



Behavioral Exercise Motivation is More Associated with ACFT Success Than Body Composition in Collegiate Army ROTC Cadets.

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BACKGROUND & METHODOLOGY

U.S Army Reserve Officers Training Corps (ROTC) Cadets

Undergo 4 years of pre-service military training to develop **physical readiness** and **occupational preparedness**, which is assessed by the

Army Combat Fitness Test (ACFT)

This standardized assessment consists of six events derived from the demands of modern warfare and may be influenced by **exercise motivation (BREQ-3)** and **body composition (In-Body)**.

PURPOSE

Identify exercise motivation and body composition measures most associated with ACFT performance in ROTC cadets.

ACFT Events



ROTC Cadet Descriptives

Measures	Males (n=29)	Females (n=6)
Age (years)	20.8±2.6	20.2±1.1
Weight (kg)	83.0±13.6	64.5±8.1
Height (cm)	178.2±7.2	141.9±17.8
ACFT Total Score	520.5±65.3	506.2±18.4
BREQ-3 Internal Motivation Score	3.1±0.9	2.9±0.7
Total Skeletal Muscle Mass (kg)	38.5±6.8	26.1±2.5
Total Body Fat Percentage (%)	16.6±5.5	28.2±5.6

Data are shown as mean ± SD. Abbreviations: ACFT: Army Combat Fitness Test; BREQ-3: Behavioral Regulation in Exercise Questionnaire (3rd Edition).

KEY RESULTS

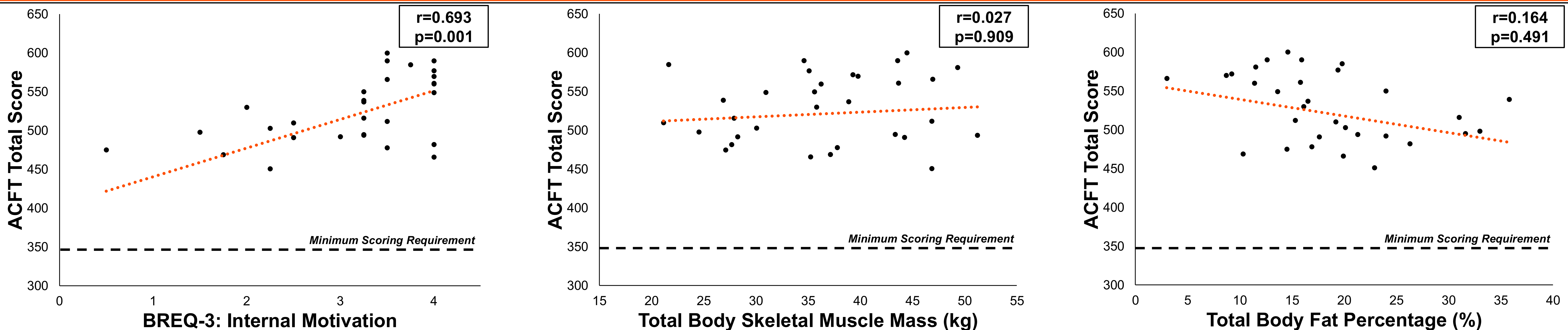


Figure 1. Within collegiate Army ROTC cadets, a moderate positive correlation was found between BREQ-3 internal motivation and ACFT total score ($r=0.693$, $p=0.001$), where no significant correlations were present between ACFT total score and total body skeletal muscle mass ($r=0.027$; $p=0.909$), or total body fat percentage ($r=0.164$; $p=0.491$). These findings suggest that an inherent pleasure and satisfaction from exercise is related to higher ACFT scores compared to body composition measures within cadets.

PRACTICAL APPLICATIONS & CONCLUSIONS

1) **Internal exercise motivation** was more associated with higher ACFT scoring than body composition measures.

2) Assessing exercise motivation may serve as a **practical** and **cost-effective screening tool** for military physical readiness.

ACKNOWLEDGEMENTS

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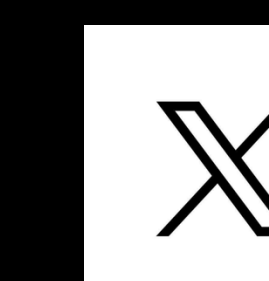
Musculoskeletal
Adaptations to
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