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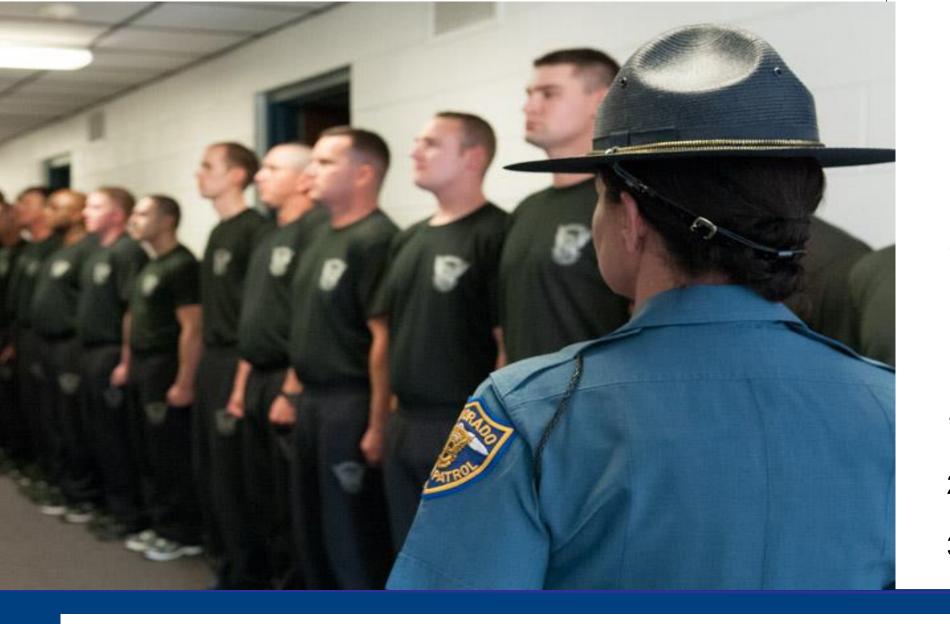Link to publication in Bond University research repository.

DIFFERENCES IN INITIAL FITNESS SCORES BETWEEN HIGHWAY PATROL CADETS WHO SUCCESSFULLY COMPLETE OR FAIL TO COMPLETE A 27-WEEK TRAINING ACADEMY

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BLUF

Highway patrol cadets with higher levels of fitness upon entering the training academy have a greater likelihood of successful completion when compared to their less fit counterparts.

INTRODUCTION

Research in tactical populations suggests that new recruits are more likely to be injured during recruit training[1]

The sudden increase in physical conditioning requirements, the complexity of new physical tasks, reduced opportunity for recovery, and resulting increased risk of overtraining are leading reasons for this increased risk of injury[2]

There is a significant fiscal, administrative and logistical investment involved in recruiting and training new law enforcement officers.

The purpose of this investigation was to determine if significant fitness differences exist between cadets who successfully complete training and those who do not.

METHODS

Archival data for ninety-nine (♂=89:♀=10) cadets belonging to three different training academies were analyzed in this study.

These data were collected prior to the commencement of a 27-week training program at a law enforcement academy.

The physical assessment was conducted at the beginning of the second week of class by the academy training staff.

Data included: self-reported age (yrs); height (in); weight (lbs); and push-up, sit-up, vertical jump and 20 meter multi-stage fitness test (20m-MSFT) scores.

Injury was defined as any musculoskeletal damage that resulted in the cadet being assigned to altered training duty or that led to their exit from the training academy.

Cadet results were then separated into two categories, "completers" (n=81) and "non-completers" (n=18).

Data were entered into SPSS version 23 (IBM 2015) for analysis. A series of independent t-tests were performed to determine if mean score differences existed between these groups. The level of statistical significance was set a priori at 0.05.

RESULTS

- Descriptive data for completers and non-completer groups is presented in Table I.
- Results suggest that non-completers were significantly older and exhibited poorer mean scores in all fitness tests when compared to completers.

DISCUSSION

Cadets who are injured or fail to complete training tend to be older and less fit.

Measures to increase fitness, especially prior to joining, or ensuring entry standard fitness levels are adequate, may provide solutions to mitigate cadet injury and / or failure

Table I: Descriptive data for police academy 'completers' and 'non-completers'

Variable	Completers n=81 Mean ± SD	Non-completers n=18 Mean ± SD
Age (yrs)	33.52 ± 11.91†	39.22 ± 13.54†
Height (in)	70.06 ± 2.60	69.41 ± 3.31
Body weight (lbs)	186.3 ± 24.89	189.16 ± 42.86
Push-ups (n)	48.67 ± 11.87†	37.39 ± 7.86†
Sit-ups (n)	44.17 ± 5.91†	40.50 ± 5.31†
MSFT Shuttles(n)	61.20 ± 16.98†	49.33 ± 18.31†
Vertical Jump Height (in)	22.06 ± 3.49†	18.92 ± 2.97†

† *Significant differences at $p \leq 0.01$*

PRACTICAL APPLICATION

Coaches responsible for conditioning cadets, both pre-enlistment, and during training, should focus on **improving the fitness levels** of cadets as a means of injury and risk mitigation.

Acceptable, and legally defensible entry level standards should be developed to reduce injury rates and improve cadet retention.

REFERENCES

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