

Proposal

Title – Human Performance Assessments in an Army ROTC Cadet Population

Program of Study – B.S., Exercise Science

Presentation Type – Printed poster

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Category – Experimental (Applied)

Abstract

Introduction: Muscular strength, power, and cardiovascular endurance are vital for Reserve Officer Training Corps (ROTC) cadets as well as active-duty Soldiers operating in the field.

These attributes are especially relevant when lifting heavy objects, traveling long distances, or moving rapidly from one area to another with maximum speed and agility. **Research**

Question: This study assessed potential physiological differences between Ranger Challenge (RC) Competition team and junior year cadets in an Army ROTC program. **Hypothesis:**

With RC training almost twice as much as the juniors, it was hypothesized that RC significantly outperform the juniors. **Methods:** RC (m = 11, f = 2) and junior year cadets (m = 7, f = 3) had their: 1) quickness and agility (5-10-5 shuttle run), 2) total-body power (standing broad jump), and 3) grip strength (hand grip dynamometry) assessed. The 5-10-5 shuttle run was performed twice (opening once to the left and once to the right). Followed by, running 5 yards, touching a line on the ground, turning around, running 10 yards touching a line on the ground, turning around, and again running 5 yards, with the time recorded once the cadet passed the starting line a final time. The standing broad jump had cadets stand with

their toes behind a line, perform a maximum of three preparatory movements, triple extend their knees, hips, and ankles while using their upper body to propel them as far forward as possible. The cadet stuck the landing and the measurement was taken at the heel of the nearest foot. Hand grip dynamometry was performed once on each hand. The cadet held the dynamometer out to his or her side and squeezed it as they lowered it to their hip. **Results:** There were no significant differences between groups for the: 5-10-5 shuttle run ($p = 0.91$); standing broad jump ($p = 0.49$), or grip strength ($p = 0.31$). **Conclusions:** With no statistical differences observed, it was concluded that RC did not outperform the junior year cadets in these assessments of human performance. **Practical applications:** Assessing cadet fitness is of great importance in order for them to be successful in their job and as future Officers in the Army. Future work will investigate cadet performance on: the Ranger Athlete Warrior assessments, Ranger Physical Assessment Test, and Occupational Physical Aptitude Test to determine how they perform compared to their fellow cadets and active duty Soldiers.

Christian worldview Integration: 1 Corinthians 6:19-20 states, “Do you not know that your body is a temple of the Holy Spirit, who is in you, whom you have received from God? You are not your own; you were bought at a price. Therefore honor God with your body.”

Exercise and physical fitness is vital to our ability to perform our best for God. The U.S.

Army is centered on how one can perform at his or her highest level and physical

assessments are a large part on how commanders and peers evaluate a cadet’s performance.

As Christians, we can make an impact by using our bodies to perform to the best of our

ability and honor Him through our Military service. This is extremely important since the

Military is one of the biggest mission fields for reaching others for Christ. This study

compared junior year cadets to the Ranger Challenge team here at Liberty. At its foundation,

we can see how one group of cadets performed compared to the elite of Army ROTC. Additionally, these results can help us improve our human performance training and assessments to ensure our cadets are physically prepared to use their bodies as vessels for God on the mission field of the U.S. Army. With the Army ROTC culture interwoven in most colleges and universities across America, the findings of this study can also help other Army ROTC programs assess how their cadets perform in physical assessments and help implement changes to human performance training that will allow them to perform at a higher level in the future.