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Scientific Abstract

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Muscle Strength and Physical Function In Women With Systemic Lupus Erythematosus: A Case Control Study

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Objective : Aim of study was to determine whether or not there were differences in muscle strength and physical function between *Systemic Lupus Erythematosus* (SLE) and healthy women.

Methods & Materials: Case-control design was used to compare SLE and healthy women aged 20-50 years and normal body mass index (BMI). Assessment of upper limb (handgrip) muscle strength used *Jamar Hydraulic Hand Dynamometer* and lower limb (quadriceps) used *Baseline Hydraulic Push Pull Dynamometer*. Physical function is assessed by *Short Physical Performance Battery* (SPPB).

Result: Twenty SLE women aged 31.85 ± 2.53 and BMI 22.37 ± 2.56 compared to twenty healthy women aged 30.51 ± 2.64 and BMI

21.79 ± 2.19 . The case group showed handgrip strength 12.37 ± 4.09 kg, quadriceps strength 7.11 ± 1.91 kg, and physical function score 11.40 ± 0.75 . The control group showed handgrip strength 17.37 ± 4.81 kg, quadriceps strength 10.12 ± 2.41 kg, and physical function score 11.95 ± 0.22 . The result showed a significant difference in muscle strength of upper limb ($p=0.001$), lower limb ($p=0.000$), and physical function ($p=0.002$) between two groups.

Conclusions: Muscle strength and physical function in SLE women significantly lower than healthy women. These results suggest future studies regarding exercise intervention in SLE women.