

**Anxiety, Attention and Performance Variability  
In Visuo-motor Skills**

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## ABSTRACT

The aims of the current program of research were to examine the impact of anxiety on performance and attentional control during the execution of two far aiming tasks, and to examine the efficacy of gaze training interventions in mediating these effects. Attentional control theory (ACT), which suggests that anxious individuals have impaired goal-directed attentional control, was adopted as a theoretical framework, and the Quiet Eye, characterised by long final fixations on relevant locations, was adopted as an objective measure of overt attentional control. In Studies 1 and 2 increased pressure impaired goal directed attentional control (QE) at the expense of stimulus-driven control (more fixations of shorter duration to various targets). The aim of studies 3 and 4 was therefore to examine the efficacy of an intervention designed to train effective visual attentional control (QE training) for novices, and determine whether such training protected against attentional disruptions associated with performing under pressure. In both studies the QE trained group maintained more effective visual attentional control and performed significantly better in a subsequent pressure test compared to the Control group, providing support for the efficacy of attentional training for visuo-motor skills. The aim of study 5 was to examine the effectiveness of a brief QE training intervention for elite golfers and to examine if potential benefits shown for novices in studies 3 and 4 transferred to competitive play. The QE-trained group maintained their optimal QE and performance under pressure conditions, whereas the control group experienced reductions in QE and performance. Importantly, these advantages transferred to the golf course, where QE-trained golfers reduced their putts per round by 1.9 putts, compared to pre-training, whereas the control group showed no change in their putting statistics. This series of studies has therefore implicated the role of attention in the breakdown of performance under pressure, but has also suggested that visual attentional training regimes may be a useful technique for alleviating this problem.

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