

# Preliminary validation of the Exam Metacognition Inventory

Tuesday, September 24, 2024 1:10 PM (20 minutes)

Metacognition, defined as the awareness and regulation of one's cognitive abilities, plays a crucial role in academic performance. Recent studies have highlighted how metacognition significantly influences academic outcomes through students' ability to monitor and regulate their own learning. Despite these insights, there remains a notable gap in the availability of psychometric tools specifically designed to assess metacognition in the context of academic exams, which is critical for precisely measuring and understanding student learning behaviors and outcomes.

The aim of this study was to develop a new psychometric instrument, the *Exam Metacognition Inventory* (EMI). The initial pool of items was derived from the adaptation of the Italian version of the *Metacognition Questionnaire* (MCQ-30). The measurement's factor structure and criterion validity were examined using a convenience sample of 196 university students from southern Italy. A principal-axis Exploratory Factor Analysis with oblique (*Oblimin*) rotation was conducted on a 30-item preliminary version. The instrument revealed a three-factor structure—Metacognitive Knowledge, Regulation, and Responsiveness—with strong internal reliability (Cronbach's alpha ranging from 0.80 to 0.91) and adequate criterion validity. Based on the item-total correlation coefficients, the final version of the instrument was reduced to 15 items, with 5 items per subscale. All subscales of the EMI showed significant correlations with all five subscales of the MCQ-30. These preliminary results confirm the robust psychometric properties of the Exam Metacognition Inventory and underscore the importance of identifying specific metacognitive issues in academic settings. Detecting these issues can facilitate targeted educational and psychological interventions to support academic students.

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Yes

**If you're submitting a symposium talk, what's the symposium title?**

**If you're submitting a symposium, or a talk that is part of a symposium, is this a junior symposium?**

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