

UNIVERSITI TEKNOLOGI MARA

**THE EFFECT OF STATIC, PROPRIOCEPTIVE
NEUROMUSCULAR FASCILITATION AND
DYNAMIC STRETCHING ON THE ACTIVATION
OF HAMSTRING MUSCLE AMONG
PREADOLESCENCE**

MOHD AZEMIR BIN MUSTAFA

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for the degree of

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Faculty of Sports Science and Recreation

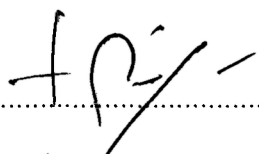
June 2012

Author's Declaration

I declare that the work in this dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referenced work. This topic has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

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Name of candidate : Mohd Azemir Bin Mustafa
Candidate I.D No. : 2010612366
Programme : Master of Sports Science
Faculty : Sports Science and Recreation
Thesis title : The effect of static, proprioceptive neuromuscular fascilitation and dynamic stretching on the activation of hamstring muscle among preadolescence

Signature of candidate: 

Date : 31st May 2012

Abstract

The purpose of this study was to determine the more effective stretching method between static, PNF and dynamic stretching on the activation of hamstring muscles among preadolescence and its relationship with power. Two methods of measuring flexibility in this study employed were sit and reach test and knee flexion test. Power was measured by vertical jump test. Eighty subjects were assigned to four groups consist of static, PNF, dynamic and control group. Each of the group followed six weeks intervention program except the control group. Outcome measures were measured using pre and post test. Statistical analyses used were mixed between-within subjects ANOVA and Pearson product moment correlation. Hamstring muscle activation following interventions with PNF was superior compared to other forms of stretching ($p < 0.05$). Sit and reach test, $F(3, 76) = 25.57; p < 0.05$, knee flexion test (dominant leg), $F(3, 76) = 17.414; p < 0.05$, knee flexion test (non dominant leg), $F(3, 76) = 22.264; p < 0.05$. Relationship between sit and reach test with vertical jump, $r = -0.435, p < 0.05$. As a conclusion, PNF stretching was the effective treatment compared to static or dynamic stretching, however moderate and inversed relationship between flexibility and power.

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