



ABSTRACT

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EFFECT OF ADDITIONAL ECCENTRIC QUADRICEPS TRAINING ON ULTRASOUND (US) INTERVENTION ON KNEE FUNCTIONAL IMPROVEMENT IN CASE OSTEOARTHRITIS

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Objective: To find the effect of additional eccentric quadriceps training on ultrasound (US) intervention on knee functional improvement at Osteoarthritis.

Methods: This study is an experimental study to determine the effect of money intervention at the subject. The subjects consisted of 24 men and women aged 50-65 years, and selected based on purposive sampling technique using questionnaires. The subjects are grouped into two treatment, the first treatment group consisted of 12 people with ultrasound interventions while the treatment group II consisted of 12 people with ultrasound intervention with additional eccentric quadriceps exercise. **Results:** hypothesis testing in treatment I with mean before research is (44.66 ± 11.49) , mean after is (42.58 ± 11.40) with paired samples t-test $p < 0.001$ which means giving ultrasound interventions affect the increase in knee function in OA. In the second treatment the mean before research is (46.75 ± 13.45) , mean after research is $(39,00 \pm 11.26)$ with paired samples t-test $p < 0.001$ which means the additional of eccentric quadriceps exercise on ultrasound intervention effect the improvement of knee functional in OA. The hypothesis III test is difference in treatment I is (2.083 ± 0.792) , the difference in treatment II is $(8,00 \pm 3.66)$ with Independent t-Test subjects showed the value of $p = 0.005$. It means there is a differences effect of giving an quadriceps exercise. **Conclusion:** The addition of quadriceps eccentric exercise is better in terms of functional of the knee in osteoarthritis.

Keywords : Knee Functional, Ultrasound, and Eccentric Quadriceps