

INTRODUCTION

The core is defined as part of the lumbo-pelvic hip complex consisting of more than 29 attachments.¹

Research suggests that enhanced core strength contributes to the advancement of athletic performance due to improvements in the following attributes: balance and stability, power generation, core endurance, neuromuscular control and injury prevention.²⁻¹⁰

Current research is limited in exploring the role of core stability on athletic performance in female > male athletes, non-youth athletes, and in recreational environments (vs. rehabilitation settings).^{1-2,5}

PURPOSE

To see the influence of an 8 week core training program on sprinting and mid distance running time and economy.

SIGNIFICANCE OF RESEARCH

Number of Individuals 18-25 years old.¹¹
35,042,911 or 10.42% of the United States population

United States Recreational Athlete Population.¹²
232,600,000 Individuals

There is a limited research on the overall significance of core strength and running performance.

Google Form



Hung Protocol



References



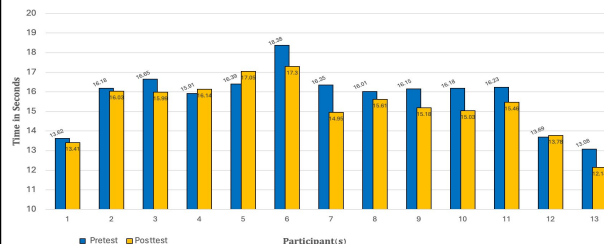
RESULTS

Analysis found a **statistical significant difference** between 100m times following the 8 week core training program. Analysis **did not find a significance difference** in the 1 mile run following the 8 week core training program.

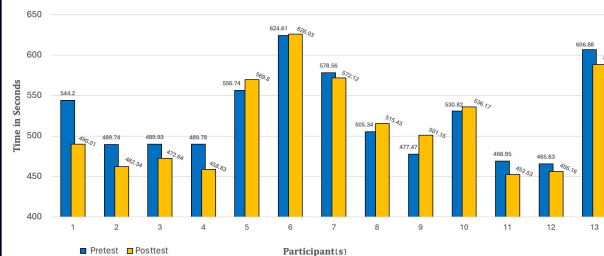
13 participants completed the study

100m: Average decrease: 0.4454s P value: 0.012
1 mile: Average decrease: 9.7377s P value: 0.061

100 M DashR Times



1 Mile DashR Times



METHODS

Inclusion Criteria: (1) Between the ages of 18-25 attending one of the selected Universities listed below; English-speaking.

Recruitment: From Misericordia University, King's College and Wilkes University via (1) Email to Athletic Directors and Coaches **and** (2) Flyers posted around campuses.

Interventions:

- 8 Week Core Strengthening Program

Data Collection:

- 100 Meter Dash Time
- 1 Mile Run Time

CONCLUSION

Based on the results, an 8-week core strengthening program had a greater impact on the 100-meter dash than the one mile run in 18-25 year olds.

Based on results, 8 week core strengthening program had greater effect on short distance run times than mid-distance in 18-25 yr olds.¹⁵

Extended research into core strength and running performance should be done to further its generalizability and significance.