

# Emotional intelligence and performance in hot and cool cognitive processes

María José Gutiérrez-Cobo, Rosario Cabello, Raquel Gómez-Leal, Alberto Megías-Robles and Pablo Fernández-Berrocal

**Objective.** Emotional intelligence (EI) is the ability to perceive, use, understand and manage emotions. Although EI attempts to connect the concept of emotion and cognition, few studies have been conducted to this objective. The aim of the present study was to analyze the relationship between the three models of EI (performance-based ability test, self-report ability test, and self-report mixed test) and different cognitive processes measured through "cool " (i.e., not emotionally laden) and " hot " (i.e., emotionally laden) laboratory tasks.

**Method.** For this purpose, we carried out 3 experiments. In experiment 1, we systematically review the available evidence about the relationship between EI and cognitive processes. In experiment 2, we analyze the relationship between EI and hot and cool cognitive control ability. Finally, in experiment 3 we analyze the relationship between EI and the hot and cool working memory capacity (WMC) through a 2-back task.

**Results.** The results provide a fair amount of evidence that performance-based ability EI (but not self-report EI tests) is positively related with efficiency in hot cognitive tasks. EI, however, does not appear to be related with cool cognitive tasks: neither through self-reporting nor through performance-based ability instruments.

**Conclusions.** These findings suggest that performance-based ability EI could improve individuals' emotional information processing abilities.

**Keywords:** emotional intelligence, cognitive processes, cool, hot,