



ABSTRACT

The fitness of law enforcement officers generally declines over their career. Sedentary behaviors contribute to these declines, so it is important for officers to complete some form of exercise to maintain their general and job-specific fitness. An officer's motivation (desire to exercise) and self-efficacy (SE; belief in ability to exercise) could affect whether they exercise and their resulting fitness levels. **PURPOSE:** To determine whether motivation and SE could predict general and job-specific fitness in law enforcement officers. **METHODS:** Data from 60 officers (48 men, 12 women) from one agency were analyzed. Motivation was measured via the 24-item Behavioral Regulation in Exercise Questionnaire, and categorized as introjected, identified, integrated, intrinsic, external, and amotivation. A 6-item questionnaire assessed coping (confidence in performing exercise under challenging conditions) and scheduling (confidence in managing schedule and making time for exercise) SE, with items assessed on a scale of 0 (not confident) to 100 (completely confident). General fitness variables included sit-and-reach, grip strength, 60-s push-ups, 60-s sit-ups, and YMCA step test recovery heart rate. Job-specific fitness was measured by a 99-yard obstacle course, 165-lb body drag, 6-foot chain link fence climb, 6-foot solid wall climb, and 500-yard run. Stepwise regression, controlling for sex, derived relationships between motivation, and coping and scheduling SE, with general and job-specific fitness ($p < 0.05$). **RESULTS:** All variables that were significantly predicted by a motivation or SE variable included sex in the relationship (Table 1). Grip strength was predicted by introjected, identified, and integrated motivation (explained variance = ~71%). Push-ups were predicted by integrated motivation and coping SE (explained variance = ~43%). The 99-yard obstacle course, and chain link fence and solid wall climbs, were predicted by coping SE (explained variance = ~24-47%). **CONCLUSIONS:** Internal motivation and coping SE were able to predict certain general and job-specific fitness metrics. Grip strength, as an indicator of muscular strength, was predicted by introjected (avoidance of guilt), identified (exercise is valued), and integrated (exercise integrated within a belief system) regulation. Integrated regulation and coping SE, or the confidence to overcome obstacles to exercise, predicted push-ups as a muscular endurance metric. Coping SE could also contribute to the exercise needed to maintain job-specific fitness relative to obstacle courses and obstacle clearance. **PRACTICAL APPLICATIONS:** Internal motivation was important for officers with better muscular strength and endurance. Law enforcement training staff should develop strategies to target introjected, identified, and integrated regulation in officers. Provision of tools to develop coping SE could benefit muscular endurance and job-specific fitness tasks (obstacle courses, fence and wall climbs).

INTRODUCTION

- The fitness of law enforcement officers generally declines over their career, in both general (tests of aerobic and anaerobic capacity, muscular strength, power, and endurance, etc.) (1) and job-specific fitness (job task simulations) (4). Numerous factors cause fitness decreases in officers, including stress, diet, sleep, sedentary activities, and reduced physical activity/exercise (11). There should be consideration of the factors behind behavior choices and fitness in officers. Two examples are motivation (desire to exercise) and self-efficacy (belief in ability to exercise).
- Table 1 displays regulatory styles that cover the continuum from amotivation through to intrinsic motivation. To develop exercise intrinsic motivation, an individual requires autonomy, relatedness, and competence (2,10). However, law enforcement personnel typically experience extrinsic motivation (mandatory training, discipline/psychological stress) during their academy. Recruits may not receive coaching and education as to why they are completing exercise (3), which could inhibit intrinsic motivation development.
- Coping self-efficacy is the confidence to perform exercise under challenging conditions, such as when lacking energy or time, or not feeling well (8). Scheduling self-efficacy is confidence in the ability to effectively schedule exercise, regardless of barriers (8). Further analysis of self-efficacy and general and job-specific in law enforcement officers is warranted, especially given the health and career implications of poor fitness in this population.
- The purpose of this study was to determine whether motivation and self-efficacy could predict general and job-specific fitness in law enforcement officers.

Table 1. Self-determination theory continuum with motivation regulatory styles. Adapted from Palombi et al. (7) and Ryan and Deci (9).

Motivation Type Regulatory Style Perceived Locus of Causality Description	Non-Self-Determined		Extrinsic Motivation		Self-Determined	
	Amotivation Non-regulation	External	Introjected	Identified	Integrated	Intrinsic Motivation
	Impersonal	External	Somewhat External	Somewhat Internal	Internal	Internal
	Lack of intentionality to perform exercise. Non-valuing, incompetence, lack of control.	Exercise performed to satisfy external demand (e.g., obtain reward, avoid punishment). Compliance.	Exercise regulated by internal rewards to increase egocentric feelings (e.g., pride, self-esteem) or to avoid guilt.	Personal importance and value placed on exercise. Conscious.	Exercise consistent with one's identity, values, and needs. Awareness, synthesis with self.	Exercise engagement due to personal interest, inherent satisfaction and enjoyment.

METHODS

- Data from 60 officers (age: 32.08 ± 5.66 years; height: 1.72 ± 0.08 m; body mass: 86.46 ± 16.32 kg), including 48 men and 12 women, were analyzed.
- Motivation was measured via the 24-item Behavioral Regulation in Exercise Questionnaire, and categorized as introjected, identified, integrated, intrinsic, external, and amotivation (5). A 6-item questionnaire assessed coping (confidence in performing exercise under challenging conditions) and scheduling (confidence in managing schedule and making time for exercise) self-efficacy, with items assessed on a scale of 0 (not confident) to 100 (completely confident).
- General fitness variables included sit-and-reach, grip strength, 60-s push-ups, 60-s sit-ups, and YMCA step test recovery heart rate. Job-specific fitness was measured by a 99-yard obstacle course, 165-lb body drag, 6-foot chain link fence climb, 6-foot solid wall climb, and 500-yard run.
- Stepwise regression, controlling for sex, derived relationships between motivation, and coping and scheduling self-efficacy, with general and job-specific fitness ($p < 0.05$).

RESULTS

- Descriptive data is shown in Figure 1 and Table 2. All variables that were significantly predicted by a motivation/self-efficacy variable included sex (Table 2). Grip strength was predicted by introjected, identified, and integrated motivation (explained variance = ~71%). Push-ups were predicted by integrated motivation and coping self-efficacy (explained variance = ~43%). The 99-yard obstacle course, and chain link fence and solid wall climbs, were predicted by coping self-efficacy (explained variance = ~24-47%).

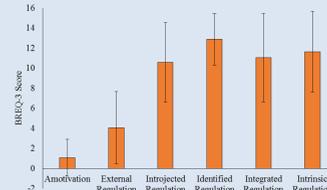


Figure 1. Scores (mean ± SD) for the six motivation subscales (amotivation, external regulation, introjected regulation, identified regulation, integrated regulation, and intrinsic regulation) from the 24-item Behavioral Regulation in Exercise Questionnaire (BREQ-3) completed by law enforcement officers ($N = 60$).

Table 2. Significant stepwise linear regression analyses between motivation (introjected, identified, integrated, intrinsic, external, and amotivation), coping self-efficacy, and scheduling self-efficacy with general and job-specific fitness in law enforcement officers ($N = 60$).

Variables	r	r ²	Adjusted r ²	F	p
Grip Strength					
Sex	0.783	0.614	0.607	90.560	<0.001
Introjected	0.813	0.661	0.649	54.692	<0.001
Identified	0.841	0.707	0.691	44.195	<0.001
Integrated	0.856	0.733	0.713	36.973	<0.001
Push-ups					
Sex	0.439	0.193	0.179	13.883	<0.001
Integrated	0.646	0.417	0.396	20.372	<0.001
Coping Self-efficacy	0.678	0.460	0.431	15.895	<0.001
Job-specific Fitness					
99-yard Obstacle Course					
Sex	0.587	0.345	0.333	30.498	<0.001
Coping Self-efficacy	0.658	0.433	0.413	21.728	<0.001
6-foot Chain Link Fence Climb					
Sex	0.596	0.355	0.344	31.878	<0.001
Coping Self-efficacy	0.699	0.489	0.471	27.247	<0.001
6-foot Solid Wall Climb					
Sex	0.432	0.186	0.170	11.669	0.001
Coping Self-efficacy	0.515	0.265	0.236	9.024	<0.001

CONCLUSIONS

- Grip strength was predicted by introjected (avoidance of guilt), identified (exercise is valued), and integrated (exercise integrated within a belief system) regulation. Integrated regulation and coping self-efficacy, or the confidence to overcome obstacles to exercise, predicted push-ups. Development of intrinsic motivation and self-efficacy, potentially through effective coaching and education to improve competency, could have positive impacts on the general fitness of law enforcement personnel.
- Coping self-efficacy, or the confidence to perform exercise when lacking energy, time, or not feeling well, also predicted the obstacle course, chain link fence and solid wall climb. What could assist coping self-efficacy is providing options for officers within their training sessions, relative to energy level, fatigue, and available time (6).

PRACTICAL APPLICATIONS

- Law enforcement training staff should develop strategies to target introjected, identified, and integrated regulation (intrinsic motivation) to benefit muscular strength and endurance in officers. Proper education and coaching about exercise could benefit officer motivation, and provide conditions to develop autonomy, relatedness, and competence in officers.
- Provision of tools to develop coping self-efficacy could benefit muscular endurance and job-specific fitness tasks (obstacle courses, fence and wall climbs). One strategy could be the provision different options for training sessions which can be adapted depending on how the officer is feeling and their level of fatigue.

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