Bodyfat as a Predictor of the Peace Office Physical Aptitude Test in Police Cadets

ANGELO MANGIONE, MATTISON MARET, ZACHARY ZEIGLER, & ANTHONY ACEVEDO

POWER Lab; Department of Exercise Science; Grand Canyon University; Phoenix, AZ

Category: Undergraduate

Advisor / Mentor: Zeigler, Zachary (Zachary.zeigler@gcu.edu)

ABSTRACT

Body composition is a measurement that is rarely assessed before police cadets enter the academy. The Peace Office Physical Aptitude Test (POPAT) is a required assessment for police cadets. **PURPOSE**: This pilot study aims to determine if body composition, upper body strength, and lower body power can predict performance on the POPAT in police cadets. **METHODS**: Maricopa County Sheriff's Office (MCSO) cadets were asked to complete the handheld grip test to assess upper extremity strength, vertical jump to assess lower extremity power, and body fat percentage (%BF) using an ultrasound machine. Fat-Free Mass Index (FFMI) was used to determine lean muscle mass relevant to height. All cadets completed the POPAT assessment before starting the police academy. The ability of the predictor variables to predict POPAT performance was determined with a linear regression model. Significance was set at $p < 0.05$. **RESULTS**: Forty cadets (32 males, eight females, aged 28.05 ± 7.17 years) completed testing. %BF was significantly and negatively correlated to the overall POPAT score ($r = -0.787$, $p < 0.01$). %BF was significantly and negatively correlated to vertical jump ($r = -0.834$, $p < 0.01$), handgrip ($r = -0.508$, $p < 0.01$), and FFMI ($r = -0.327$, $p < 0.05$). BF% and vertical jump explained about 65% of the variation in POPAT scores. **CONCLUSION**: Due to the significance of %BF and FFMI on a cadet's performance on the POPAT, the MCSO's body composition standards may need to be reevaluated.