

## ABSTRACT



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### **Difference in Addition of Mulligan's Mobilization With Movement Techniques in Implementation of Close Kinetic Chain Exercise on Improved Joint Mobility and Decreased Disability in Knee Osteoarthritis**

Consists of VI Chapter, 95 Pages, 11 Tables, 10 Images, 3 Grafik, 9 Appendix

**Objective :** To find out the difference of effect of addition of MWM technique on application of close kinetic chain exercise to increase joint mobility and decrease of disability in case of knee osteoarthritis. **Methods :** This study was a type of quasi experimental study. Samples were chosen based on purposive sampling technique. Group I treatment with close kinetic chain exercise, treatment group II with close kinetic chain and MWM exercises. Treatment group I was measured using goniometer before intervention have value and standar deviation  $94,62 \pm 15,06$  and after intervention  $117,23 \pm 8,85$  and using WOMAC score before intervention have value  $56,46 \pm 14,7$  and after intervention  $29,38 \pm 10,22$  while treatment group II with using goniometer  $90,77 \pm 14,12$  and after intervention  $128 \pm 5,15$  and while for measured using WOMAC before intervention  $58,38 \pm 13,58$  and after intervention  $17,7 \pm 6,73$ . **Result :** Normality test with shapiro wilk test was obtained with normal diffusion data while homogeneity test with Levene's test got homogenous data. The result of hypothesis test I and II with paired sample t-test was obtained  $p = 0.0001$  and hypothesis test III with independent sample t-test shows the value of  $p = 0,001$  for the increase of joint mobility and  $p$  value =  $0,002$  for disability degradation. **Conclusion :** There is a significant difference in the addition of MWM technique to the application of close kinetic chain exercise to increased joint mobility and decreased disability in cases of knee osteoarthritis.

**Keywords :** knee osteoarthritis, MWM, close kinetic chain exercise.