

Bond University  
Research Repository



## Physical Abilities Related to Peace-keeping and Domestic Security Efforts

Dulla, Joseph; Schram, Ben; Orr, Rob Marc; Lockie, Robert G.; Dawes, Jay

Unpublished: 11/02/2020

*Document Version:*  
Peer reviewed version

[Link to publication in Bond University research repository.](#)

*Recommended citation(APA):*

Dulla, J., Schram, B., Orr, R. M., Lockie, R. G., & Dawes, J. (2020). *Physical Abilities Related to Peace-keeping and Domestic Security Efforts*. Poster session presented at 5th International Congress on Soldiers' Physical Performance, Quebec, Canada.

**General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

For more information, or if you believe that this document breaches copyright, please contact the Bond University research repository coordinator.

## Introduction

The physical tasks and abilities of emerging peace-keeping conflicts can closely resemble similar physical job tasks and abilities required of US sworn peace officers (SPO) assigned to patrol duties.

## Purpose

The purpose of this study was to describe physical abilities important for job tasks associated with peace-keeping and domestic security.<sup>1</sup>

## Methods

A survey of 5,527 SPOs from small, medium, and large agencies in California (USA) assigned to rural, suburban, and urban environments was conducted on 49 job-relevant physical tasks.

Criticality/importance, frequency, and duration of physical tasks such as force required during arrest, defensive tactics, use of firearms, lifting, pulling, pushing, climbing, running, etc. were also rated (Figures 1 - 9 respectively). Though content analysis, a panel of subject matter experts categorized the tasks into physiological ability demands using both:

- Relative Percent Contribution (RPC): the contribution of each ability relative to the other abilities regarding over all physical job performance.
- Essentiality Rating (ER) computed as frequency rating multiplied by importance rating.
- Essentiality Rating Percentage or E%: the contribution of each ability relative to the other abilities.

## Results & Discussion

- Over 75% (n=3890) of respondents had been assigned to patrol duties for at least two years
- 87.8% (n=4,479) of respondents identifying as male and 12.2% (n=620) as female
- RPC determinations: stability (17.9%), flexibility/range of motion (ROM) (14.4%), power (13.3%), agility (13.3%), anaerobic capacity (12.3%), muscular strength (10.3%), muscular endurance (8.2%), balance (5.6%), and aerobic capacity (4.6%) (Chart 1).
- ER determinations: stability (18.4%), flexibility/ROM (14.2%), agility (13.9%), power (12.5%), anaerobic capacity (12.5%), muscular strength (9.5%), muscular endurance (8.6%), balance (5.7%), and aerobic capacity (4.7%) (Chart 2).



Figure 1: Officer performing one type of arrest task.



Figure 2: Officers engaging in typical defensive tactics training.



Figure 3: Officers engaging in typical defensive tactics training.

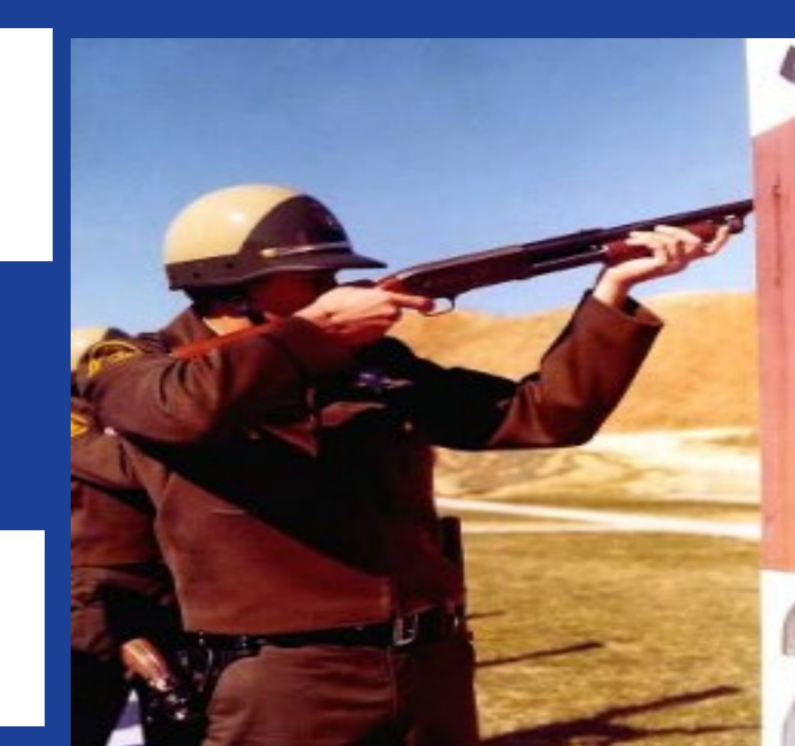


Figure 4: Officers engaging in typical firearms tasks.

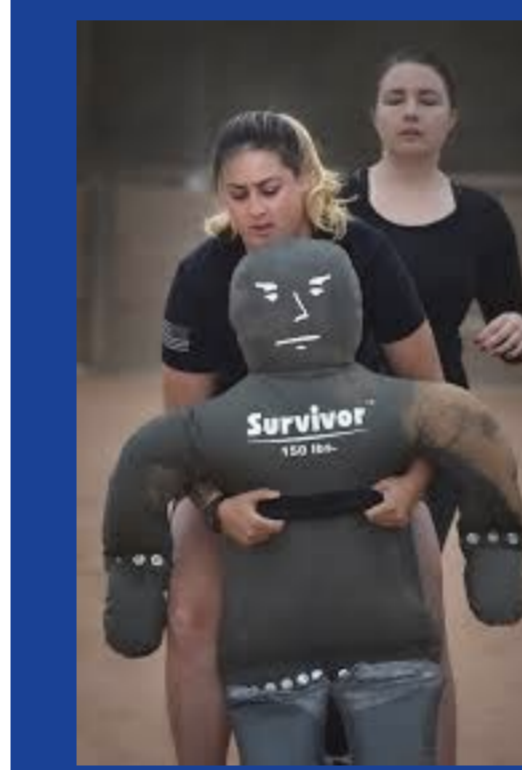


Figure 5: Officers engaging in typical lifting / pulling tasks.



Figure 6: Officers engaging in typical lifting / pulling tasks.



Figure 7: Officers engaging in typical lifting/pulling tasks.



Figure 8: Officers engaging in typical pushing tasks.



Figure 9: Officers engaging in typical climbing task.

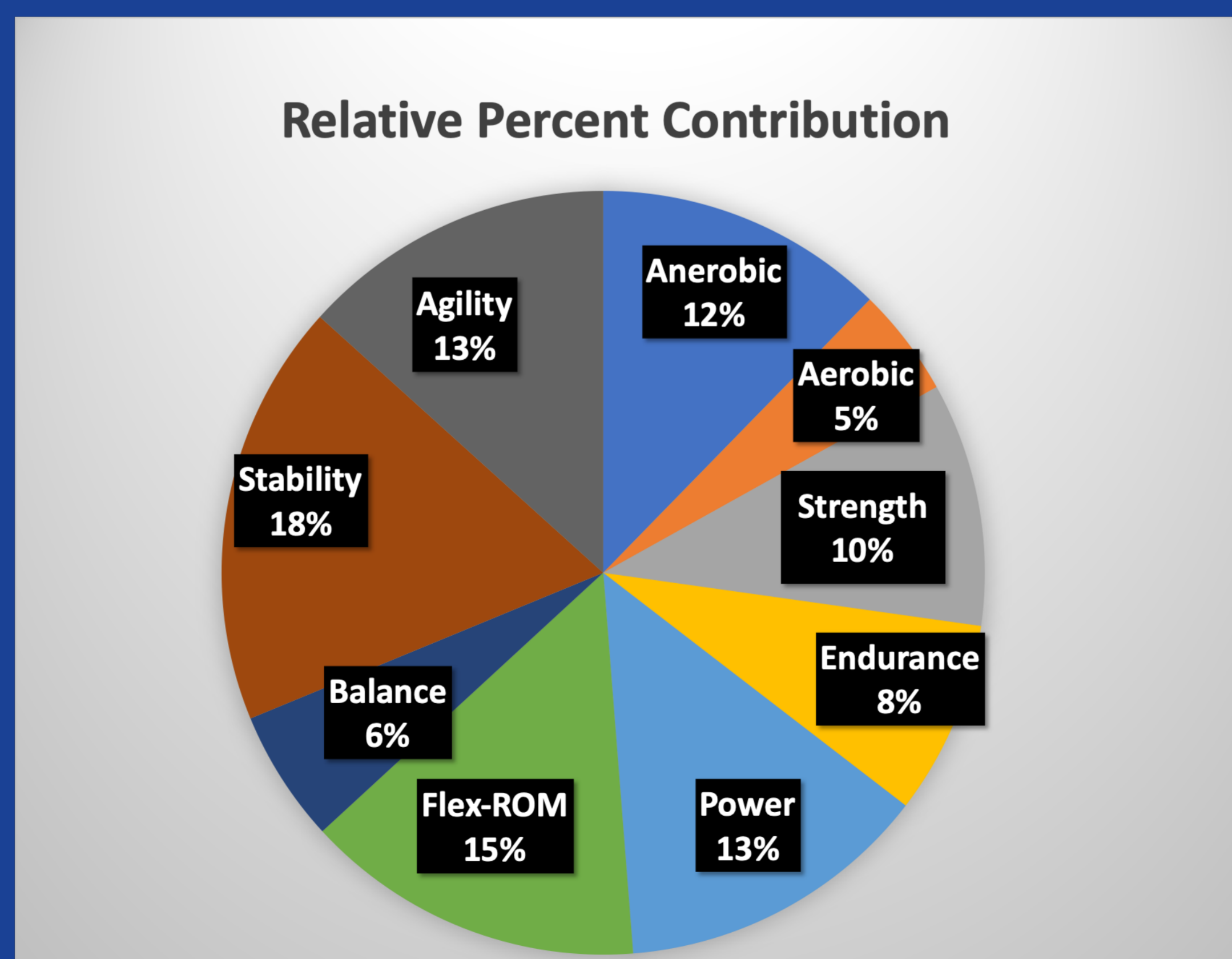


Chart 1: Job tasks rated by their respective underlying physiological construct and corresponding contribution of each ability relative to the other abilities for overall physical job performance. (Relative Percent Contribution-RPC).

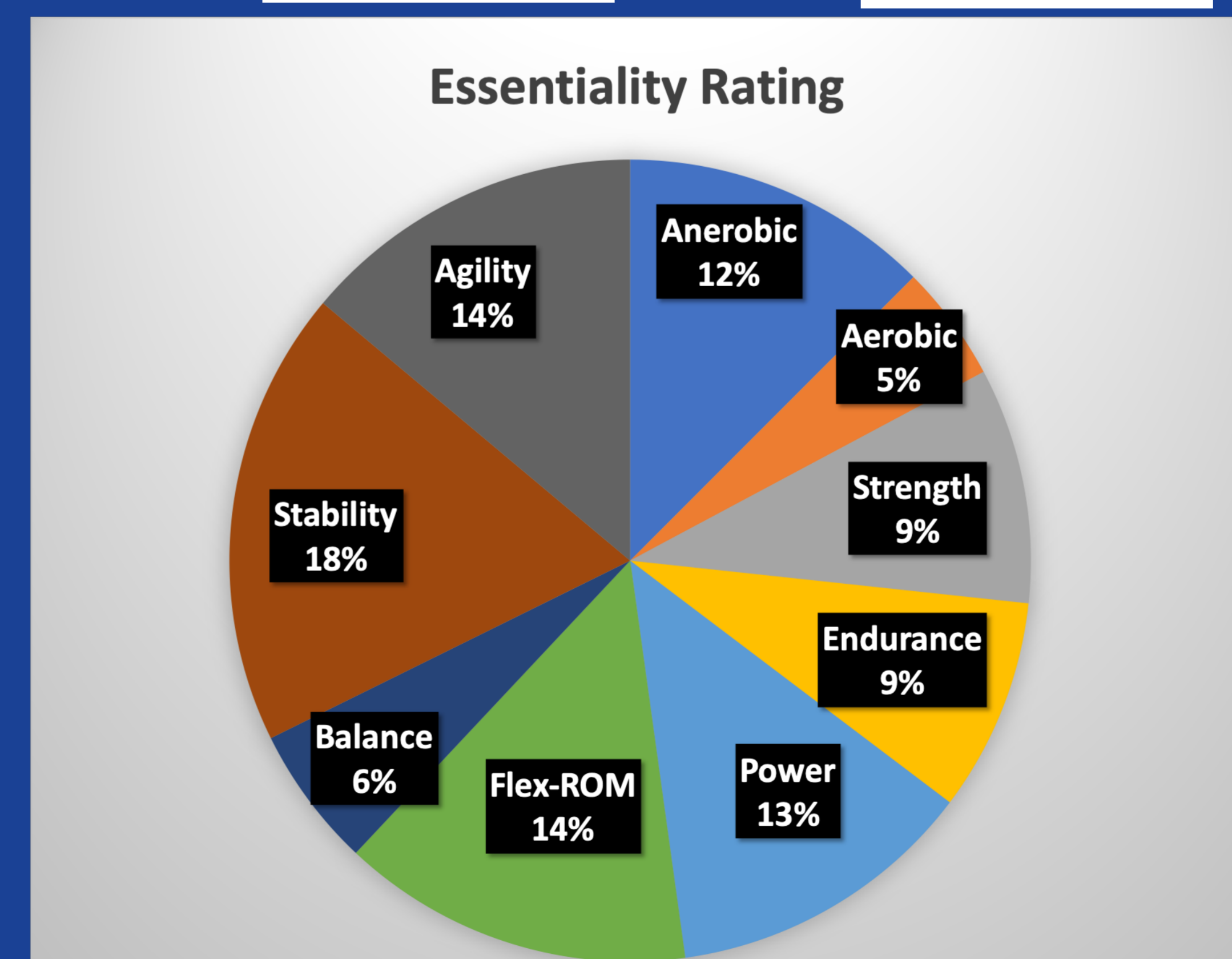


Chart 2: Job tasks rated by their respective underlying physiological construct and corresponding frequency rating multiplied by importance rating. (Essentiality Rating-ER).

## Conclusions

- Considering both RPC and ER, physical tasks grouped by physiological abilities involving stability, flexibility/ ROM, agility, power, and anaerobic capacity scored higher than other abilities.
- Of note, muscular strength was also consistently rated higher than muscular endurance for physical domestic security tasks.
- These data indicate that the important physiological qualities for peace-keeping and domestic security may be different to those needed in other aspects of military work.

## Operational Relevance

As soldiers are often called to peace-keeping and law enforcement-type missions, review of law enforcement physical demands research can inform needs analysis as well as physical training programming goals.

A majority of reported domestic law enforcement physical tasks involve stability, agility, flexibility/ROM, power, and anaerobic abilities.

Physical training programming to prepare peace officer and soldiers assigned these types of tasks should consider these abilities to increase likelihood of mission success.

## References:

1. Chan, C. and Krueger, K. (2020). Patrol Officer Physical Demands Study & Technical Report-publication in process. California Commission on Peace Officer Standards and Training. California, USA.