 patients received no other therapy (KCs). Three weeks after the start of treatment, we measured the patients' pain levels, knee joint range of motion, mobility and self-care. Descriptive statistics, two-sample t-test, ANOVA, Mann-Whitney, Wilcoxon, and Kruskal-Wallis tests were performed. Results were considered significant at p<0.05.

RESULTS

The mean age of the study sample was limited to 85.33 ± 7.34 years. In the group-control comparison and in the within-group pre-post tests, the pain score for MT+ATCs decreased significantly from 6.8 ± 2.01 to 1.53 ± 1.36 (p<0.05). There was also a significant reduction in the Timed up and go test score from 12.57 ± 3.8 seconds at the start of treatment to 8.02 ± 1.51 seconds (p<0.05). The knee joint flexion range of motion increased significantly from 101.47° ± 13.91° to 112.73° ± 9.06° for the MT+ATCs group (p<0.05).

CONCLUSIONS

Based on the evaluation of the results, it can be said that active movement therapy in combination with mechanical traction is a more effective treatment method in physiotherapy than active movement therapy alone. The range of motion in the extensor joint was measured at physiological values in both the Pre and Post measurements.

PATIENTS	MT+ATCs	ATCs	KCs
MAN	7	6	3
WOMAN	8	9	12
MINIMIM AGE	55	61	71
MAXIMUM AGE	77	76	96
AVERAGE AGE	66.80	69.33	85.33

Table 1.
Average age and incidence of patients in the study. (2023)

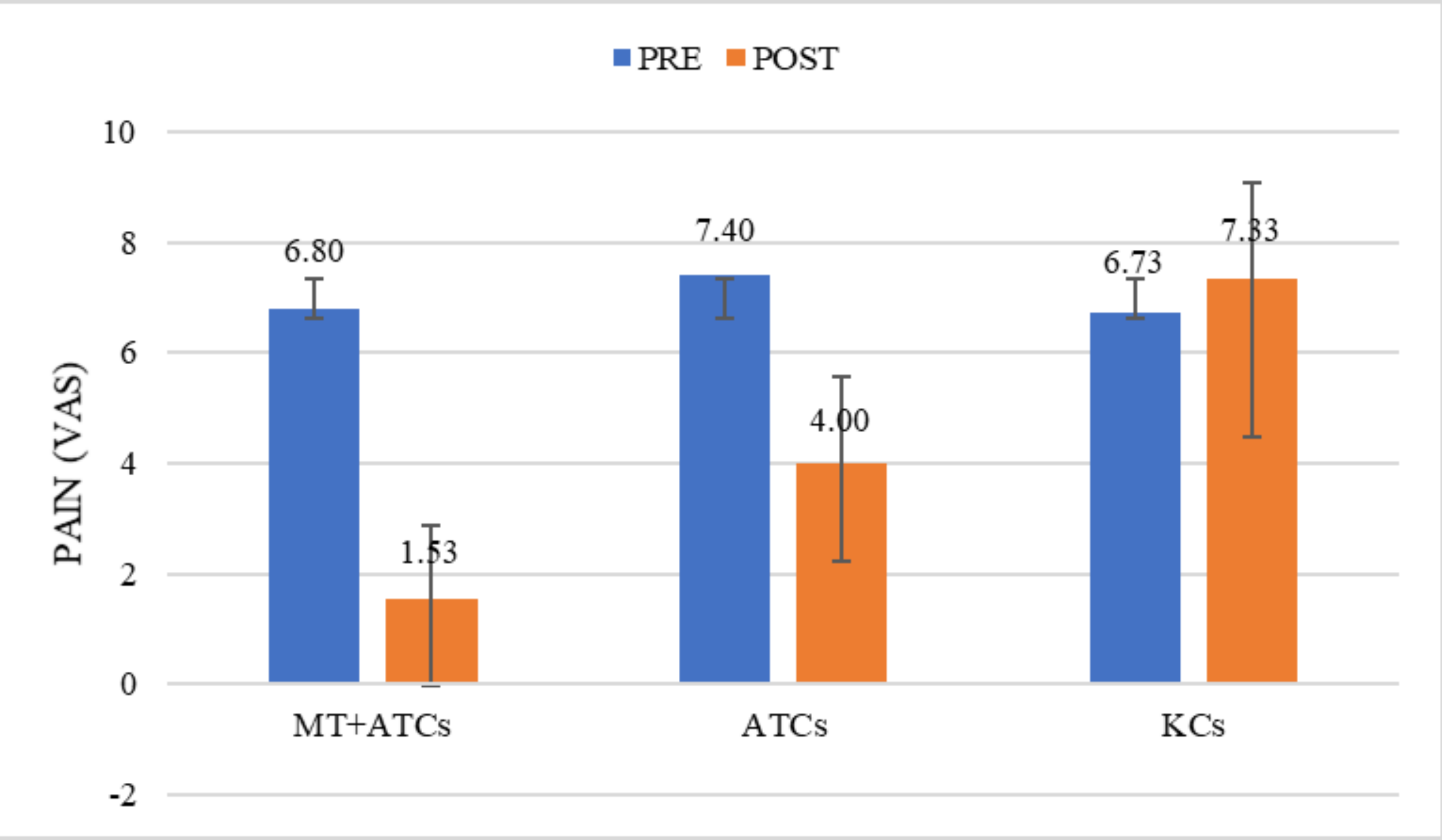


Figure 1.
Change in the degree of pain. (2023)

TIMED UP AND GO TEST			
	PRE	POST	P
ATCs	12.8±4.58	10.26±3.44	0.001
MT+ATCs	12.57±3.8	8.02±1.51	0.001
KCs	25.49±10.83	30.33±13.21	0.001
RESULTS BETWEEN GROUPS			
1V2	0.000	0.000	0.014
1V3			0.000
2V3			0.000

Table 2.
Timed up and go test results. (2023)

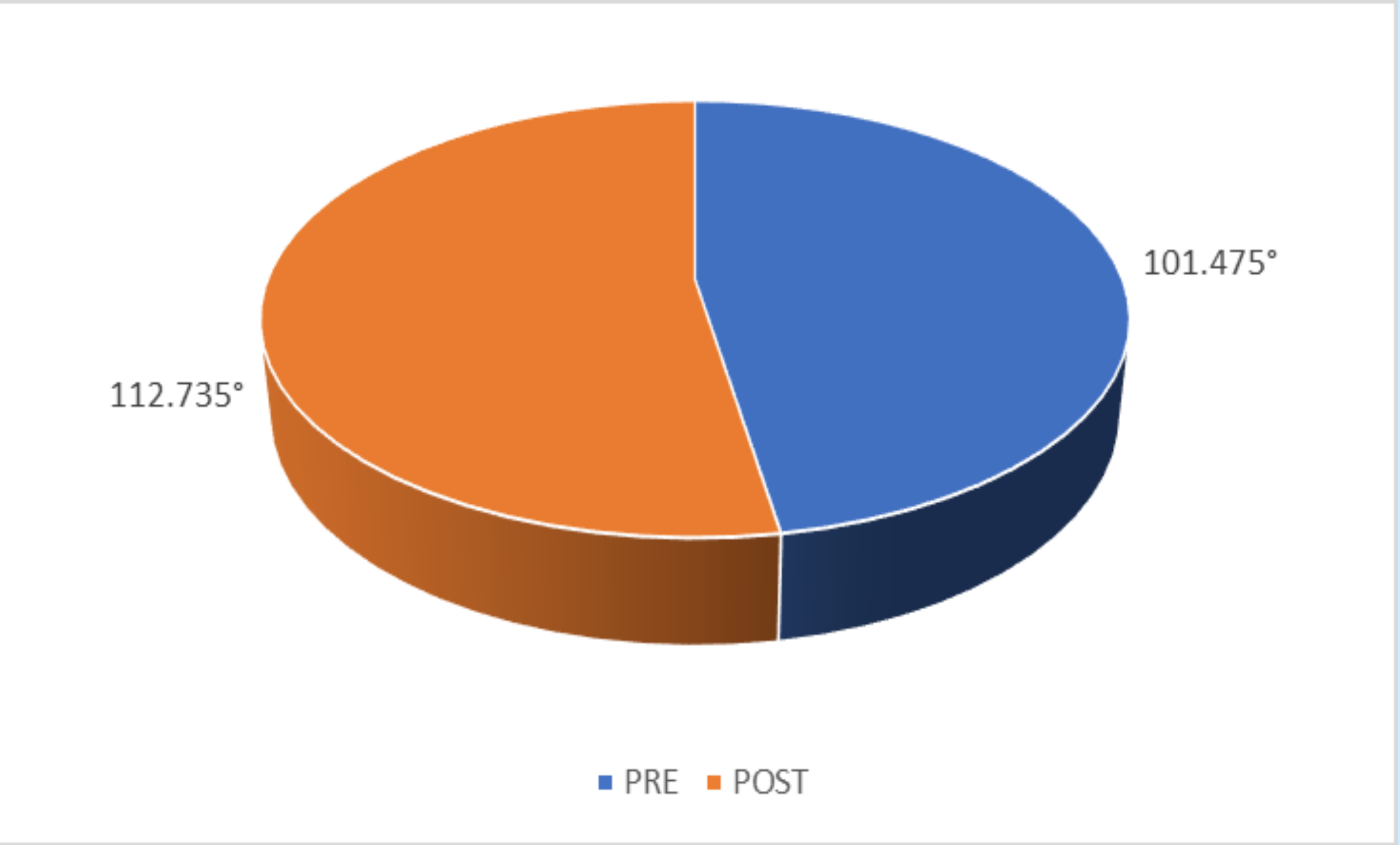


Figure 2.
The change in the flexion range of motion of the knee joint. (2023)



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