Journal of Health and Rehabilitation Research JHRR

https://doi.org/10.61919/jhrr.v4iICIC1.1978

Conference Abstract

Effects of Agility Training on Muscle Strength in Young Adults

Mazahir Zia[1]

[1]Assistant Professor, Department of Health, Physical Education and Sports Sciences, University of Karachi, Karachi, Pakistan

***Correspondence: Dr. Mazahir Zia P.T, mzia@uok.edu.pk**

ABSTRACT

Background: Muscular strength is an important determinant of physical performance, movement competence, and long-term musculoskeletal health. Agility training, which involves rapid acceleration, deceleration, and multidirectional movement, may improve neuromuscular performance; however, evidence regarding its effect on muscle strength in non-athletic young adults remains limited. **Objective**: To determine the effect of an eight-week agility training program on muscle strength in young adults. **Methods**: This quasi-experimental study was conducted at the Department of Health, Physical Education and Sports Sciences and the Directorate of Physical Education, University of Karachi. A total of 200 participants aged 18–25 years were recruited, and data from 180 participants were analyzed after attrition. Participants were allocated to an experimental group (n = 90) and a control group (n = 90). The experimental group completed an eight-week agility training program with two sessions per week, while the control group continued their usual activities. Muscle strength was assessed before and after the intervention using a Back and Leg Dynamometer. Within- and between-group comparisons were performed to evaluate changes in muscle strength. **Results**: The experimental group showed a significant improvement in muscle strength, increasing from 73.91 ± 40.56 to 84.13 ± 41.26 ($p < 0.001$). The control group demonstrated only slight changes over the same period. The improvement in the experimental group was greater than that observed in the control group. **Conclusion**: An eight-week agility training program may improve muscle strength in young adults. Agility training appears to be a practical and accessible exercise approach for enhancing physical fitness and musculoskeletal function in this population. Keywords: Agility training, Muscle strength, young adults, Physical fitness.

"Cite this Article" | Published: 04 June 2024

Author Contributions: Concept, Design, Data Collection and Drafting: MZ. **Ethical Approval**: University of Karachi, Karachi, Pakistan. **Informed Consent**: Written informed consent was obtained from all participants; **Conflict of Interest**: The authors declare no conflict of interest; Funding: No external funding; **Data Availability**: Available from the corresponding author on reasonable request.

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