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The Weakening and Reconstruction of College Students' Exercise Motivation in the Short-Video Era

HU Caifeng
Chongqing Sanxia University of Science and Technology, Chongqing, China

Short videos have become an activity that occupies an extremely high proportion of college students' daily time structure. They do not directly "cause" students to be physically inactive; rather, they reduce the probability that exercise behavior occurs by changing reward structures, self-control resources, affective evaluations, and the process of motivation internalization. Drawing on three lines of theorizing—dual-process theory, the strength model of self-control together with habit research, and self-determination theory—this paper proposes four pathways through which short videos weaken exercise motivation: raising the threshold for immediate reward so that exercise appears "not interesting enough"; depleting limited self-control resources; strengthening the automatic activation of negative affective evaluations of exercise; and squeezing out autonomy-supportive activity space, thereby delaying motivation internalization. On this basis, four pathways for reconstruction are proposed: reducing initiation costs through situational self-control; rebuilding perceptible immediate feedback; replacing reliance on willpower with the cultivation of habits; and taking behavioral substitution rather than behavioral deprivation as the intervention goal.

Keywords: short videos, physical exercise, motivation, self-control, habit, college students

Introduction

When the decline in college students' physical fitness is discussed, "short videos" are often treated as the prime suspect. Such attributions are intuitive and easy to circulate, yet they simplify a complex problem of behavioral competition into a moralized causal narrative. From the perspective of behavioral science, the question that needs to be answered is not "Do short videos make people lazy?" but rather: When short videos and physical exercise compete within the same time budget, which psychological mechanisms make exercise more likely to be abandoned, and what changes in conditions can make exercise possible again?

There is a structural asymmetry between the psychological characteristics of short-video use and exercise behavior. The former offers immediate, certain, low-effort rewards; the latter offers delayed, uncertain returns that require effortful investment. Existing research suggests that problematic short-video use is associated with lower motivation and reduced well-being (Ye et al., 2022), and that short-video addiction is also related to executive function (attentional control) and academic procrastination (Xie et al., 2023); across the broader range of social media, associations between problematic use and symptoms of depression, anxiety, and stress among adolescents and young adults have been reported in a systematic review and meta-analysis of 18 studies (Shannon et al., 2022). However, such evidence is largely cross-sectional, and heterogeneity across platforms is substantial.

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A systematic review of short-video platforms and adolescent mental health explicitly points out that pooling analyses across different social media platforms limit the reliability of conclusions (Conte et al., 2025), and another systematic review of problematic short-video use likewise emphasizes that its relationship with mental health outcomes still requires more rigorous empirical research to clarify (Jain et al., 2025). This paper therefore does not adopt a "short videos are harmful" stance, but instead treats short videos as a daily behavior with a particular reward structure and discusses how it interacts with exercise motivation.

The Psychological Attractiveness of Short Videos and Its Competitive Relationship With Exercise Participation

The Psychological Attractiveness of Short Videos: Three Mechanisms

A review of the motives for using short-video platforms notes that the reason short videos rapidly occupy a large amount of usage time is related to their satisfaction of a series of immediate needs (Montag, Yang, & Elhai, 2021). Summarized from the perspective of behavioral psychology, their attractiveness stems mainly from three features: first, immediacy—a swipe yields new stimulation, and the cost of waiting is close to zero; second, low effort—consumption requires no skill and no planning and carries almost no risk of failure; third, uncertain reward—the content of the next video cannot be predicted, which produces a tendency to keep checking that resembles variable-ratio reinforcement. Together these three features constitute a "high-density reward" environment.

Behavioral Competition: More Than Time Displacement

The most common explanation is time displacement: Short videos occupy time that could have been used for exercise. This explanation holds but is insufficient. More crucial is competition between reward structures: When individuals remain for a long time in a high-density, low-effort reward environment, their evaluation of the relative attractiveness of low-density, high-effort activities declines. Exercise does not change its own physiological benefits because short videos exist, but its competitiveness as an "entertainment option" may indeed be weakened.

Existing research suggests that screen time and physical activity have mutually independent associations with mental health and sleep quality among college students (Wu et al., 2015), which indicates that the two are not a simple substitution relationship but act jointly on the same outcome. Qualitative research on the determinants of physical activity and sedentary behavior among college students also found that the barriers and facilitators mentioned by students involve environmental, social, and individual levels (Deliens, Deforche, De Bourdeaudhuij, & Clarys, 2015); attributing them to any single technology is therefore inappropriate.

Four Pathways of the Weakening of Exercise Motivation

Reward Threshold: Exercise Appears "Not Interesting Enough"

Reward thresholds shift with experience. After prolonged exposure to a high-density, immediate-reward environment, individuals' anticipated pleasure from ordinary activities may decline. In the exercise domain there is a corresponding theoretical framework for this mechanism—the Affective–Reflective Theory (ART). This theory is a dual-process model: Exercise-related stimuli trigger automatic associations and form automatic affective evaluations of exercise; such automatic evaluations constitute a source of action impulses, while reflective evaluations can intervene and override automatic evaluations only when self-control resources are

available (Brand & Ekkekakis, 2018).

This framework has direct heuristic value for the short-video context. Long-term short-video use reinforces the association that "low effort equals pleasure", whereas if exercise has been accompanied by discomfort in past experience, its automatic affective evaluation will be negative. When the automatic evaluation is negative and self-control resources are insufficient, the default outcome of behavioral choice is to continue not exercising. Researchers have systematically reviewed the affective determinants of physical activity, distinguishing constructs such as affective responses during exercise, incidental affect in daily life, affective processing, and affective judgments (Stevens et al., 2020). This means that "making exercise enjoyable" is not a vague slogan but a target that can be specifically intervened upon at multiple points.

Self-Control Resources: Willpower Is a Limited Budget

The strength model of self-control holds that various acts of self-control share a limited, depletable resource; prior acts of self-control cause temporary resource depletion and thereby affect subsequent self-control performance; the model has also been introduced into and tested in the field of sport and exercise psychology (Englert, 2016). Whatever the controversy surrounding this model, its applied implication is clear: If students expend a large part of the day's self-control resources on resisting short videos, then the decision to "go exercise first", which itself requires self-control, becomes less likely to occur.

More noteworthy is that defining the problem as "you need to be more self-disciplined" may itself be a trap. Research on situational strategies of self-control proposes that truly effective self-control is often not "resisting temptation" but actively selecting or changing the situation in order to weaken undesirable impulses and strengthen desirable behavior (Duckworth, Gendler, & Gross, 2016). Applied to exercise, this means that "leaving the phone in the dormitory and then going to the sports field" are more likely to succeed than "relying on willpower to stop scrolling in the dormitory and then going for a run".

Habit: The Mediator Between Self-Control and Behavioral Outcomes

A study comprising six studies with a total sample of 2,274 participants provided an important finding: Self-control predicts a wide range of positive life outcomes in part because people with high self-control rely more on beneficial habits rather than more frequently using effortful inhibition (Galla & Duckworth, 2015). In the exercise domain, this conclusion has received a conceptual replication: Trait self-control predicts exercise behavior through the mediating role of habit (Gillebaart & Adriaanse, 2017).

This finding is of particular significance in the short-video era: Pinning "sticking with exercise" on daily self-control is itself an unreliable design. If exercise has not yet formed a habit automatically triggered by cues, then it must compete with short videos anew every day, and each competition consumes the same resource.

Motivation Internalization: From Autonomous to Controlled

Self-determination theory provides a framework for understanding the quality of motivation. A study of 575 exercisers (aged 18-65, mean age 34.07 years, regularly exercising for at least six months) examined the "bright side" and "dark side" of motivation and found systematic differences in the predictive power of different forms of motivation for exercise enjoyment, intention to continue exercising, and persistence (Rodrigues et al., 2020). In other words, "whether" motivation exists and "what quality" that motivation has are two separate questions, and the latter is more decisive for long-term adherence.

This mechanism has also been verified in school settings. A study of 397 students aged 11-15 showed that

students' perceived autonomy support from physical education teachers was associated with objectively measured moderate-to-vigorous physical activity through psychological need satisfaction and autonomous motivation (Kalajas-Tilga et al., 2020). This suggests that if physical education classes and extracurricular exercise are long dominated by assessment, ranking, and compulsory check-ins, students' motivation may remain in a controlled form, and once external constraints disappear the behavior is easily interrupted—and short videos happen to offer a lower-cost substitute gratification at exactly that moment.

From "Weakening" to "Reconstruction": Four Actionable Pathways

Reducing Initiation Costs: Turning Decisions Into Situational Design

Following the logic of situational self-control (Duckworth et al., 2016), actionable adjustments include: fixing the time and place of exercise, preparing equipment in advance, placing the phone somewhere inconvenient to reach during specific periods, and agreeing on times with companions. What these practices share is that they transform "whether to exercise" from a resource-consuming decision that has to be remade each time into a behavior automatically triggered by situational cues.

Rebuilding Immediate Feedback: Making Exercise "Perceptible"

Since exercise is at a disadvantage when competing with immediate rewards, it is necessary to add immediately available information and experience on the exercise side. This includes: using wearable devices that instantly display steps, heart rate, and pace; dividing long-term goals into small goals that can be completed in a single session; and recording and reviewing the subjective feelings after each training session in order to correct automatic affective evaluations of exercise. It is worth emphasizing that the focus here is on changing the affective experience itself, not merely on adding numerical feedback.

Cultivating Habits Rather Than Relying on Willpower

Based on the mediating role of habit between self-control and behavioral outcomes, the core of the reconstruction strategy is to make exercise "not require a decision every time". Research suggests that habit formation depends on stable cues and repeated rewards, so the recommendations are: fix the triggering cue, start with a minimal dose to ensure repetition frequency, and ensure that each exercise session is accompanied by some form of immediate satisfaction. This is precisely the opposite of grand plans such as "run five kilometers every day starting today"—the frequent failures of the latter instead reinforce the self-evaluation "I can't do it".

Taking "Watching Fewer Videos" Itself as the Intervention Goal

In practice, a common approach is to set "reduce phone use time" directly as the intervention goal, supplemented by monitoring of screen time. But from the perspective of behavior change, this goal has two problems. First, it defines the intervention as "reduction", yet people find it hard to sustain a behavioral plan centered on deprivation over the long term, and a rebound easily produces a sense of frustration; second, it concentrates attention on the competing behavior without changing the attractiveness structure on the exercise side, so that when monitoring stops, the behavior also ceases.

A more feasible approach is to first occupy the target time period with concrete, attractive exercise arrangements, so that short-video consumption is passively reduced—that is, to achieve change through behavioral substitution rather than behavioral suppression. The logic of situational self-control supports this strategy: Changing situations and arrangements saves more resources than repeatedly resisting impulses; and

habit research suggests that only when exercise has formed a stable cue-behavior link can it automatically win in the decision of "whether to move", without having to be adjudicated by willpower each time.

Conclusion

The competition between short videos and physical exercise is essentially a competition between two reward structures over the same pool of time and self-control resources. Short videos are not a moral problem but an environmental variable that must be taken seriously; the weakening of exercise motivation is likewise not a failure of willpower but the joint result of automatic affective evaluation, the allocation of self-control resources, the absence of habit, and blocked motivation internalization. Correspondingly, the key to reconstructing motivation lies not in demanding that students "put down the phone and go running immediately", but in fully providing immediate pleasure, ease of initiation, and autonomous choice on the exercise side—so that students can walk onto the sports field without having to struggle with themselves every time.

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