

## Academic achievement and health related fitness outcomes among kinesiology majors

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### ABSTRACT

**BACKGROUND AND PURPOSE:** Academic achievement has been shown to be related to health related fitness (HRF) performance among grade school and middle school children. However, very little is known about this relationship in college age students. The authors are not aware of any data available concerning HRF performance and those students seeking degrees in kinesiology. The purpose of this study was to determine if a relationship exists between academic achievement and HRF outcomes among kinesiology majors. **METHODS:** Health related fitness measurements were taken on 104 undergraduate Tarleton kinesiology majors. Students overall GPA was obtained by the supervising faculty member through approved methods and with any identifying information removed. Fitness measures included body composition, blood pressure, cardiorespiratory endurance (1.5 mile time), flexibility (sit-n-reach), and muscular strength and endurance. One and half mile run, sit ups, bench press, leg press, and the sit and reach were administered and ranked according to ACSM Guidelines (9<sup>th</sup> ed). Differences in HRF outcomes were analyzed using independent t-tests with significance set at  $p < 0.05$ . Pearson product correlation was used to evaluation relationships between GPA and HRF rankings. **RESULTS:** Relationships between HRF and GPA are presented in the table below.

**GPA and Health-Related Fitness Percentile Rankings ( $p < 0.05$ )\***

Student Characteristics	Males (N=44)	Females (N=50)
GPA*	2.74 ± 0.49	2.95 ± 0.53
1.5 Mile Run (% Rank)*	59.1 ± 29.9	41.9 ± 28.9
Body Fat (% Rank)*	53.6 ± 30.4	34.5 ± 24.1
Leg Press Ratio (% Rank)*	83.8 ± 8.9	87.6 ± 5.9
Flexibility (% Rank)	69.3 ± 17.3	69.4 ± 16.1
Bench Press Ratio (% Rank)	49.5 ± 19.9	46.5 ± 24.8
Sit-ups (% Rank)	57.8 ± 24.1	54.9 ± 24.5
Systolic Blood Pressure*	126.3 ± 11.1	117.6 ± 10.9
Diastolic Blood Pressure	78.5 ± 7.6	73.3 ± 10.0

**CONCLUSION:** In this subset, although females ranked higher relative to GPA, males performed better on several HRF measures. Further analysis to investigate HRF and GPA relationships.

