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The Driving Force: Relationships between Motivation, Physical Activity, Resistance Training, and Years Sworn in Incumbent Deputy Sheriffs

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ABSTRACT

In addition to the physical and mental benefits of physical activity (PA) and resistance training (RT), deputy sheriffs may also experience job-related benefits. However, incumbent deputy sheriffs and law enforcement officers tend to be less physically fit than recruits. As motivation is a key factor in PA, this lower fitness level may reflect motivation variations whether from a lack of fitness standards or a shift in priorities (i.e. shift work hours, family). To understand these variations, self-determination theory (SDT) characterizes motivation on a continuum ranging from external reasons (e.g. reward & punishment) to intrinsic reasons (e.g. enjoyment of PA). The primary purpose of this study was to explore the relationship between different motivations and participation in both PA and RT in deputy sheriffs. A secondary purpose examined how years sworn was related to PA and motivation. Deputy sheriffs ($n=60$; years sworn: 4.8 ± 3.5) from one law enforcement agency completed a cross-sectional questionnaire assessing PA using the Godin Leisure Time Exercise Questionnaire with three added items for RT. Motivation was measured using the 24-item Behavioral Regulation in Exercise Questionnaire (BREQ-3) categorizing motivation ranging from external to intrinsic (external, introjected, identified, integrated, and intrinsic regulation) and amotivation. Pearson correlations were conducted to assess relationships between motivation, years sworn, PA, and RT. Spearman's Rho correlations were used for amotivation and identified regulation as normality assumptions were not met. A positive relationship was shown between PA and identified ($r=0.31, p=.02$), integrated ($r=0.32, p=.01$), and intrinsic regulation ($r=0.30, p=.02$). Similarly, a positive relationship was shown between RT and introjected ($r=0.29, p=.03$), identified ($r=0.48, p=.01$), integrated ($r=0.60, p=.01$), and intrinsic regulation ($r=0.43, p=.01$). Years sworn was negatively associated with external regulation ($r=-0.30, p=.02$) and PA ($r=-0.34, p=.01$). In line with SDT, more intrinsic motives (personal satisfaction, alignment with values) were associated with PA. However, the longer time since a deputy sheriff was sworn was associated with lower PA and lower external regulation. These relationships may reflect a lack of fitness standards and absence of external rewards and punishments for fitness maintenance that were present as recruits. Further research should explore how to encourage PA and intrinsic motivation in deputy sheriffs, from how physical training is applied during academy and promoted when deputy sheriffs begin deployment.

INTRODUCTION

- Participation in physical activity (PA) and resistance training (RT) should provide physical and mental benefits to deputy sheriffs, in addition to job-related benefits. However, incumbent deputy sheriffs and law enforcement officers tend to be less physically fit than recruits.⁴
- As motivation is a key factor in PA, this lower fitness level may reflect motivation variations whether from a lack of fitness standards or a shift in priorities (i.e. work hours, family).
- To understand these variations, self-determination theory (SDT)⁵ characterizes motivation on a continuum ranging from intrinsic reasons (e.g. enjoyment of PA) to external reasons (e.g. reward and punishment):
 - Intrinsic Regulation:** Performing a certain behavior because it elicits personal satisfaction and enjoyment.
 - Integrated Regulation:** Performing a certain behavior because it aligns with one's identity, values, and needs.
 - Identified Regulation:** Performing a certain behavior because of the personal importance and value placed on it.
 - Introjected Regulation:** Performing a certain behavior to avoid guilt or to increase egocentric feelings, such as pride.
 - External Regulation:** Performing a certain behavior in order to obtain external rewards or avoid punishment.
 - Amotivation:** A lack of desire to perform a certain behavior.
- More intrinsic forms of motivation have been shown to not only be related to performance but also more excitement and persistence in engaging in a behavior.¹ Additionally, more internal forms of motivation are also more sustainable due to links to autonomy and competence in the behavior.⁵
- The primary purpose of this study was to explore the relationship between different motivations and participation in both PA and RT in deputy sheriffs. A secondary purpose examined how years sworn was related to PA and motivation.

METHODS

- Deputy sheriffs ($n = 60$; gender: male = 48, female = 12) from one law enforcement agency (years sworn: 4.8 ± 3.5) completed a questionnaire administered by graduate students from California State University, Fullerton in the Spring of 2018. The participants arrived in small groups and completed the questionnaire independently in approximately 10-15 minutes.
- PA was assessed using the Godin Leisure Time Exercise Questionnaire² considering the average frequency of moderate to vigorous physical activity over a 7-day period.
- RT was assessed through three items addressing how often participants engaged in RT in the past 3 months, the average number of days per week in the past 3 months, and the number of days in the past week that they engaged in RT.
- Motivation was measured using the 24-item Behavioral Regulation in Exercise Questionnaire (BREQ-3).³
 - Assessed 6 types of motivation with 4 items corresponding to each subscale.
 - Scale of 0 (Not true for me) to 4 (very true for me).
 - Cronbach's alpha:
 - One item was removed from the subscales for Identified Regulation (0.74) and Amotivation (0.74) to move Cronbach's alpha into acceptable levels. Alpha levels were acceptable for all other variables.
- Pearson correlations ($p < .05$) were conducted to assess relationships between motivation, years sworn, PA, and RT.
 - Normality assumptions were met for all variables except identified regulation and amotivation, for which Spearman correlations were conducted.
 - Outliers: There was one outlier for PA that was adjusted by recording the next highest value as the score.

RESULTS

- Correlations and descriptive statistics for types of motivation, PA and RT are shown in Table 1. Figures 1-4 display the relationships for years sworn with PA and external regulation, and for intrinsic regulation with PA and RT.

Table 1: Correlations, Means and Standard Deviations for Type of Motivation and PA and RT.

Type of Motivation	PA (2.27 ± 1.36)	RT (2.99 ± 1.63)
Intrinsic Regulation	0.30* (2.94 ± 0.98)	0.43*** (2.94 ± 0.98)
Integrated Regulation	0.32* (2.77 ± 1.09)	0.60*** (2.77 ± 1.09)
Identified Regulation	0.33* (3.59 ± 0.55)	0.48*** (3.59 ± 0.55)
Introjected Regulation	0.15 (2.66 ± 0.97)	0.29* (2.66 ± 0.97)
External Regulation	0.04 (1.03 ± 0.90)	-0.07 (1.03 ± 0.90)
Amotivation	-0.08 (0.25 ± 0.49)	-0.17 (0.25 ± 0.49)

* $p < .05$; ** $p < .01$; *** $p < .001$

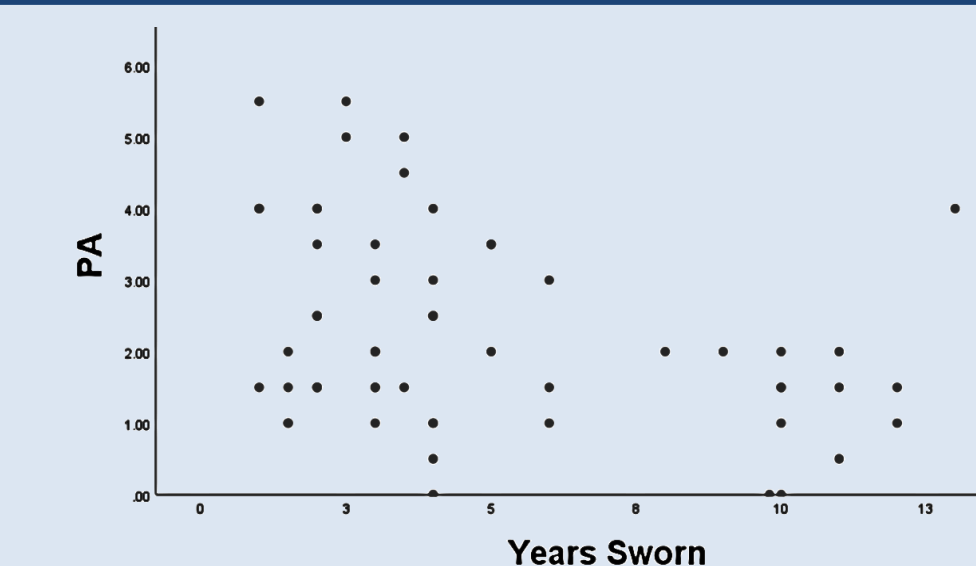


Figure 1. Scatter plot for years sworn and PA ($r = -0.34, p = .01$).

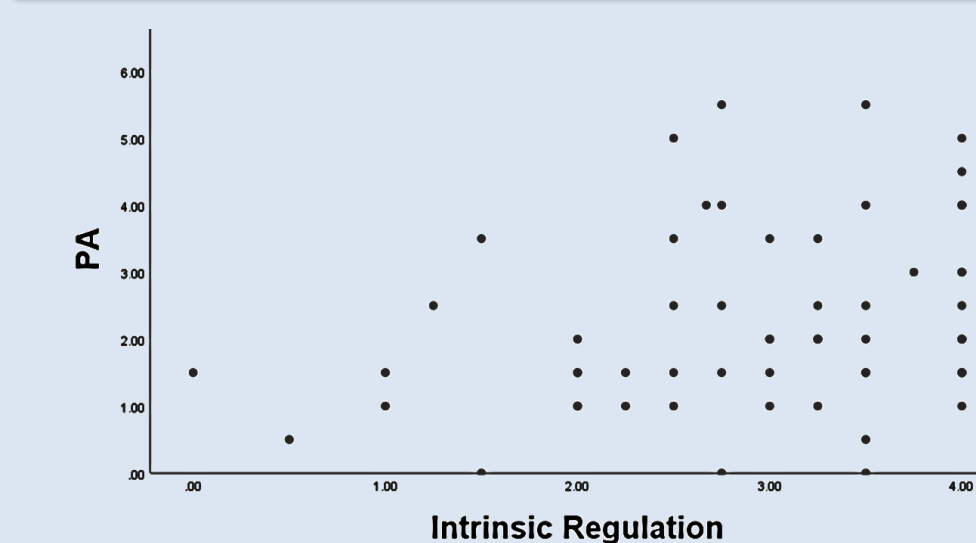


Figure 3. Scatter plot for intrinsic regulation and PA ($r = 0.30, p = .02$).

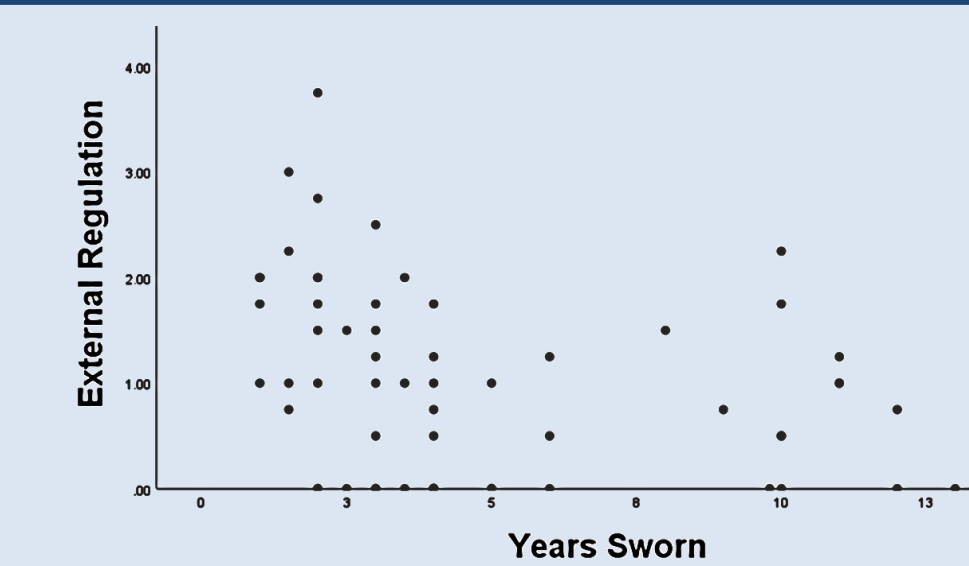


Figure 2. Scatter plot for years sworn and external regulation ($r = -0.30, p = .02$).

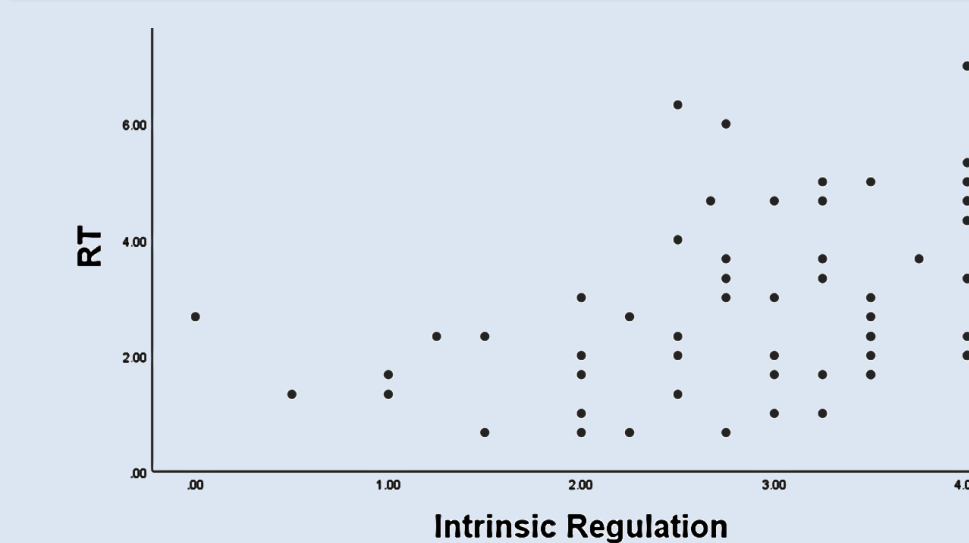


Figure 4. Scatter plot for intrinsic regulation and RT ($r = 0.43, p = .001$).

CONCLUSIONS

- In line with SDT,⁵ more intrinsic and autonomous motives (intrinsic, integrated, and identified regulation) were associated with both PA and RT.
- However, the longer time since a deputy sheriff was sworn was associated with lower PA levels as well as lower external regulation levels. As recruits, there are fitness standards as well as external rewards and punishments that may promote PA during academy.
- Although PA was not related to external regulation, the lower PA levels of deputy sheriffs may reflect a lack of fitness standards and rewards and punishments after recruits graduate academy.
- However, more external factors such as rewards and threats, such as evaluations, have been shown to actually decrease intrinsic forms of motivation.⁵
- If fitness standards are not added as a part of post academy, it may be beneficial to foster more intrinsic and autonomous forms of motivation during and after academy to help deputy sheriffs engage in more PA and RT, which can improve their fitness levels and can benefit their job-related performance.
- Further research should look at how the motivations and fitness levels of recruits and deputy sheriffs differ, as this study only looked at one deputy sheriffs' class so comparisons to recruits could not be made. Additionally, further research should explore how to encourage PA and intrinsic motivation in deputy sheriffs, from how physical training is applied during academy and promoted when deputy sheriffs begin deployment.

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