

# Attention, Performance and Cardiac Activity: A Flight Simulator Study

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## ABSTRACT

In the field of sports, researchers often distinguish between an internal focus and an external focus of attention. An external focus is when the person concentrates on the distal effects of a movement and appears to be advantageous for motor performance. This is in contrast to an internal focus which occurs when the person focuses on the feeling of a movement. Further, an external focus is associated with a higher heart rate compared to an internal focus. The aim of this paper is to transfer the external-internal focus concept to aviation. In a flight simulator study with 18 participants with generic simulator experience, landing performance and cardiac activity were analysed in relation to attentional focus. It was found that an external focus results in better landing performance and that heart rate significantly increases a few seconds before touchdown. During the phase of approach an internal focus should be avoided as far as possible. In further studies, attention models for pilots including the aspect of time (when to focus) could be developed.

## Keywords

Attention processes – aviation – heart rate – flight simulator