Can I Save You? A Pilot Analysis of the Body Drag Test in Law Enforcement Academy Recruits

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ABSTRACT

An essential job task for law enforcement officers is a body drag (BD), where they must drag a civilian or fellow officer from a hazardous environment to safety. In California, a BD with a 165-lb dummy is a test within the Work Sample Test Battery (WSTB). Completed by a recruit before they graduate academy, the BD must be completed within 28 s in order to attain points towards the WSBT. However, current US population data indicates that an adult male has a mean body mass of ~196 lb, while females equal ~169 lbs (which does not include any additional loads that may be worn if the victim is an officer). This would suggest that the dummy mass should be increased to prepare recruits for this task. However, before increases to the dummy mass are considered, there should be an analyses of how recruits who have yet to undergo specific law enforcement training complete this test. If they are strong enough to achieve state standards with a 165-lb dummy before academy, this would imply that staff should be able to improve recruit strength to any new BD standards. The purpose of this study was to measure the BD performance for incoming recruits (INC), detail how many achieved the current state standard, and compare their results to data from recruits who graduated academy (GRAD). A cross-sectional, retrospective analysis of data from one law enforcement agency was conducted. One class of INC (67 males, 23 females) was compared to GRAD from nine classes (542 males, 100 females). The INC completed the BD in the week prior to the start of their 22-week academy; the GRAD in the final weeks of their academy. The BD required the recruit to lift the dummy and drag them 32 feet. Recruits were instructed to lift the dummy and stand stationary before initiating the drag; timing commenced once the dummy began to move. Independent samples t-tests ($p < 0.05$) compared BD differences between the INC and GRAD groups, with data combined for the sexes. INC were compared to the state standard to ascertain passing rate. GRAD (5.11 ± 1.33 s) performed the BD significantly faster than INC (7.83 ± 4.02 s). However, only one recruit from the INC did not complete the BD in 28 s. Most recruits from this class had sufficient strength and technical ability to successfully drag a 165-lb dummy fast enough to achieve state standards prior to specific training. The strength of recruits should not be considered a barrier to increasing the dummy mass to be reflective of the US population. Moreover, the use of a strength test (e.g., hex bar deadlift) should be considered for inclusion in the hiring process to indicate a potential recruit's strength relative to the BD if the dummy mass increases.

INTRODUCTION

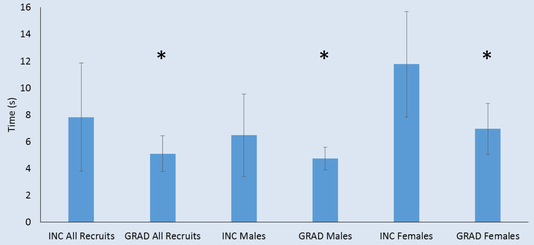
- An essential job task for law enforcement officers (LEOs) is a body drag (BD). This task requires an officer to drag a civilian or fellow officer from a hazardous environment to a safe location.
- In California, a BD with a 165-lb (74.84 kg) dummy is a test within the Work Sample Test Battery (WSTB).[5] The WSTB must be completed by a recruit before they graduate academy, where the recruit completes job-specific tests to accrue points. The BD must be completed within 28 s in order to attain points in this test towards the WSBT.[5]
- Current US population data indicates that an adult male has a mean body mass of ~196 lb (88.90 kg), while females equal ~169 lbs (76.66 kg).[1] This does not consider additional load if the person who must be dragged is a LEO; LEOs can carry ~18-49 lb (8-22 kg) of extra load.[2] This would suggest that the dummy mass should be increased from 165 lb to prepare recruits for the BD task.
- Before increases to the dummy mass are considered, there should be an analyses of how recruits who have yet to undergo specific law enforcement training complete this test. If they are strong enough to achieve state standards with a 165-lb dummy before academy, this would imply that law enforcement training staff should be able to improve the strength of recruits to any new standards established for the BD (as long as the training stimulus is appropriate).
- The purpose of this study was to measure the BD performance for incoming recruits (INC), compare their results to data from recruits who graduated academy (GRAD), and detail how many INC recruits achieved the state standard prior to receiving any law enforcement-specific training.

METHODS

- A cross-sectional, retrospective analysis of data from one law enforcement agency was conducted. One class of INC (67 males: age = 26.46 ± 5.74 years, height = 1.73 ± 0.07 m, body mass = 83.14 ± 12.10 kg; 23 females: age = 26.60 ± 4.58 years, height = 1.58 ± 0.06 m, body mass = 60.23 ± 6.70 kg) was compared to GRAD from nine classes (542 males: age = 26.73 ± 5.18 years, height = 1.76 ± 0.07 m, body mass = 83.41 ± 12.65 kg; 100 females: age = 26.60 ± 4.58 years, height = 1.63 ± 0.07 m, body mass = 65.75 ± 12.65 kg).
- The BD required the recruit to lift the dummy to standing position, and then drag the dummy 32 feet.[5] Recruits were instructed to lift and stand stationary with the dummy before initiating the drag. Timing was commenced via stopwatch by qualified instructors once the dummy began to move. The INC completed the BD in the week prior to the start of their 22-week academy; the GRAD in the final weeks of their academy.
- Independent samples t-tests ($p < 0.05$) were used to calculate any differences in BD time between the INC and GRAD groups. Data were combined for the sexes as there are not separate standards for males and females.[3] However, each sex was also analyzed separately for the purpose of this study. GRAD and INC were compared to the state standard to ascertain passing rate in the WSTB.

RESULTS

- GRAD performed the BD significantly faster than INC when comparing all, male, and female recruits (Figure 1).
- Figure 2 displays the BD times for each recruits. All GRAD completed the BD in less than 28 s, which would have earned them points in the WSTB. Out of the INC, 99% (89/90) achieved a BD time less than 28 s.



* Significantly ($p < 0.05$) faster than INC recruits.
Figure 1. Descriptive data (mean ± SD) in the BD for INC and GRAD recruits.

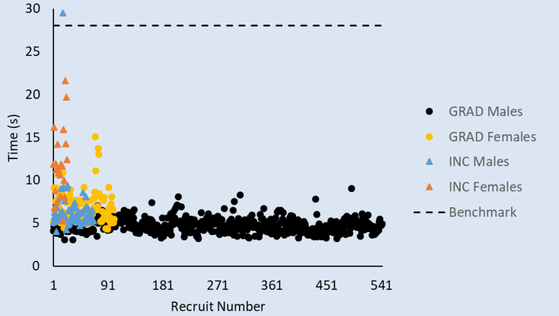


Figure 2. Scatter plot for BD times for all INC and GRAD male and female recruits. The 28 s benchmark is also indicated in the scatter plot.

CONCLUSIONS

- Although the GRAD group completed the BD test faster than the INC group, only one recruit from the INC did not complete the BD in 28 s. This would suggest the great majority of recruits from this class had sufficient strength and technical ability to successfully drag a 165-lb dummy fast enough to achieve state standards prior to specific training.
- Lockie et al.[3] has linked the BD to lower-body strength, which would imply that improving this physical quality should positively influence BD performance. Incorporation of strength training should be a focus of future law enforcement academies in California, especially if the dummy mass increases.
- Nonetheless, given the BD performance of the INC group, the strength of incoming recruits should not be considered a barrier to increasing the dummy mass to be reflective of the US population.
- Should the dummy mas increase, and similar to the US Army,[4] LEA staff should consider the use of a strength test (e.g., hex bar deadlift) for inclusion in the hiring process for officers or deputy sheriffs to indicate a potential recruit's strength relative to the BD.

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