Self-control is arguably one of the most beneficial adaptations of the agentic self. It enables humans to alter spontaneous, impulsive responses in order to fit one’s goals and standards. Variation in self-control capacity is a strong predictor of psychological adjustment, academic achievement, physical health, financial condition, and criminality. In this respect, investigating how to prevent self-control failures is a promising way for psychologists to improve human well-being. To this end, it is important for researchers to understand why people fail to control themselves.

The limited-energy model (Baumeister, Vohs & Tice, 2007) suggests that all self-control behaviors draw on a limited, depletable energy resource. Research has demonstrated that an initial volitional act would undermine subsequent self-control performance as if the initial exertion exhausts an internal resource that is required for self-control. This phenomenon is known as ego-depletion. Although much research has lent credence to the validity of the ego-depletion phenomenon, little is known about its underlying psychological mechanisms. To fill this research gap, the present research tested a self-efficacy account of ego-depletion, which suggests that decrease in self-efficacy mediates the effect of initial self-control exertion on subsequent
A series of four experiments were conducted to examine the self-efficacy account. Experiment 1 found that initial self-control exertion resulted in lower self-efficacy to regulate eating habits. Two subsequent experiments found that self-efficacy mediated the negative effect of initial self-control effort on mental calculation performance under distracting environment (experiment 2) and persistence on anagrams (experiment 3). In experiment 4, it was found that self-efficacy explained how implicit theory of willpower moderated ego-depletion. In particular, participants who believed that “willpower is unlimited” were less affected by ego-depletion because their self-efficacy did not decrease after initial exertion. Taken together, the current data suggests that the ego-depletion effect could be partially explained by reduction in self-efficacy. The current findings not only enrich the self-efficacy theory by identifying a potential source of efficacy belief, but also contribute to a fuller mechanistic understanding of self-control failures. Further implications for intervention and human agency are discussed.