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#### **Authors**

Nedergaard, Johanne  
Wallentin, Mikkel

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# Mind over Body: Investigating Cognitive Control of Cycling Performance with Dual-Task Interference

**Johanne Nedergaard**

Aarhus University, Aarhus, Denmark

**Mikkel Wallentin**

Aarhus University, Aarhus, Denmark

## Abstract

In cognitive psychology, dual-task investigations have indicated that internal language plays a role in a variety of cognitive functions. This preregistered study investigated whether physical endurance as exemplified by cycling performance depends on internal language and internal visual experience. A sample of 50 physically active participants performed 12 cycling trials, each lasting one minute where they were required to cycle as fast as possible while remembering either a sequence of letters and numbers (verbal interference) or locations on a grid (nonverbal interference). We found that participants cycled a shorter distance in the verbal interference condition compared with the no-interference ( $p < .001$ ) and the visuospatial interference conditions (nonsignificant:  $p = .10$ ). Further, participants who reported that self-talk usually helps their sports performance were more negatively affected by verbal interference. Our study comprises a first attempt at using the dual-task method to investigate the causal role of self-talk in physical performance.