



Masterthesis

"Theoretically, it's all about joy! – Does joy mediate or moderate the positive effect of physical exercise on executive functions?"

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We are offering the above-mentioned topic for a master thesis.

Recently, a scientific debate has emerged on whether acute physical exercise has a positive impact on executive functions (EF; Diamond, 2016; Ishihara et al., 2021), with the latest meta-analysis revealing inconsistent results (Diamond & Ling, 2020). So far, the positive impact of acute exercise has been discussed on a physiological level (e.g., cerebral blood flow, Jeon & Ha, 2015; catecholamine level, Verburch 2014). A systematic analyses and explanation of why mixed results were obtained is still missing. These inconsistencies might be explained by psychological factors. One emotional factor that has been suggested to play a role in constituting the positive effect of exercise on EF is joy (Diamond & Ling, 2016; Moreau & Conway, 2013, 2014; Moreau et al., 2015). Conceptualizing joy in terms of the broaden-and-build theory of positive emotions (Fredrickson, 2004), joy expand one's momentary thoughts and actions repertoires to facilitate the "building" of new patterns of thought and behavior. However, it remains unclear whether joy mediates or moderates the positive effects of acute exercise on executive function. Therefore, the present study aims to test the role of joy in the effect of physical exercise on EF in 2 (cycling at moderate intensity vs. seated on ergometer) x 2 (pre vs. post) within-subject design.

Conditions:

- ✓ Interest in the research field, especially exercise and cognition research
- ✓ Reliability
- ✓ Motivation

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