

CISM International Symposium 2025: Physical Readiness and Resilience in the Armed Forces: Challenges and Foreseeing the Future

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Abstract

Topic: Sports Psychology for Military Athletes

Title: Fostering Exercise Motivation in Youth Preparing for Military Service: Self-Determination Theory Approach

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Introduction: In demanding military settings, physical training is crucial for enhancing performance, resilience, teamwork, and maintaining sustained readiness. However, conventional training methods often emphasize compliance over commitment. This presentation examines how Self-Determination Theory (SDT; Deci & Ryan, 2000; Ryan & Deci, 2017) can transform military training by prioritizing intrinsic motivation. By fostering self-determined motivation, we can develop more committed, adaptable, and mentally resilient national service entrants. This study aimed to examine whether body mass index (BMI), hand grip strength, and moderate-to-vigorous physical activity (MVPA) predicted motivational regulation among college students around the age of entering national service.

Methods: The study employed a follow-up design, eight weeks apart, to examine gender differences in self-determined motivational regulation using path analysis. Participants included 280 youth (255 girls, 25 boys), aged 16 to 28 years ($M = 20.45$, $SD = 1.96$). Data were collected on body mass index (BMI), grip strength, and moderate-to-vigorous physical activity (MVPA) using standardized protocols. Motivation was assessed using validated self-report measures aligned with Self-Determination Theory, which captured six regulatory styles (intrinsic, integrated, identified, introjected, external, and non-regulation) across two time points. Structural equation modelling with multi-group analysis was conducted to explore predictive relationships and gender-specific patterns.

Results: The path model results revealed distinct patterns of self-determined motivational regulation between girls and boys. Among girls, intrinsic and identified regulation were significantly and positively predicted by grip strength. In contrast, intrinsic and integrated regulation were negatively predicted by BMI, highlighting a stronger link between physical fitness and autonomous motivation. Additionally, MVPA was positively associated with identified regulation and negatively associated with non-regulation, suggesting that higher activity levels enhance self-determined motivation while reducing amotivation.

Boys showed fewer significant predictors at Time 1, with only grip strength positively predicting identified regulation and negatively predicting amotivation. Notably, boys exhibited more substantial longitudinal effects, as Time 1 motivational variables were more predictive of their corresponding Time 2 counterparts. Girls, meanwhile, showed more immediate cross-sectional

associations with physical indicators. Overall, while both genders demonstrated internal consistency and stability in motivational constructs over time, girls' motivation appeared more sensitive to physical attributes and activity behaviours. In contrast, boys' motivation was more temporally stable but less influenced by BMI, MVPA, or strength.

Discussion and Conclusion: The findings underscore meaningful gender differences in the predictors and development of self-determined motivation among youth. For girls, physical health markers, particularly grip strength and BMI, emerged as important contributors to more autonomous forms of motivation, suggesting that physical competence may play a key role in fostering intrinsic and identified regulation. MVPA further reinforced this pattern by promoting adaptive motivational profiles and reducing amotivation. These results align with prior literature emphasizing the role of perceived competence and activity engagement in girls' motivational development.

In contrast, boys' motivational regulation appeared less influenced by physical attributes and activity levels in the short term. However, it demonstrated stronger longitudinal stability, indicating that once established, their motivational profiles tend to persist over time. This difference may reflect varying developmental trajectories or contextual influences in how boys and girls experience and internalize motivation for physical activity.

In conclusion, interventions aimed at promoting physical activity motivation should consider these gender-specific patterns. For girls, enhancing physical fitness and ensuring positive physical activity experiences may be critical for supporting self-determined motivation. For boys, early cultivation of intrinsic motivation may have long-lasting effects. These insights can inform the development of tailored strategies to sustain engagement in health-promoting physical activities across genders.

Practical Implications for CISM: The findings offer key insights for military sport and physical training programs, particularly for youth entering national service. Given that girls' motivation is more sensitive to physical fitness indicators such as grip strength, BMI, and MVPA, pre-service training programs should prioritize developing muscular strength and promoting regular activity to foster intrinsic and identified motivation. This can enhance engagement, resilience, and persistence in physically demanding environments.

For boys, whose motivation appears more stable over time but less reactive to physical measures, early interventions that establish strong intrinsic motivation, such as emphasizing personal mastery, purpose, and autonomy, may yield sustained benefits throughout service. Military training structures should therefore include motivational climate strategies that support competence and self-determined goals, rather than relying solely on external rewards or pressures.

By tailoring motivation-enhancing strategies to gender-specific patterns, military programs can improve adherence, reduce dropout risk, and optimize both physical readiness and psychological commitment among conscripts during national service.

References:

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Conflict of Interest: The authors declare no conflicts of interest.

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