Does playing sports as a child boost your race time as an adult runner?

Is there a correlation between a runner's race time and previous sports participation?

We hypothesized that previous participation in running-intensive, individual sports from the ages of 8-15 will correlate to faster race times later in life.

We expect that participation in "running sport" will produce a ***faster*** speed

Methods

Atlanta Spring Tune Up

Survey *list sports as kids*

Compiled data *grouped into Running vs. Non-Running and Individual vs. Group Sports*

27 Sports

11 Individual

16 Team

13 Running

14 No Running

Running vs. Non Running Sports

Running Sports

Football
Triathlon
Field Hockey
Netball
Ultimate Frisbee
Soccer
Cross Country
Track and Field
Running
Baseball
Softball
Lacrosse
Basketball

Non Running Sports

Canoe
Cheerleading
Equestrian
Golf
Wrestling
Fishing
Swimming
Tennis
Cycling
Ice Hockey
Gymnastics
Volleyball
Karate
Powerlifting

Team vs. Individual Sports

Team Sports

Soccer
Basketball
Volleyball
Softball
Ultimate Frisbee
Baseball
Lacrosse
Cheerleading
Field Hockey
Netball
Ice Hockey

Individual Sports

Tennis
Track & Field
Gymnastics
Swimming
Golf
Cross Country
Cycling
Skiing
Wrestling
Canoe
Karate
Fishing Equestrian
Triathlon
Powerlifting

Methods

Cronbach's Alpha Reliability Test
categorize sports

Edited participants *removed speedless, unanswered questions, and specific sports*

(No dance, speedball, or mountain biking)

Averaged, Graphed, Statistical Significance

Methods

Removed people without times

team sports

Pivot Table

average for each type of sport

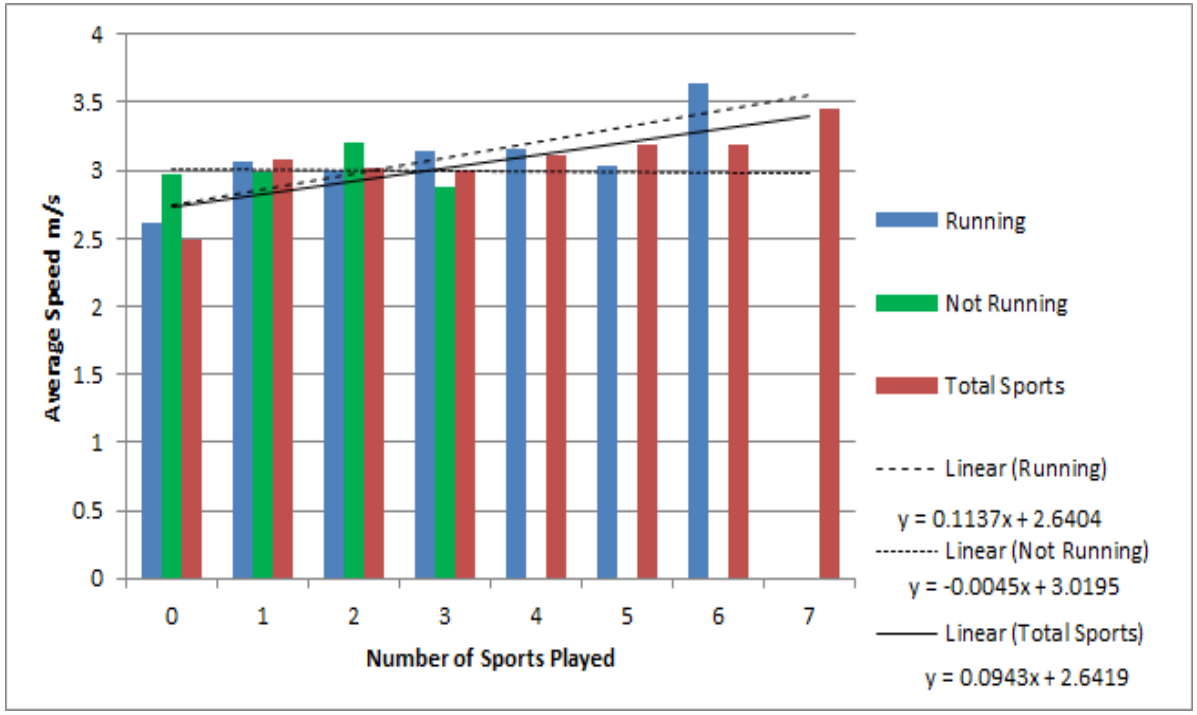
T Test

statistically significant?

Population

	Sample	Race
Total Participants	131	1033
Average Speed (m/s)	3.00	2.75
% Female	49.62	53.34

Playing sports in youth predicts speed in races later in life.

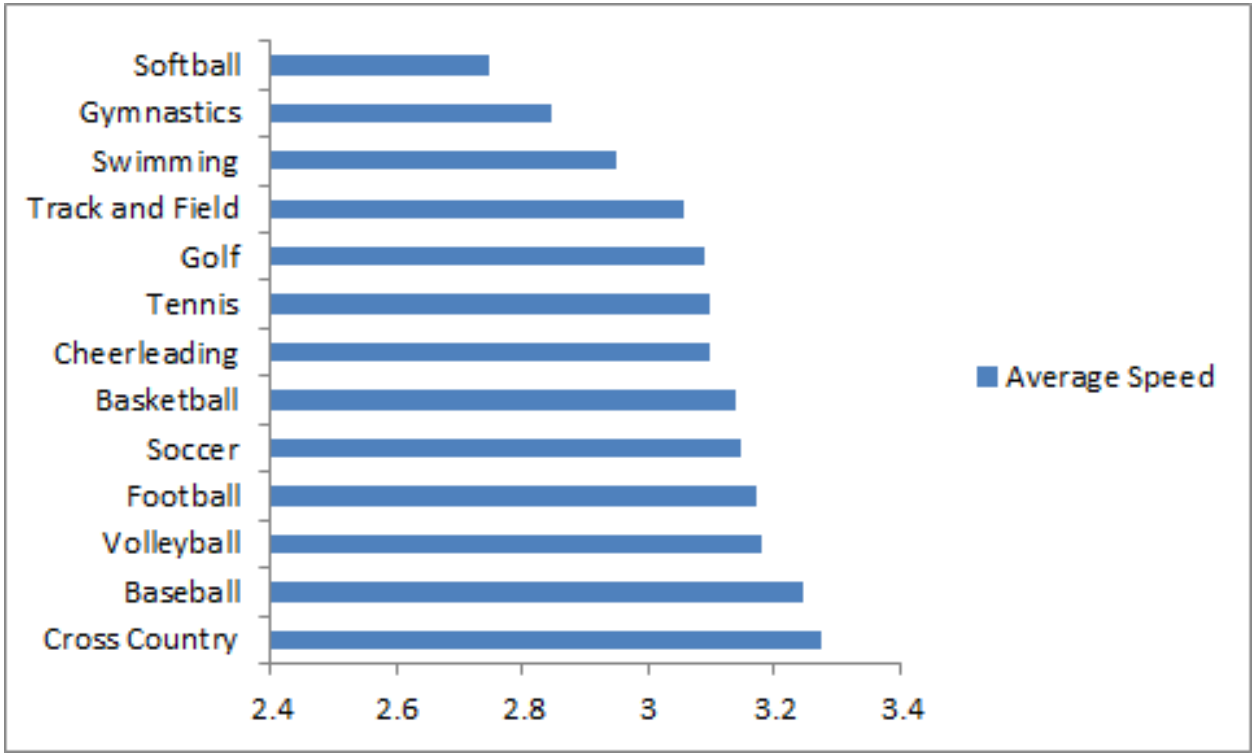


Average of 0 running sports compared to compared to average of all running sports.
$p < 0.05$

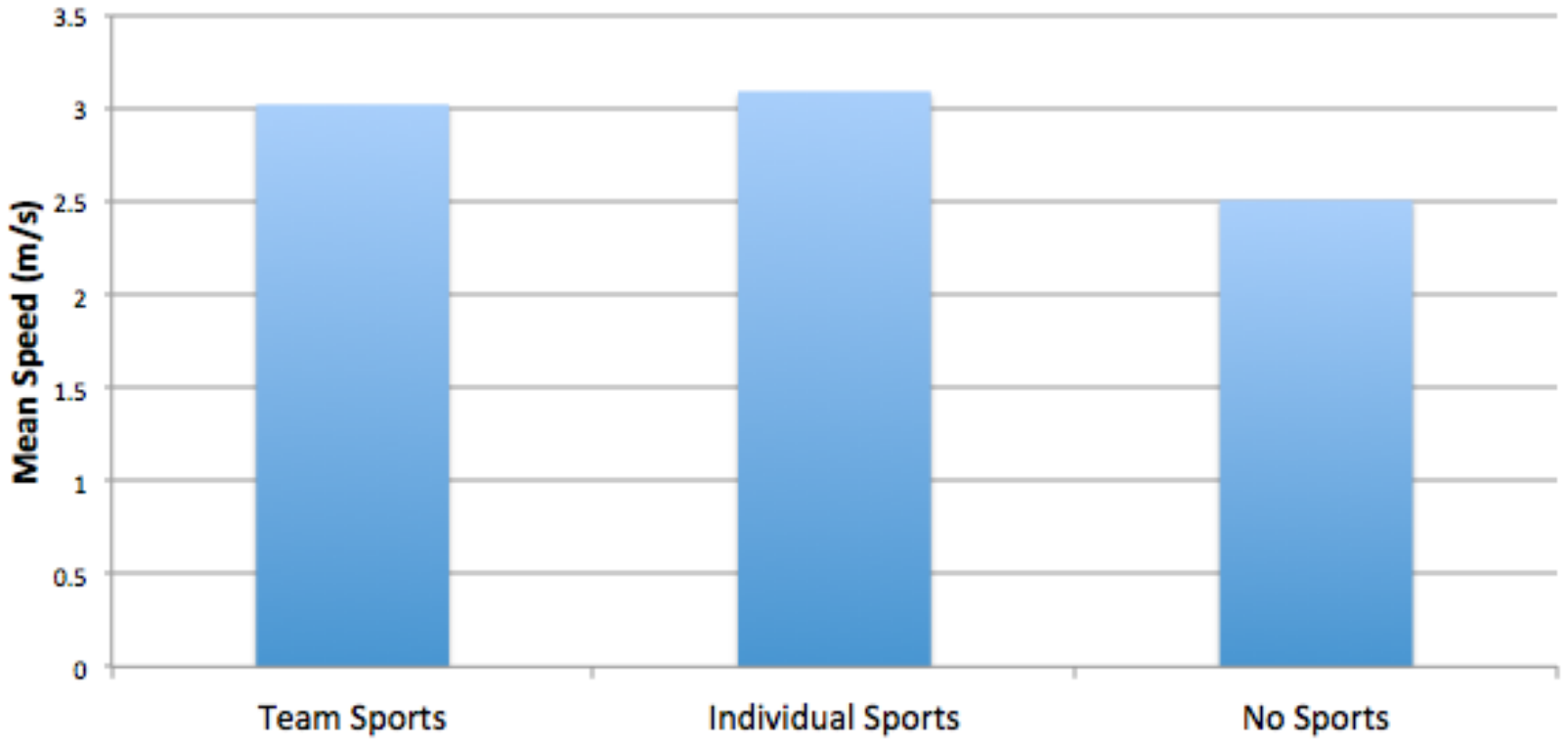
Average of 0 not running sports compared to compared to average of all not running sports.
$p > 0.05$

Average of 0 total sports compared to compared to average of all total sports.
$P < 0.05$

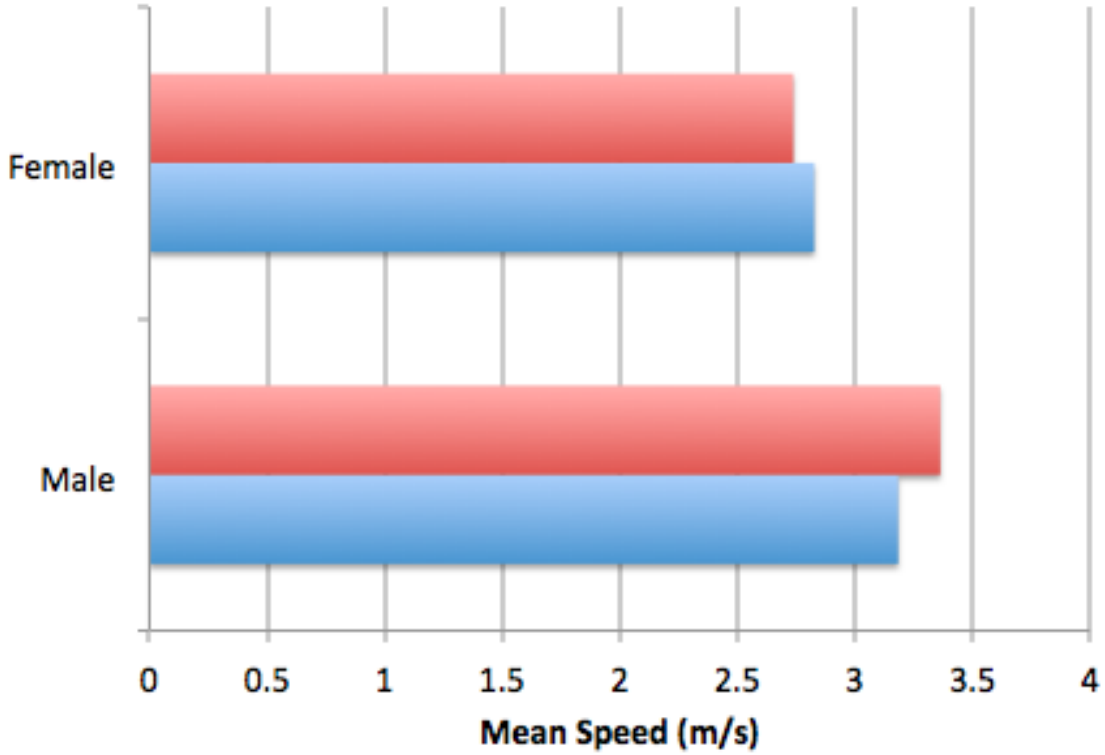
As predicted, childhood participation in Cross Country correlated to a faster average speed.



There is no significant difference (p>0.05) between the speed of those who participated in team sports compared to those who participated in individual sports.



For both males and females, there is no significant difference ($p>0.05$) between the speed of those who participated in team and individual sports.



Generalizability of Results

https://encrypted-tbn1.gstatic.com/images?q=tbn:ANd9GcSdYM67R7D2CGFRg8iwYMmjZcGeNNRkJa5rAjD4JQuqAwB6WeUfuA

Discussion

Why group sports based on “running” versus “non-running” and “individual” versus “team”?

To our knowledge there is no current research that studies previous sports participation as a predictor of running performance. Groupings were based on the summation of information other research findings.

Team Sports

Childhood physical activity levels

Running to school

Type of childhood sports (high-impact or low)

Bone density development

Grouping methodology reflects findings of previous research

Tammelin et al. (2003)

participation >= twice a week for males and females >=once a week led to high physical activity in adulthood

orienteering, track and field, combat sports, cross-country skiing, and running in adolescence led to running in adulthood

Grouping methodology reflects findings of previous research

Fredericson et al. (2007) and Kemmler et al. (2005)

bone restructuring results from high-impact and heavy-load activity

runners have higher bone mass density than non-athletic controls, particularly in pelvis and bones of the foot and leg

Grouping methodology reflects findings of previous research

Noakes (2011)

Anticipatory Central Governor model allows for psychological inputs to determine runner's race outcome

Conclusion

Playing a sport of any kind in childhood will improve your running performance in adulthood. This seems logical. Developing athleticism in childhood will help adult athleticism.

People who participated in one or more running sport during childhood had better race times than those who participated in 0 running sports in childhood.

Works Cited

Fredericson, M., K. Chew, J. Ngo, T. Cleek, J. Kiratli, and K. Cobb. "Regional Bone Mineral Density in Male Athletes: A Comparison of Soccer Players, Runners and Controls." *British Journal of Sports Medicine* 41.10 (2007): 664-68. Print.

Kemmler, Wolfgang, Klaus Engelke, Heiko Baumann, Carola Beeskow, Simon Stengel, Jürgen Weineck, and Willi A. Kalender. "Bone Status in Elite Male Runners."*European Journal of Applied Physiology* 96.1 (2006): 78-85. Print.

Noakes, Timothy David. "Time to Move beyond a Brainless Exercise Physiology: The Evidence for Complex Regulation Of human Exercise Performance." *Applied Physiology, Nutrition, and Metabolism* 36.1 (2011): 23-35. Print.

Scott, Robert A., Evelina Georgiades, Richard H. Wilson, Will H. Goodwin, Bezabhe Wolde, and Yannis P. Pitsiladis. "Demographic Characteristics of Elite Ethiopian Endurance Runners." *Medicine & Science in Sports & Exercise* 35.10 (2003): 1727-732. Print.

Tammelin, Tuija, Simo Näyhä, Andrew P. Hills, and Marjo-Riitta Järvelin. "Adolescent Participation in Sports and Adult Physical Activity." *American Journal of Preventive Medicine* 24.1 (2003): 22-28. Print.