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# The FITT-VP prescription model may not be sufficient for adherence to physical activity: the importance of affect-driven physical activity

## Abstract

International physical activity guidelines, such as those from the WHO, and the FITT-VP prescription model (frequency, intensity, type, time, volume, and progression) prioritize the quantity and intensity of exercise. However, high intensities can elicit negative affect, which compromises the intention to repeat the behavior and, consequently, adherence. This article argues that FITT-VP-based prescription may be insufficient for ensuring physical activity adherence and should incorporate variables that promote positive affect. To this end, a brief theoretical-argumentative communication was developed, integrating literature from exercise psychology and behavioral economics, drawing on frameworks such as the peak-end rule, the dual-mode model, and self-determination theory. Key findings suggest that the affect experienced during exercise is associated with the intention to repeat the activity, and that intensities exceeding the ventilatory threshold tend to elicit less positive affective responses. Strategies such as gamification, "nudges," perceived immediate utility, autonomy, perceived competence (fostered through positive feedback), and social interaction can promote positive affect. Nevertheless, for individuals who are overweight or obese, having autonomy in choosing exercise intensity may lead to excessive exertion and reduced enjoyment. Ultimately, it is concluded that exercise prescription based on the FITT-VP model should also account for variables that promote positive affect, although further research is required to confirm these relationships.

**Keywords:** physical activity, affective response, FITT-VP, adherence

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## Introduction

Historically, physical activity recommendations proposed by international organizations and guidelines, such as those from the World Health Organization, have focused primarily on the quantity and intensity of physical activity.[1] In general, a minimum of 150 minutes of moderate-to-vigorous physical activity (MVPA) per week is recommended.[1] These guidelines advise accumulating 150–300 minutes of MVPA per week, 75–150 minutes of vigorous physical activity per week, or an equivalent combination of both.[1]

Within this framework, scientific literature has outlined a model for prescribing physical activity based on six key variables: Frequency, Intensity, Type, Time, Volume, and Progression (FITT-VP).[2,3]

Taking into account the World Health Organization's[1] recommendations regarding minimum intensity and frequency, as well as the FITT-VP model for physical activity prescription, the scientific literature has largely focused on promoting physical activity at higher volumes – and, in particular, at greater durations and intensities.[4,5]

However, in recent years, studies in the field of exercise psychology, particularly through the lens of behavioral economics, have shown that variables related to the affect experienced during physical activity appear to be strongly linked to the intention to repeat physically active behavior.[6] Although the "intention-behavior gap" is well-documented, indicating that a significant portion of one's intention does not necessarily translate into actual behavior,[7] intention remains a necessary antecedent to behavior. This is illustrated in the literature by the "peak-end rule",[8] which suggests that the peak moments of an experience and, in particular, its conclusion, are directly related to "remembered utility". This, in turn, informs "decision utility", which facilitates the repetition of the behavior. Both remembered utility and decision utility are rooted in hedonic theory: the pursuit of maximizing future pleasure – based on the hedonic memory of a past experience – increases the likelihood of behavioral adherence.[8,9]

From this perspective, it is also relevant to note that exercise intensity, if prescribed in accordance with major physical activity guidelines for health,[1] may potentially elicit negative affect. This is supported by key models used to assess affective responses during physical activity, such as the dual-mode model,[10] which suggests a possible negative correlation between intensity and affect. Specifically, at higher intensities, particularly those exceeding the ventilatory threshold (the physiological point at which ventilation increases disproportionately relative to oxygen consumption, marking the transition from moderate to vigorous intensity), there is a tendency toward more negative or less positive affective responses.[10–12]

It should be noted that the literature has shown that, beyond the modulation of intensity, other variables can be manipulated to foster greater positive affect during physical activity. Key examples include gamification and "nudges," as well as basic psychological needs.[13–17]

Studies have focused on physical activity performed in purely virtual environments or linked to virtual experiences, such as games that require actual physical activity to achieve virtual rewards.[18–20] Furthermore, the use of so-called "nudges" – such as manipulating the physical environment to provide reminders for physical activity – can enhance perceived affect.[13,21]

Another latent variable related to affective perception is "perceived immediate utility".[22] According to neuroevolutionary theory, which posits that movement is inherently purposeful only in the contexts of social interaction (procreation), fight-or-flight responses, or the search for food,[22] the perception of an immediate need for movement tends

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to motivate individuals to engage in it. Consequently, creating small behavioral triggers, such as getting off the bus a stop early or parking the car a few blocks away from one's destination, can serve as initial strategies to foster motivation in beginners. In this regard, although further empirical research is required, it is worth noting that training modalities like functional training may potentially support motivation by leveraging this variable of perceived immediate utility.

Regarding the basic psychological needs for well-being and self-determined behavior,[23] studies have shown that having the autonomy to choose FITT-VP variables, such as the type of activity and its intensity, tends to promote better affective responses.[24] However, among individuals who are overweight or obese, this autonomy in selecting intensity may actually trigger negative affect; this is because, due to a lack of experience or low body awareness, these individuals are more likely to choose intensities that exceed their ventilatory threshold. This potentially leads to an emphasis on the interoceptive cues of physical activity (e.g., the perception of muscle pain or fatigue inherent to the exercise), ultimately resulting in lower levels of pleasure – even when the exercise prescription allows for such autonomy.[25]

Another basic psychological need to consider in relation to affect and adherence to physically active behavior is perceived competence; the perception of motor competence, beyond enhancing actual motor learning, tends to promote higher levels of positive affect. This can be fostered by providing positive feedback that praises performance during physical activity, a practice which, even if it does not necessarily reflect actual motor ability, has been shown to yield benefits for motivation, affect, and learning.[26,27]

Finally, regarding basic psychological needs, social interaction can be a strong ally in fostering more positive affective responses to physical activity.[28–30] According to previous findings, engaging in physical activity as part of a group, given its connection to the aforementioned ancestral motivations, can serve as a powerful motivating factor,[22] although some individuals may prefer more solitary forms of physical activity.[31]

Given this, physical activity designed to elicit positive affect during participation appears to be an emerging strategy for increasing motivation to engage in physical activity. Consequently, it is believed that exercise prescription based on the FITT-VP model should also be guided by variables linked to the promotion of positive affect,[32] although further research into these relationships is still required.

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## Conflicts of interest

The author declares there is no conflict of interest.

## References

1. World Health Organization. *WHO Guidelines on Physical Activity and Sedentary Behaviour*. World Health Organization; 2020.
2. American College of Sports Medicine (ACSM). Progression Models in Resistance Training for Healthy Adults. *Med Sci Sports & Exerc*. 2009;41(3):687–708.
3. Currier BS, D'Souza AC, Singh MAF, et al. American College of Sports Medicine Position Stand. Resistance Training Prescription for Muscle Function, Hypertrophy, and Physical Performance in Healthy Adults: An Overview of Reviews. *Med Sci SportsExerc*. 2026;58(4):851–872.
4. Hansen D, Junior GC, Milani JGPO, et al. Advancing Aerobic Exercise Training Intensity Prescription in Health and Disease Beyond Standard Recommendations: A Call to Action. *Sports Med*. 2025;55(9):2111–2135.
5. Taylor JL, Bonikowske AR, Olson TP. Optimizing outcomes in cardiac rehabilitation: the importance of exercise intensity. *Front Cardiovasc Med*. 2021;8:734278.
6. Rhodes RE, Kates A. Can the affective response to exercise predict future motives and physical activity behavior? A systematic review of published evidence. *Ann Behav Med*. 2015;49(5):715–731.
7. Feil K, Fritsch J, Rhodes RE. The intention-behaviour gap in physical activity: a systematic review and meta-analysis of the action control framework. *Br J Sports Med*. 2023;57(19):1265–1271.
8. Kahneman D, Wakker PP, Sarin R. Back to Bentham? Explorations of experienced utility. *Quarterly Journal of Economics*. 1997112(2):375–405.
9. Hargreaves EA, Stych K. Exploring the peak and end rule of past affective episodes within the exercise context. *Psychology of Sport and Exercise*. 2013;14(2):169–178.
10. Ekkekakis P, Parfitt G, Petruzzello SJ. The pleasure and displeasure people feel when they exercise at different intensities: decennial update and progress towards a tripartite rationale for exercise intensity prescription. *Sports Med (Auckland, N.Z.)*. 2011;41(8):641–671.
11. Alvarez-Alvarado S, Chow GM, Gabana NT, et al. Interplay Between Workload and Functional Perceptual-Cognitive-Affective Responses: An Inclusive Model. *J Sport & Exerc Psychol*. 2019;41(2):107–118.
12. Ekkekakis P, Lind E. Exercise does not feel the same when you are overweight: the impact of self-selected and imposed intensity on affect and exertion. *Int J Obes*. 2006;30(4):652–660.
13. Forberger S, Wichmann F, Comito CN. Nudges used to promote physical activity and to reduce sedentary behaviour in the workplace: Results of a scoping review. *Prev Med*. 2022;155:106922.
14. Mazeas A, Duclos M, Pereira B, et al. Evaluating the effectiveness of gamification on physical activity: systematic review and meta-analysis of randomized controlled trials. *J Med Internet Res*. 2022;24(1):e26779.
15. Rodrigues F, Teixeira D, Neiva H, et al. Understanding exercise adherence: the predictability of past experience and motivational determinants. *Brain Sci*. 2020;10(2):98.
16. Ryu E, Farraday D, Fanaroff AC, et al. What motivates participants: a qualitative analysis of gamification and financial incentives to increase physical activity. *BMC Public Health*. 2025;25(1):1804.
17. Sailer M, Hense JU, Mayr SK, et al. How gamification motivates: an experimental study of the effects of specific game design elements on psychological need satisfaction. *Comput Human Behav*. 2017;69:371–380.
18. Althoff T, White RW, Horvitz E. Influence of Pokémon Go on Physical Activity: Study and Implications. *J Med Internet Res*. 2026;18(12):e315.
19. Direito A, Jiang Y, Whittaker R, et al. Apps for IMproving FITness and Increasing Physical Activity Among Young People: The AIMFIT Pragmatic Randomized Controlled Trial. *J Med Internet Res*. 2015;17(8):e210.
20. Khamzina M, Parab KV, An R, et al. Impact of Pokémon Go on physical activity: a systematic review and meta-analysis. *Am J Prev Med*. 2020;58(2):270–282.
21. Thaler R, Sunstein CR. *Nudge: Improving Decisions About Health, Wealth, and Happiness*. Yale University Press; 2008.
22. Lee HH, Emerson JA, Williams DM. The exercise–affect–adherence pathway: an evolutionary perspective. *Front Psychol*. 2016;7:25.

23. Deci E, Ryan RM. Intrinsic motivation and self-determination in human behavior. New York: Plenum Press. 1985.

24. Williams DM, Dunsiger S, Emerson JA, et al. Self-paced exercise, affective response, and exercise adherence: a preliminary investigation using ecological momentary assessment. *J Sport Exerc Psychol*. 2016;38(3):282–291.

25. Elsangedy HM, Nascimento PHD, Machado DGS, et al. Poorer positive affect in response to self-paced exercise among the obese. *Physiol & Behav*. 2018;189:32–39.

26. De Meester A, Maes J, Stodden D, et al. Identifying profiles of actual and perceived motor competence among adolescents: associations with motivation, physical activity, and sports participation. *J Sports Sci*. 2016;34(21):2027–2037.

27. Martinez VML, Cardozo P, Kaefer A, et al. Positive feedback enhances motivation and skill learning in adolescents. *Learn Motiv*. 2024;86:101966.

28. De La Cruz MF, Zamarripa J, Calva-Vite FA. Influence Of Social Support On Adherence And Compliance With Recommendations Of Healthy Practice. *Medicine & Science in Sports & Exercise*.2016;48:690.

29. Huang J, Lv Q, Zeng X. The influence of social support and empowerment on physical exercise behavior in university students: A self-determination theory perspective. *Acta Psychol*. 2025;257:105086.

30. Smith GSE, Moyle W, Burton NW. The relationship between social support for physical activity and physical activity across nine years in adults aged 60–65 years at baseline. *Int J Environ Res Public Health*. 2023;20(5):4531.

31. Hall EE, Petruzzello SJ, Ekkekakis P, et al. Role of self-reported individual differences in preference for and tolerance of exercise intensity in fitness testing performance. *Journal of Strength and Conditioning Research*. 2014;28(9):2443–2451.

32. Andrade AJ, Bastos V, Teixeira DS. Exploring the Impact of Pleasure-Oriented Exercise on Motivation and Behavior in Health Clubs: Results From a Randomized Controlled Trial Ancillary Study. *Journal of Sport and Exercise Psychology*. 2026;1–12.

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