Abstract

Background:

Flexibility is thought to be essential to regular biomechanical function. Athletes who have tight hamstrings are more likely to sustain injuries again, perform worse, experience pain after working out, and have poorer coordination. Hamstring tightness is more common in the right lower extremity. The hamstring muscles are commonly linked to movement dysfunction at the lumbar spine, pelvis, and lower limbs, in addition to low back pain and irregular gait.

Study design: This is a correlation study.

Methodology: Total 65 subjects (43 males 22 females) involved, with mean age 20.62±1.72 of years, were included in the study. The hamstring muscle tightness was measured by active knee extension test using universal goniometer and hamstring muscle strength was measured by isometric end range hamstring test with hand held dynamometer.

Results: Spearman's correlation coefficient test showed that there is no correlation ($r = -0.009$, $p<0.05$) between hamstring muscle tightness and hamstring muscle strength, and also among male ($r= -0.024$, $p<0.05$) and female young adults ($r= -0.073$, $p<0.05$).

Conclusion: Hamstring muscle tightness is significantly not correlated to hamstring muscle strength among healthy young adults. Addressing flexibility deficits may enhance strength and potentially mitigate injury risk. These insights can guide physiotherapy assessments and interventions targeting hamstring dysfunction.

Keywords: Hamstring muscle tightness, hamstring muscle strength, Handheld Dynamometer, correlation study.

Table of Contents

Sl. No.	NAME OF CONTENTS	PAGE NO.
01	INTRODUCTION	1-3
02	LITERATURE REVIEW	4-6
03	AIMS & OBJECTIVES	7-8
04	HYPOTHESES	9
05	MATERIALS & METHODS	10-15
06	DATA ANALYSIS	16-17
07	RESULTS	18-23
08	DISCUSSION	24-27
09	CONCLUSION	28-29
10	FUTURE SCOPE	30-31