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Motivation and Physical Activity from the Perspective of Self-Determination Theory

Motivación y Actividad Física desde la Perspectiva de la Teoría de la Autodeterminación

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Abstract:

This paper examines motivation in physical activity from the perspective of Self-Determination Theory (SDT), highlighting its central role in the initiation, maintenance, and adherence to exercise. It argues that the satisfaction of basic psychological needs (autonomy, competence, and relatedness) enhances autonomous motivation, well-being, and learning, whereas their frustration leads to demotivation. Empirical evidence shows that educational and sport environments that support autonomy, provide constructive feedback, and support relatedness increase enjoyment and engagement. The paper also reviews recent theoretical developments integrating social, systemic, and methodological dimensions, including innovations such as neurophysiological measures and computational models. Finally, it emphasizes the need to strengthen teacher education, design SDT-based interventions, and translate these principles into public policy to promote sustainable motivation and an active, healthy lifestyle.

Keywords:

Motivation, physical activity, Self-Determination Theory, psychological needs, well-being.

Resumen:

El texto analiza la motivación en la actividad física desde la perspectiva de la Teoría de la Autodeterminación (TAD), destacando su papel central en la iniciación, mantenimiento y adherencia al ejercicio. Se expone que la satisfacción de las necesidades psicológicas básicas de autonomía, competencia y relación favorece la motivación autónoma, el bienestar y el aprendizaje, mientras que su frustración genera desmotivación. La evidencia empírica confirma que los entornos educativos y deportivos que apoyan la autonomía, ofrecen retroalimentación constructiva y promueven la relación social incrementan el disfrute y el compromiso. Asimismo, se presentan avances teóricos que integran dimensiones sociales, sistémicas y metodológicas, incluyendo innovaciones como mediciones neurofisiológicas y modelos computacionales. Finalmente, se subraya la necesidad de fortalecer la formación docente, diseñar intervenciones basadas en la TAD y trasladar estos principios a políticas públicas para promover una motivación sostenible y un estilo de vida activo y saludable.

Palabras claves:

Motivación, actividad física, Teoría de la Autodeterminación, necesidades psicológicas, bienestar.

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Introduction

Motivation is a key determinant of both the initiation and maintenance of physical activity and sport participation. According to recent data, nearly 40% of European adults report no interest in engaging in physical activity (Eurobarometer, 2022), reflecting a significant motivational deficit with respect to meeting health recommendations. Self-Determination Theory (SDT), developed by Deci and Ryan (1985, 2000), provides a robust framework for understanding the motivational processes underlying participation in physical activity and sport and exercise contexts. According to SDT, three basic psychological needs (autonomy, competence, and relatedness) are essential for fostering self-determined motivation, learning, and well-being (Deci & Ryan, 2000; Ryan & Deci, 2017). In contrast, the frustration of these needs leads to demotivation and negative psychological outcomes. In this regard, educational environments that support autonomy and competence in physical education promote greater participation and enjoyment (Reeve & Cheon, 2021).

Recent developments in the theory have proposed extensions such as beneficence, which may further enrich the understanding of human motivation in physical activity contexts (Martela & Ryan, 2016). This expanded framework reinforces the idea that engagement in physical activity depends not only on competence or performance, but also on meaning, contribution to others, and the exploration of new experiences.

Current Evidence

Empirical research consistently supports the importance of autonomous forms of motivation (intrinsic and identified regulation) for adherence to physical activity and the maintenance of an active lifestyle (Teixeira et al., 2012; Xu et al., 2025). In the systematic review by Xu et al. (2025), autonomous motivation and perceived competence are confirmed as key determinants of physical activity across different stages of life.

Similarly, educational contexts in which teachers support autonomy, provide constructive feedback, and support relatedness are associated with higher levels of intrinsic motivation and student engagement (Pérez et al., 2019; White et al., 2021). These environments facilitate the internalization of values associated with physical activity, fostering habits that extend beyond the school setting.

At an applied level, interventions grounded in SDT have demonstrated effectiveness in improving adolescents' enjoyment, persistence, and well-being (Barbosa Cano & Gómez-Baya, 2025). These effects are explained by the capacity of such interventions to satisfy basic psychological needs, a necessary condition for fostering sustainable motivation (Ryan & Deci, 2017).

Recent Contributions and New Directions

Recent developments in SDT have expanded beyond the individual level to address the social and systemic contexts that shape motivation. Howard et al. (2025) highlight that the theory is

evolving toward broader domains, including public policy, education, economics, and health, to better understand how institutions can support or hinder the satisfaction of basic psychological needs. In the field of physical activity, this implies designing educational and sport environments that promote not only performance but also autonomy and well-being.

Additionally, researchers emphasize the importance of methodological innovations, such as neurophysiological measures and computational models, to more accurately capture underlying motivational processes (Reeve & Lee, 2025). These approaches offer new perspectives for understanding how experiences of competence or frustration are reflected in physiological and emotional responses during physical activity.

Furthermore, social and collective applications of SDT, for example, programs promoting gender equality and inclusion through physical activity (Lamonedá Prieto et al., 2023), demonstrate the usefulness of the theory in addressing contemporary social challenges from a well-being and social justice perspective.

Challenges and Perspectives

Despite significant progress, several challenges remain. First, there is a need for more longitudinal and experimental research designs to identify causal relationships in motivational processes. Additionally, it is essential to consider diverse motivational profiles by taking into account cultural and contextual differences (Slemp et al., 2024; Xu et al., 2025).

A second major challenge concerns teacher and coach education. Professional development programs based on SDT have shown that educators can learn to provide more effective autonomy support, which, in turn, has a positive impact on students' motivation (Aelterman et al., 2014; Reeve & Cheon, 2021).

Finally, recent advances point to the importance of integrating SDT principles into public policy. As Martela and Ryan (2023) argue, indicators of well-being should incorporate measures of basic psychological need satisfaction, complementing traditional indicators such as health or performance. In the field of physical activity, this would involve promoting institutional policies that prioritize autonomous motivation, equitable participation, and holistic well-being.

Conclusions

Self-Determination Theory remains a key theoretical and practical framework for understanding motivation in physical activity. Recent conceptual and methodological developments have expanded its explanatory power by integrating social, cultural, and neuropsychological dimensions.

Fostering environments that satisfy the needs for autonomy, competence, and relatedness continues to be the central pathway for promoting sustainable motivation, well-being, and long-term engagement in physical activity (Howard et al., 2025; Ryan & Deci, 2017). Integrating these principles into teacher education, physical activity programs, and public policy represents a critical pathway toward fostering a more active, healthier, and psychologically enriched society.

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