

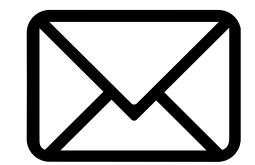


Attentional Focus in Musical Performance: Insights from Motor Metacognition

María Paula Villabona Orozco [1], Deliah Seefluth [1], Anthony Ciston [2], Michiko Sakaki [1] & Elisa Filevich [1]

[1] Hector Research Institute of Education Sciences and Psychology, University of Tübingen, Tübingen;

[2] Max Planck Institute for Human Cognitive and Brain Sciences, Department of Neurology, Leipzig.



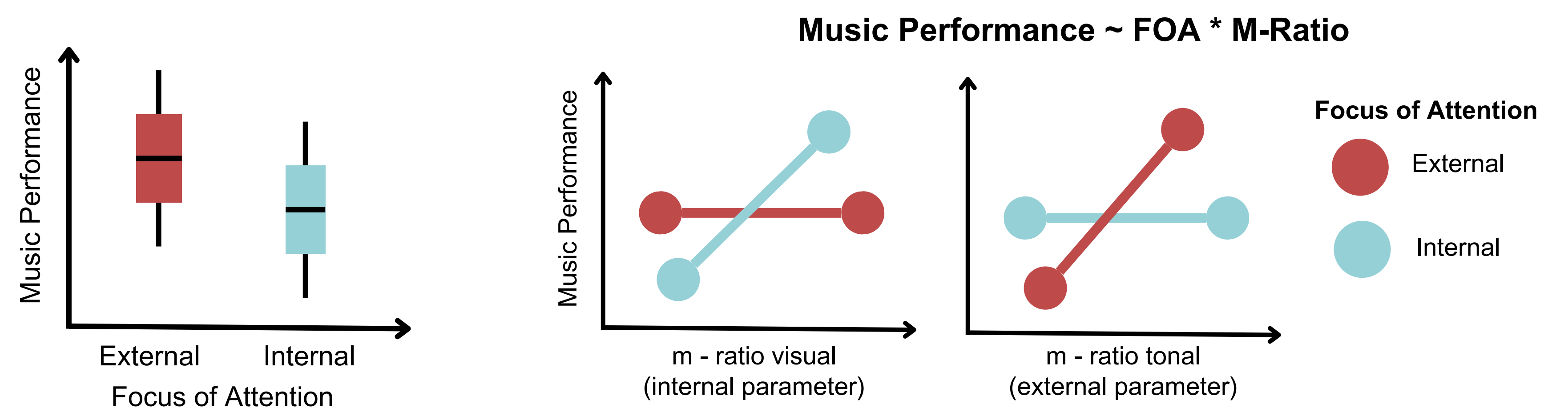
maria.villabona-orozco@uni-tuebingen.de

Introduction

- Research in **sports** suggests that focusing on the **outcome** (an **external focus**) rather than the movement itself (an **internal focus**) leads to better motor performance [1].
- Limited studies in music** show inconsistent results regarding the effectiveness of external versus internal focus [2].
- Metacognitive ability** to monitor **internal** versus **external** movement parameters may help explain the **focus attention (FOA) effect**.

Research Questions & Hypotheses

- (RQ1) Does an **external focus** of attention benefit musical performance?
- (RQ2) How does **metacognitive ability** to monitor **internal** versus **external** movement parameters modulate **the FOA** in music?



Methods

Participants: 65 amateur guitarists:
(18 female, age range: 19–48)

Music Performance Task

Metacognition Guitar Task

Sensor
Set-up



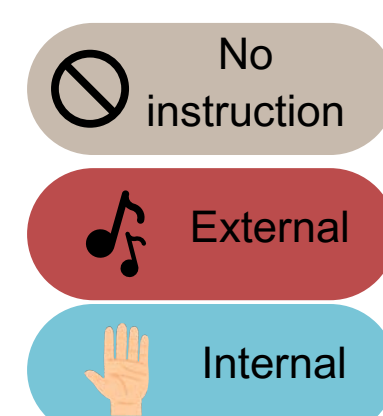
Display on
the screen



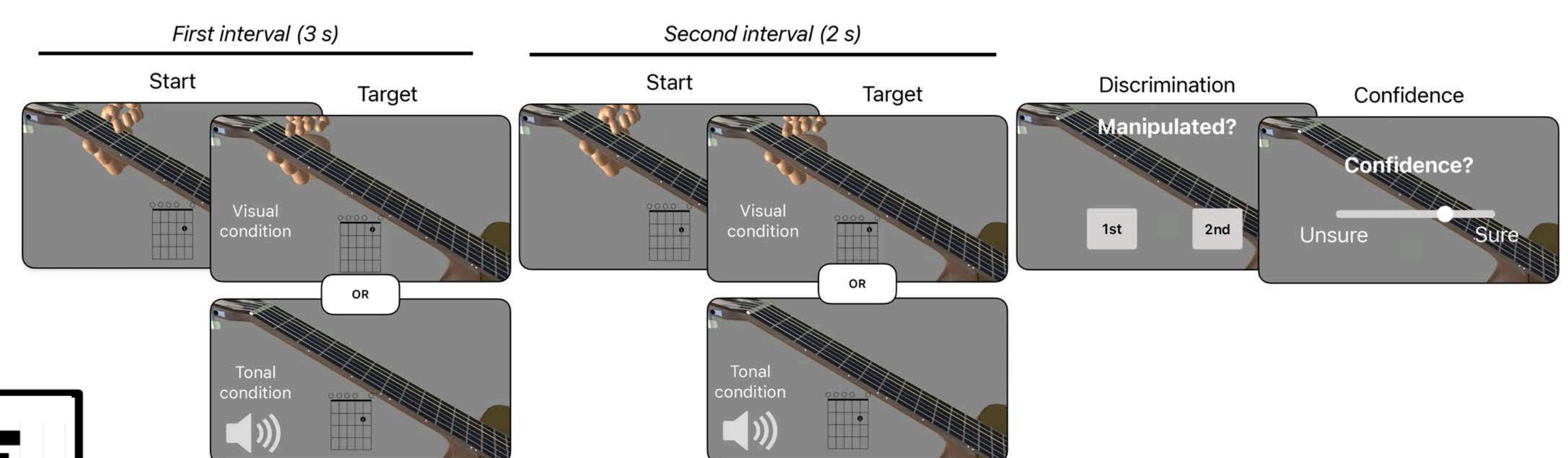
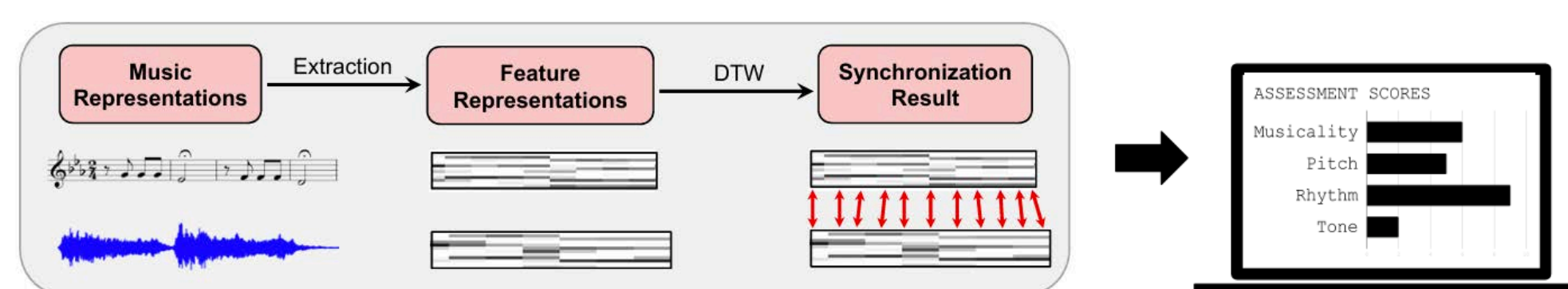
Song playing



Conditions

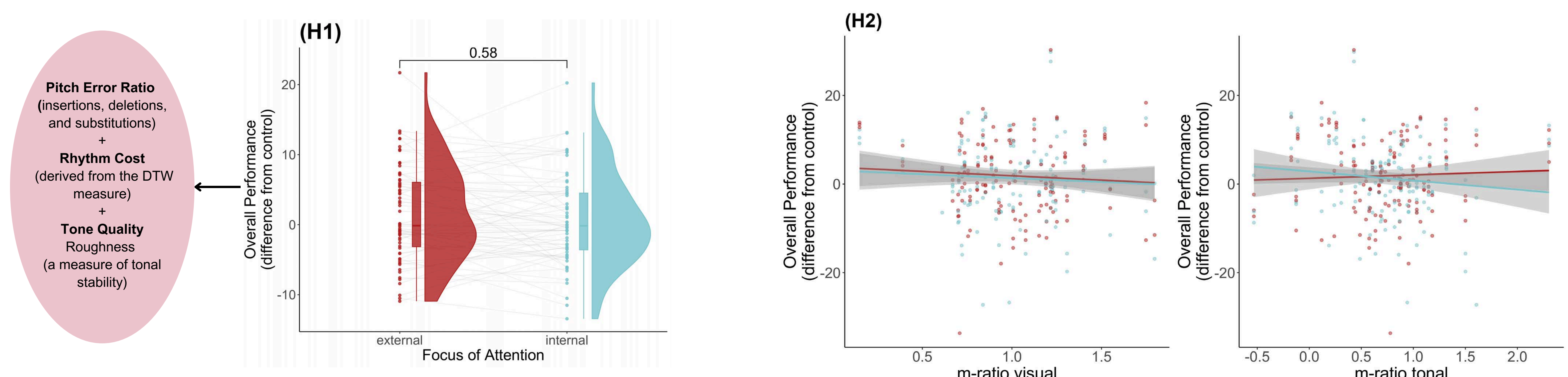


Automatic Assessment

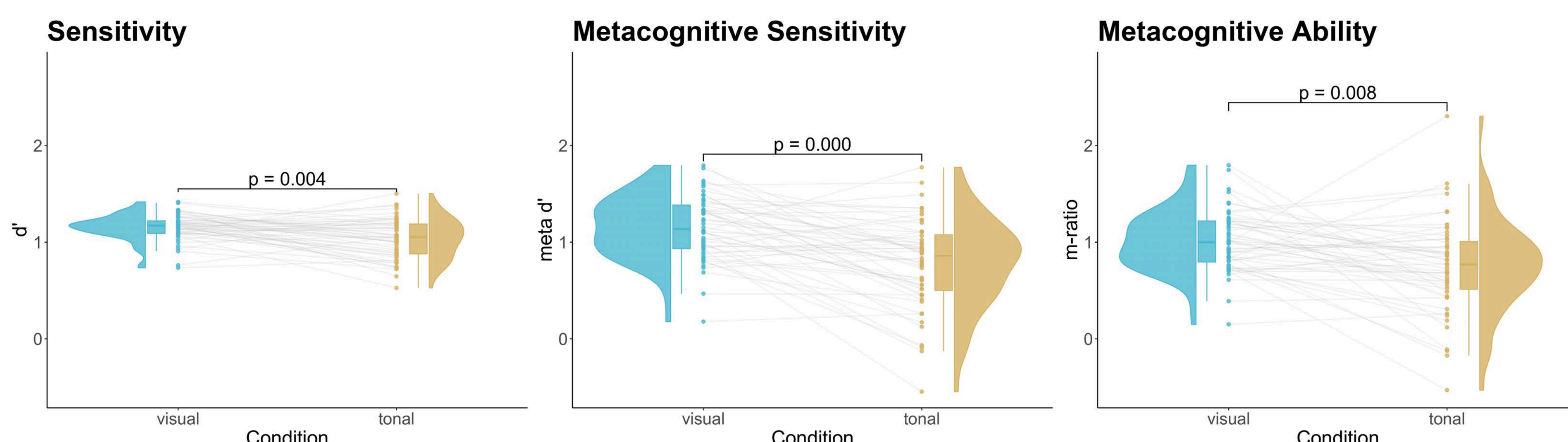


Results

*Assessment Figure adapted from Reference 3 and 4



- FOA conditions did not significantly affect performance.**
- No interaction between metacognitive ability and FOA.**



- Higher **metacognitive ability** when monitoring **visual (internal)** vs. **tonal (external)** movement parameters

Discussion & Outlook

- FOA's benefits for motor performance **may be less universal** than thought; **publication bias** could distort current understanding [5].
- Ongoing analysis will evaluate music performance more comprehensively **to verify FOA effects**.
- Participants show **varying levels of metacognitive ability** across **different perceptual domains**.
- Further evaluation** is needed to identify factors driving ability differences.

- References:**
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 - Hohagen, J., & Immerz, A. (2024). Focus of attention in musical learning and music performance. <https://doi.org/10.3389/fpsyg.2024.1290596>
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 - McKay, B., Corson, A. E., Seedu, J., De Faveri, C. S., Hasan, H., Arnold, K., Adams, F. C., & Carter, M. J. (2024). Reporting bias, not external focus <https://doi.org/10.1037/bul0000451>