Run To The Hills: The Effects of Academy Training on the Physical Fitness of Law Enforcement Recruits across Three Classes
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ABSTRACT

Law enforcement agencies (LEAs) use the academy period to train recruits in the skills needed to undertake the demands of their job. Recruits must become familiar with the many physical rigorous laws of this occupation, including pre-academy training, vaulting, sprinting, dragging, pursu ing fleeing suspects, and controlling those resisting arrest (1,4).

As recruits make the transition from the general population to becoming law enforcement personnel, they may be not accustomed to the amount and type of physical training that will be demanded in law enforcement (2). This indicates the need for academy fitness programming that should be specific to the demands of law enforcement.

Ideal training for recruits should include exercises that emphasize the movements and explosiveness needed for the daily tasks of law enforcement (2). Other considerations should be muscular strength and endurance, anaerobic power, flexibility, and injury prevention (1-3).

The purpose of this study was to compare the effects of physical training across three classes through post- and pre-academy assessment to determine the effectiveness of the training regimen implemented by the academy training staff.

METHODS

• Retrospective analysis was conducted on three classes from one LEA (Class 1: 42, +3, 10; Class 2: 47, 4; 7; Class 3: 3, 51, 8). Recruits performed pre- and post-testing in the following assessments: 1) PR, 2) pre and post anaerobic, 3) physical training programs, and 4) MBT. Academy training was conducted over 22 weeks; pre-testing occurred in the week prior to academy, while post-testing occurred in the last few weeks. All participants followed the same training regimen during assessment results between classes and pre/post-academy training.

• The data indicated that there were major improvements in the MSFT for all three classes, a lack of improvement in MBT for Class 1 (MBT distance decreased), however it was not statistically significant, and lack of change or even decreases in performance in the 75PR (even for Class 3 which started with a significantly slower performance in 75PR).

• These results suggest that the physical training programs implemented for these academy classes consistently focused on aerobic development. This would suggest a greater implementation of interval running and long slow distance running, which is typical of law enforcement academies (1,4).

• However, the data also suggests that training staff did not focus on developing recruit's anaerobic capacity in a consistent manner. Given the majority of law enforcement jobs tasks tend to be aerobic in nature, physical training programs should consider an increased focus on anaerobic training during academy job readiness for recruits.

• Future research should investigate the performance benefits of training programs and aerobic development, as well as physical modalities.

CONCLUSIONS

• Significant (p<0.05) improvement in performance from pre-academy to post-academy.

• Significant (p<0.01) decrease in performance from pre- to post-academy.

• Class 2 performed significantly (p<0.05) poorer than the other two classes in pre-academy assessments.

• Class performed significantly (p<0.05) poorer than class 1.

Figure 7. Two of PR time (A) and MSFT shuttle (B) from pre-academy assessment to post-academy assessment for three classes.

RESULTS

• Retrospective analysis was conducted on three classes from one law enforcement agency: o Class 1: males = 62 [age=25.7 years ± 4.13, height=178.2 cm ± 6.41, body mass=81.7 kg ± 10.28], females = 5 [age=26.5 years ± 3.27, height=164.0 cm ± 10.44, body mass=66.6 kg ± 10.29]

  - Class 2: males = 47 [age=26.8 years ± 5.98, height=179.7 cm ± 11.1, body mass=81.8 kg ±12.28], females = 7 [age=26.4 years ± 6.32, height=165.0 cm ± 8.70, body mass=66.6 kg ± 12.12]

  - Class 3: males = 52 [age=26.8 years ± 5.42, height=175.9 cm ± 6.96, body mass=68.1 kg ± 10.29], females = 8 [age=26 years ± 3.63, height=164.4 cm ± 0.86, body mass=67.8 kg ± 10.55]

• Recruits performed pre- and post-academy testing in the following assessments: medicine ball throw with a 2 kg ball (MBT), 75-yard pursuit run (75PR), and the multi-stage fitness test (MSFT).

• Academy training was conducted over 22 weeks. Pre-testing occurred in the week prior to the academy start. Depending on the schedule for each class, post-testing was conducted during the last few weeks of the academy.

• Multiple repeated measures ANOVA (p <0.05) investigated the differences in assessment results between classes and pre/post-academy training.

• Due to the nature of law enforcement academies, all of the classes began their academy training with different fitness levels at least in one assessment:

  - Class 1 performed significantly lower than Class 2 (p<0.01) and Class 3 (p<0.05) in height for the MSFT (Shuttles Completed).

  - Class 2 performed significantly better than both classes in pre testing: Class 2 performed significantly poorer than Class 1 on 75PR. Class 2 performed significantly fewer shuttles than Classes 1 (p=0.011) and 3 (p=0.002).

  - Tremendous improvement of the MBT showed significant improvement in Classes 1 (p=0.003) and 3 (p=0.003). The 75 PR did not improve in Classes 1 and 3, while Class 2 performed significantly (p=0.001) poorer. MSFT showed all three classes having significant (p <0.001 for all three classes) improvement in the amount of shuttles completed.

• Given the small sample size and the subjectivity of the training programs, it is possible that the results can be misleading. Further research is needed to determine the effectiveness of the training programs implemented by the academy training staff.