Detecting intentional misrepresentation when testing vision for classification

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VISTA 2017, Toronto

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International Paralympic Committee

Classification Research Partner

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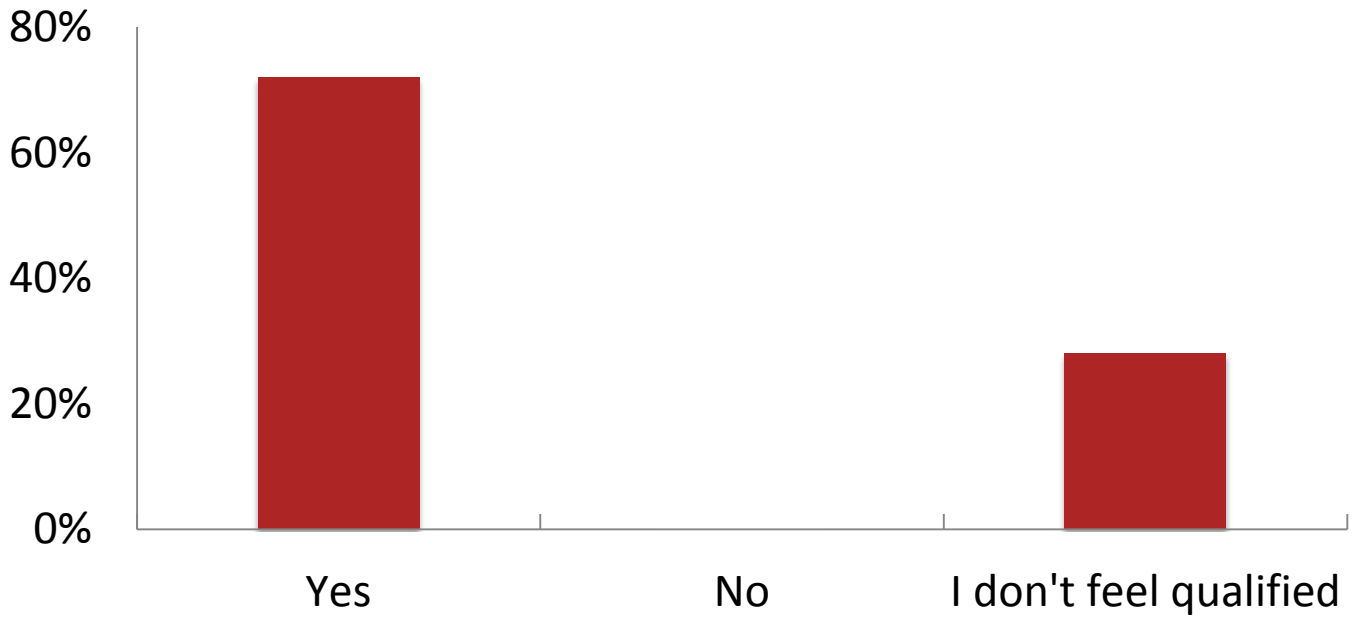
WHAT IS INTENTIONAL MISREPRESENTATION?

Intentional misrepresentation (IM):

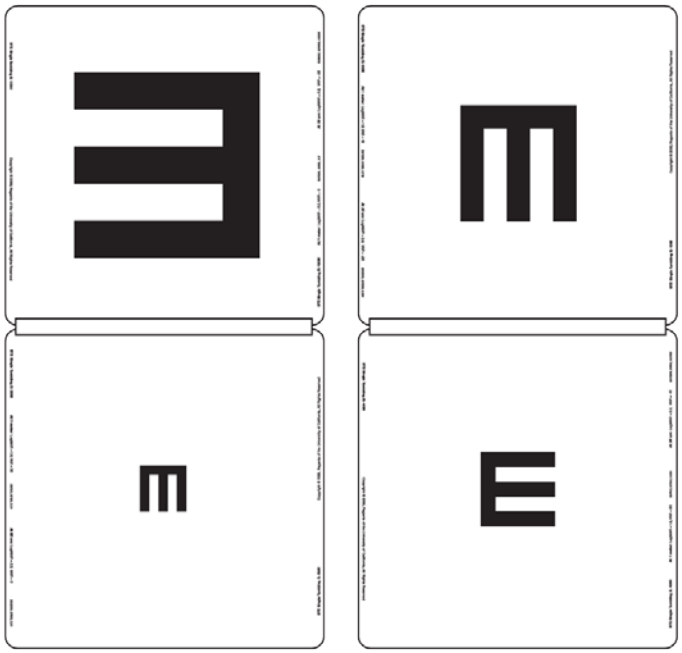
*Under-representing one's vision so that it appears to be **worse** than it actually is*

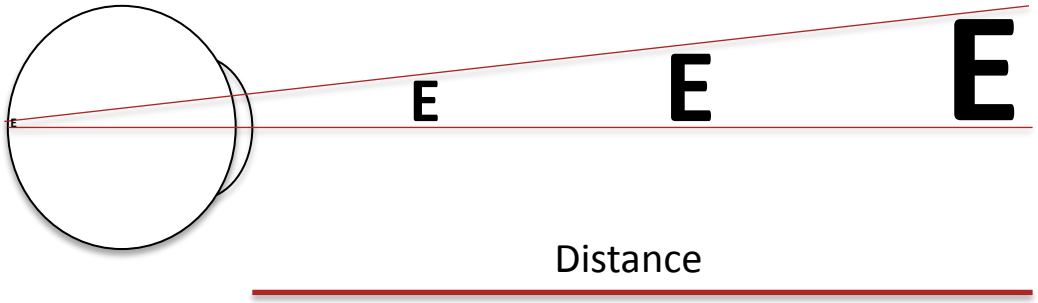
IS IM AN ISSUE IN VI CLASSIFICATION?

Do you believe that, at present, some athletes are intentionally misrepresenting their level of VI?



HOW TO DETECT IM ON VISION TESTS?





Berkeley Rudimentary Vision Test:

Expected to have 4 (almost) equal scores

Variability might be an indicator of IM

AIM

To investigate whether the intentional misrepresentation of vision could be detected when using the BRVT

STUDY DESIGN

Participants

13 normally sighted participants

Simulated vision impairment:

- Bangerter foils

Procedures

Berkeley Rudimentary Vision Test:

- Standard protocol
- Modified protocol

STUDY DESIGN

BLOCK 1

Standard **OR** modified -

Honest responses

Modified **OR** standard -

Honest responses

CHEATING TRAINING

Three components:

1. Need for consistency
2. Level of VA to aim for (1.5 logMAR)
3. Practice run – using one STE size over full distance range

BLOCK 2

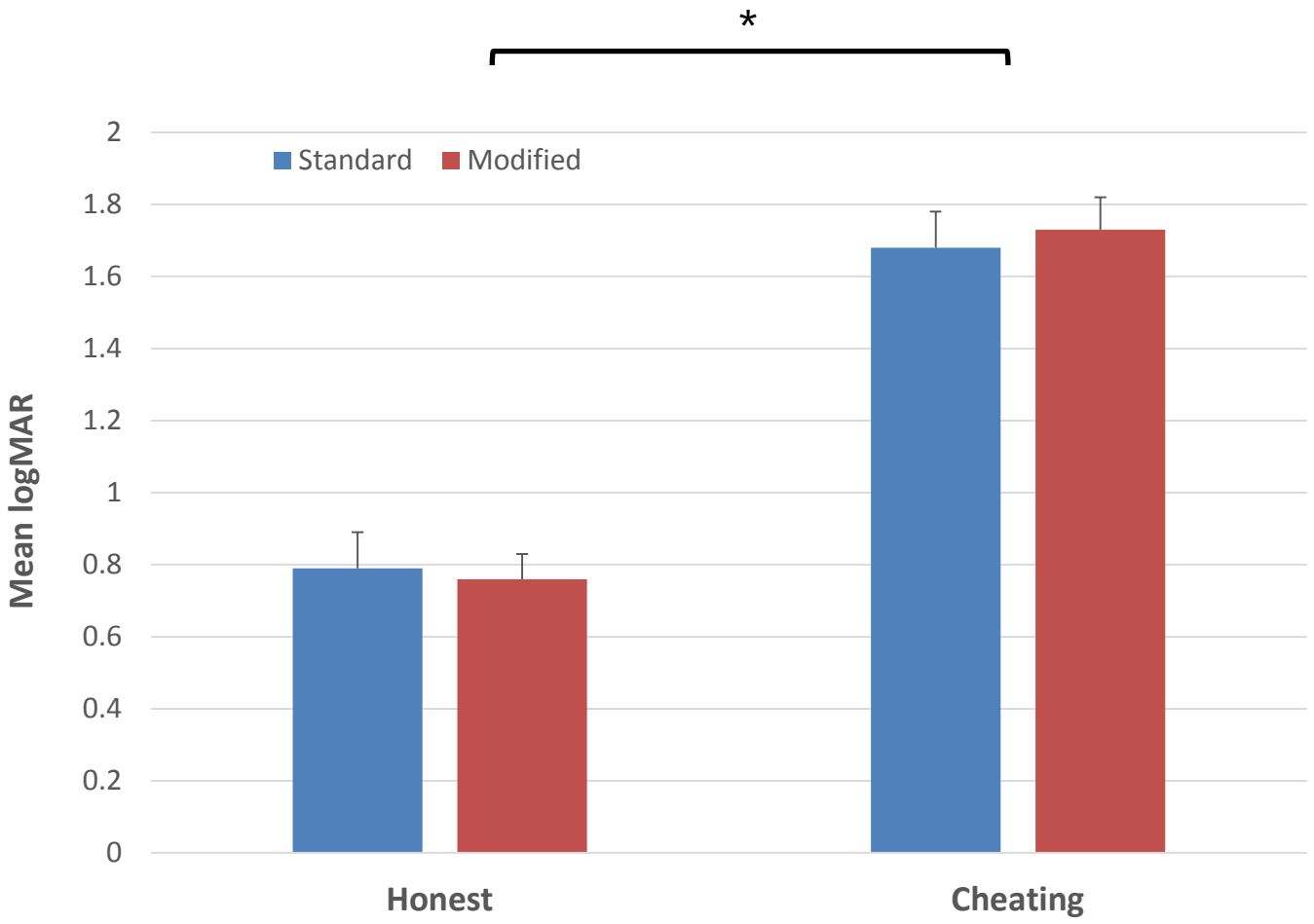
Standard **OR** modified -

Cheating

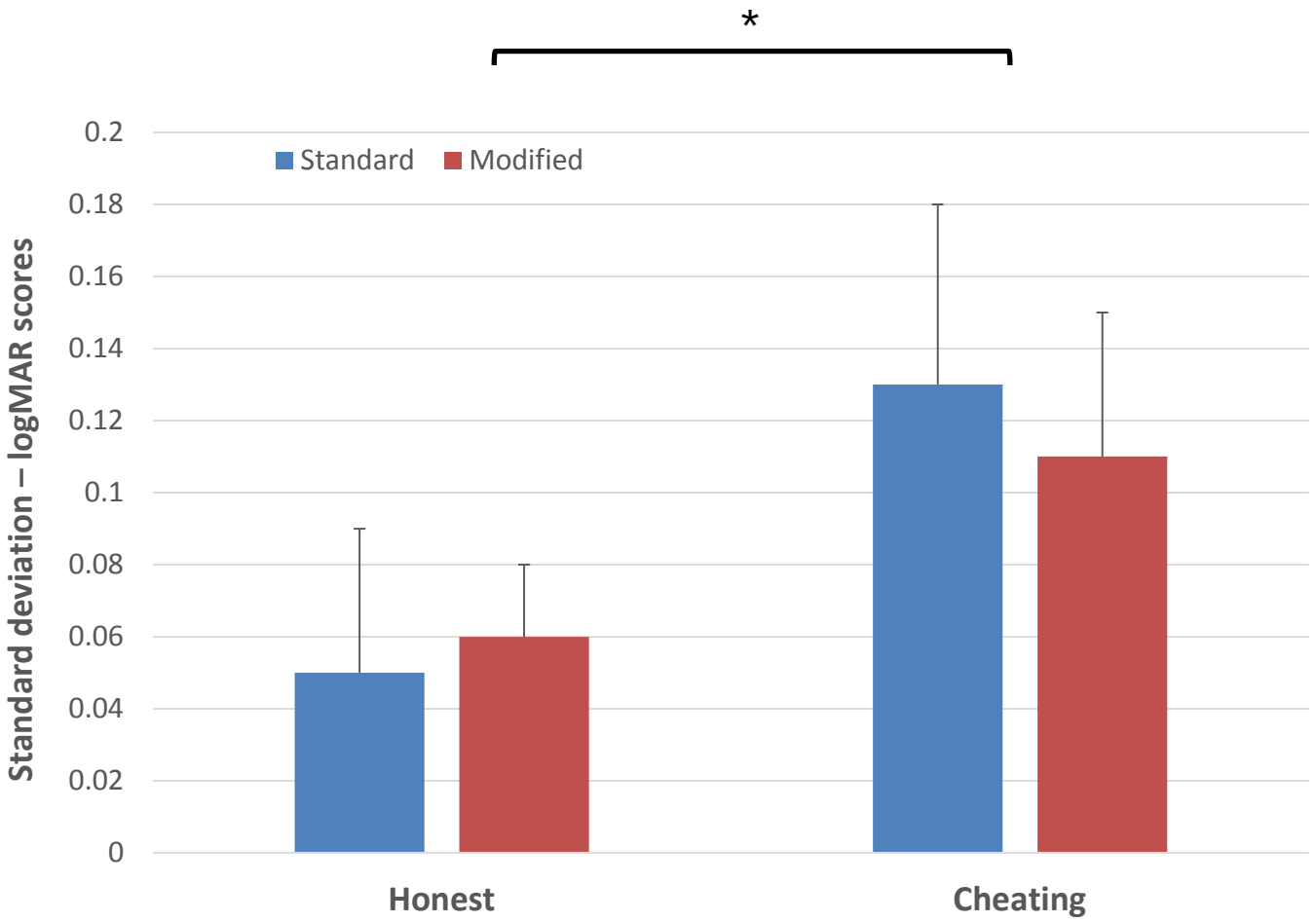
Modified **OR** standard -

Cheating

RESULTS
ABILITY TO MISREPRESENT VISUAL ACUITY

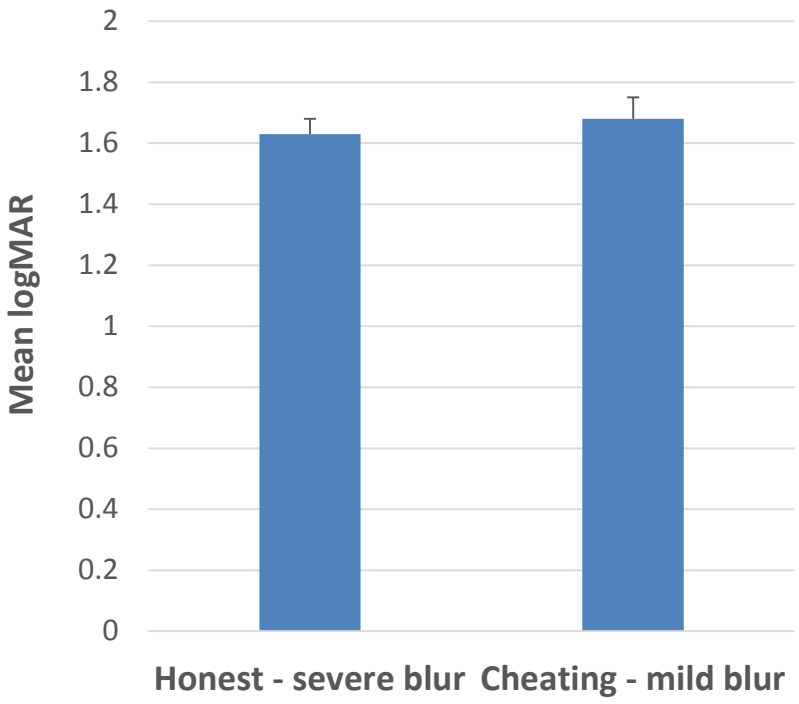


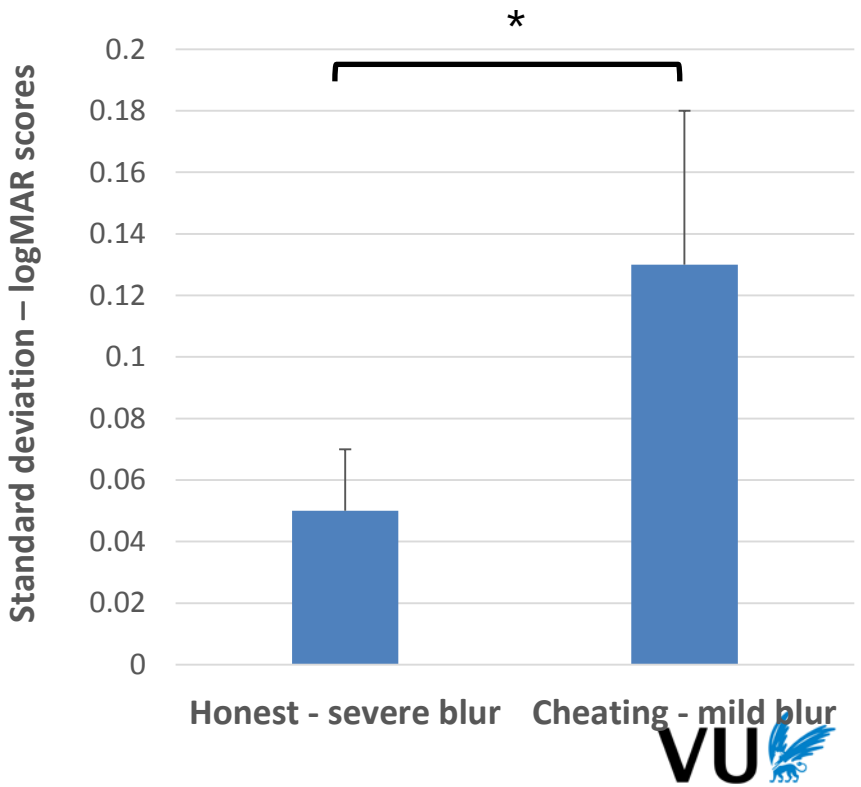
RESULTS
CONSISTENTLY MISREPRESENTING VISUAL ACUITY



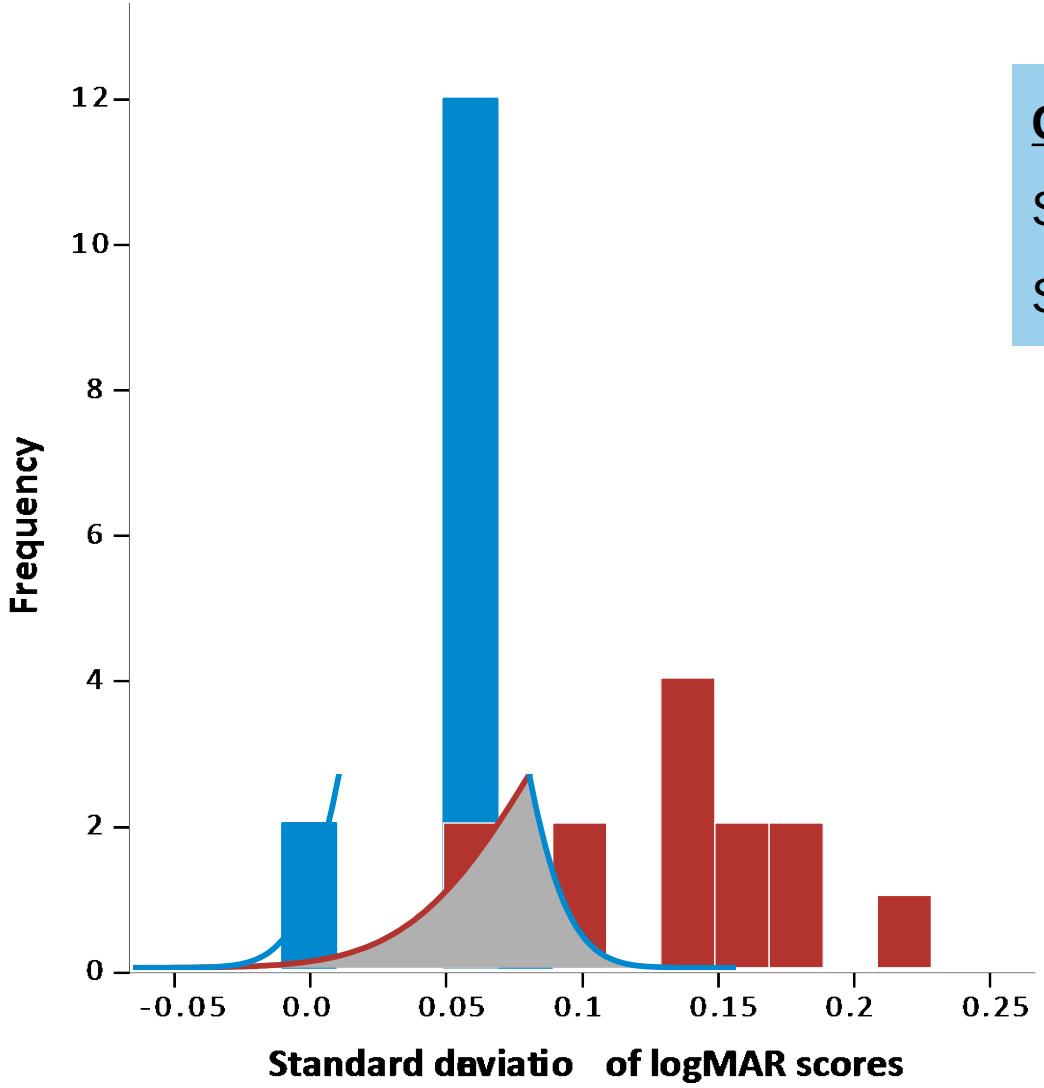
RESULTS

CONTROL EXPERIMENT – EFFECT OF POORER VA?





RESULTS
DETECTING CHEATING



Cut-off SD ≥ 0.1

Sensitivity = 100%

Specificity = 77%

DISCUSSION

- Participants were able to cheat on a vision test
- Variability in performance on vision tests is a promising means to detect IM
- The standard procedure of the BRVT is suitable for the purpose
- Need to verify in individuals with actual VI

ACKNOWLEDGEMENTS

International Paralympic Committee

This project is supported by a Classification Research Grant awarded by the International Paralympic Committee.

International Blind Sports Federation

This project is supported by a Research Grant awarded by the International Blind Sports Federation.

Agitos Foundation

This project is supported by Agitos Research Grants awarded by the Agitos Foundation.