Motivation, Movement, and Vitality: Self-determination Theory and its Organismic Perspective on Physical Activity as Part of Human Flourishing

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Abstract

Ntoumanis and Moller review 25 years of self-determination theory (SDT) research as part of *Psychology of Sport and Exercise*'s 25th Anniversary Special Issue. They delineate many of the key propositions, empirical findings, and practical applications of the theory in the domain of physical activity (PA). In this brief commentary, I highlight the organismic assumptions of SDT and the relevance of PA to SDT's focus on flourishing. PA is intrinsically motivated, as observed from infancy and beyond, but as SDT research has shown, the inherent propensities to move and be physically active can be enhanced or undermined as a function of need-supportive or need-thwarting social conditions. Further, many types of PA are instrumental rather than intrinsically motivated, such that sustaining them requires internalization, a process well detailed within the theory. Also highlighted is SDT research on subjective vitality, a psychological construct with direct ties to PA, as well as being influenced by autonomous versus controlled motives. Finally, building on Ntoumanis and Moller's discussion, I enumerate additional future directions for SDT research and practice including neuropsychological underpinnings, motivational dynamics in group or team settings, and the influence of pervasive social factors such as sedentary work styles and media use on people's participation in PA. Given that SDT is an organismic perspective focused on human flourishing, PA research will continue to be highly relevant to its aims.

Keywords: self-determination theory, subjective vitality, physical activity, autonomy, flourishing, organismic theory

Highlights

- Reviews how self-determination theory explains motivation for physical activity and human flourishing.
- Emphasizes the role of basic psychological needs in sustaining physical activity.
- Highlights SDT research on subjective vitality as linked to physical activity.
- Discusses internalization of motivation for instrumental forms of physical activity.
- Suggests future directions, including neuropsychological, digital, and social factors.

Motivation, Movement, and Vitality: Self-determination Theory and its Organismic Perspective on Physical Activity as Part of Human Flourishing

In their review of 25 years of self-determination theory (SDT) research, Ntoumanis and Moller (2025) captured many of the primary themes, findings, and applications of the theory within the domain of physical activity (PA). These themes included the theory's steady growth in basic research, field studies, and practical interventions in the promotion of PA and active lifestyles. Their comprehensive review also suggests that SDT has a sufficient theoretical scope, evidence base, and phenomenological resonance to continue to incite the efforts of the many international researchers in the PA field who are moving the theory forward. My aim here is thus not to critique their review, but rather to place it within the overarching aims of SDT, which emphasize the promotion of human flourishing.

Although SDT has been applied in many fields, motivational dynamics in motor learning, PA, and sport have been core areas of investigation from its very beginnings (Deci & Ryan, 1980). Part of the reason that SDT is particularly apt in these domains is that SDT is not merely a cognitive or a behavioral approach, but more fundamentally an *organismic* theory. It assumes that humans are inherently active, moving in the direction of their own elaboration and integration (Ryan & Deci, 2017). We are, in short, evolved to develop both physically and psychologically and, under favorable conditions, to flourish.

That active nature is nowhere more evident than in our propensities to be physically active. From their earliest moments, infants are reaching out and actively engaging their world. They begin to roll, crawl, stand, and soon, if able, to run. This trajectory is fueled by an *intrinsic motivation* to exercise and extend our physical capacities, such that one doesn't need to look outside the organism to find the impetus to action. It's right there in the very nature of life.

Although intrinsic motivation for physical activities is universal, there are clearly individual differences in the frequency and intensity of PA. Biological and personality factors certainly play a role. But desires to move, to play, to compete, and to explore, and the intrinsic motivation associated with these activities, are also strongly influenced by social contexts. Especially as they move beyond toddlerhood, children are increasingly exposed to adult-directed physical education and sports, shaping their attitudes toward PA, inspiring many, and strongly discouraging others. An important focus of SDT concerns these social conditions that support or undermine intrinsic motivation. SDT assumes that interpersonal supports for the basic needs for autonomy, competence, and relatedness by trainers, coaches, and PE teachers can enhance intrinsic motivation for PA and sport, whereas need thwarting interactions undermine it (Standage & Ryan, 2020). Evidence supporting these assumptions derives from multiple methods and sources, ranging from tightly controlled lab experiments to controlled intervention studies (e.g., see Chiviacowsky, 2014; Meerits et al., 2025; Reeve et al., 2022).

Yet PA and sport are clearly not always 'fun and games' and people often need more than intrinsic motivation to sustain physical activities. In health maintenance and rehabilitation, regular physical exercise is often required. In sports, disciplined practice and conditioning are essential to high performance. In such contexts the relevance of *internalized motivation* becomes more salient. SDT describes how even arduous activities can become autonomously motivated through internalization. On the darker side, the theory shows how controlling contexts lead PA to become either reliant on external motivators, or deteriorate into disengagement and amotivation.

Indeed the two most important motives for sustained engagement in PA are *identification* (personally endorsing the value of activity) and *intrinsic motivation* (finding the joys, both social and physical, within the activity), with much evidence suggesting that for many health-related behaviors having *both* types of motives is key. Luckily, supports for autonomy, competence, and

relatedness by parents, peers, coaches and PE teachers can simultaneously enhance both of these autonomous forms of motivation, and help prevent people from drifting into unhealthy, inactive ways of living. These ideas have been broadly confirmed across multiple meta-analyses (e.g., Gillison et al., 2019; Mossman et al., 2024; Ntoumanis et al., 2021).

Physical Activity, Vitality, and Autonomy

Although the review by Ntoumanis and Moller was highly comprehensive, the body of SDT research is quite broad and varied. One area not spotlighted is SDT research on *subjective vitality*, conceptualized within SDT as the *energy perceived to be available to the self.* SDT-based studies of subjective vitality show that it is associated with a sense of autonomy in acting. People can experience vitality even *after* expending significant physical effort when those activities are willingly embraced, whereas activities done for controlled motives feel more depleting (Frederick & Ryan, 2023; Ryan & Deci, 2008).

There is a deep connection between physical activity and the experience of vitality. PA can be a direct source of feeling energized, as it can, for example, enhance blood flow and oxygen delivery, catalyze endorphins and reduce bodily tensions and stress. In fact, our original interest in assessing subjective vitality arose from investigations of the motives behind PA. Ryan and Frederick (1997) found that among the main reasons people reported for activities such as running or strength training was that it increased their vitality. Yet when PA activities were perceived to be motivated either by controlling others or by strong introjects, feeling more tired and drained was a common result. Physical exertion can therefore be subjectively vitalizing or depleting depending on its relative autonomy (Kazén et al., 2015).

I recently cooperated with the Cigna Group, an insurance company, in a study of vitality in thousands of American adults (Cigna, 2024). We found that many of the individuals one might expect to have high vitality, such as those who were younger or without physical illnesses or

health problems, reported low vitality. Many factors contribute to this, but a primary source was a lack of basic need satisfactions in people's work lives. Also relevant were the sedentary nature of some types of work, as well the attractions of technologies (e.g., social media, video games) to which people can readily turn for distractions and psychological need satisfactions (Burnell et al., 2023), but which can also contribute to less active lifestyles. All the more reason to infuse PA settings with a high density of supports for autonomy, competence, and relatedness to increase their gravitational pull relative to other options for recovery from the depleting elements of work.

SDT appreciates that subjective vitality, a sense of having energy available to the self, is a core component of what it means to flourish (see also Huppert & So, 2013; Logan et al., 2023). When people can find basic need satisfactions *within* PA they experience more vitality, yielding the double value of enhancing both physical health and psychological wellness. Designing PA contexts to support basic need satisfactions thus represents a promising pathway to fostering more energized, flourishing lives.

Future Directions

Ntoumanis and Moller's (2025) summary of SDT research on PA spanning the 25 years since the launching of PSE not only documents the extensive body of knowledge and practices that have emerged from this framework, but also points to important new directions for research. A particularly salient agenda is testing the recently proposed *tripartite model of needs* (Huyghebaert-Zouaghi et al., 2024) which recognizes that needs can be satisfied, frustrated, or simply unmet in different PA contexts. Distinguishing the antecedents and outcomes associated with these differing need states will greatly advance theory and practice. Another agenda is the continuing examination of whether psychological satisfactions beyond autonomy, competence, and relatedness merit the status of truly basic needs. One possibility, for instance, is that proposed needs such as that for "variety/novelty" (González-Cutre et al., 2020) may be domain

specific, enhancing motivation and wellness in physical education or physical activity contexts, but perhaps not across all domains of life as do SDT's three major basic needs. Still another area for more active research is on the practice of using financial incentives to motivate PA, especially in ways that attempt to "incentivize" active behaviors. Although extant evidence suggests that such controlling uses of rewards are typically ineffective in fostering sustained PA (Moller et al., 2019), because these practices are common, and behavioristic intuitions surrounding them hard to extinguish, it is an area where deeper study is warranted. Topics such as the neuropsychology of motivation (Di Domenico & Ryan, 2017; Reeve & Lee, 2025); the effects of group, team, and peer climates on motivation for PA (Kritz et al., 2025; Slemp et al., 2024); the circumplex model of teacher/trainer styles (Aelterman & Vansteenkiste, 2023); and how social media, digital gaming, and passive entertainments relate to PA and wellness (Rigby & Ryan, 2011), are among a plethora of promising new directions for PA research within SDT.

Yet within the strict confines of this brief commentary, my main hope is only to remind researchers as to why we might so strongly value PA in the first place. It's not just because it leads to longevity and health—it is also because it is central to peoples' psychological vitality and overall flourishing. Any look around modern societies shows how commonly people are amotivated for PA, and how sedentary behaviors too often provide more ready psychological need satisfactions than classical PA settings. Flourishing, while natural to our species, thus not only requires physical supports such as nutrition, sleep, and health care, but also the psychological satisfactions of autonomy, competence, and relatedness. When PA contexts are designed to facilitate these satisfactions, they help individuals remain reliably engaged across time. Strategies to foster sustained PA motivation are being increasingly revealed in empirical studies based in SDT, so I am confident that SDT research will merit a similarly broad review in PSE's 50th anniversary issue, 25 years hence.

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