You Look Sick to Me



A Behavioral Paradigm for the Smoke Detector Principle of the Behavioral Immune System

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This poster presents preliminary findings from an ongoing, larger-scale project.

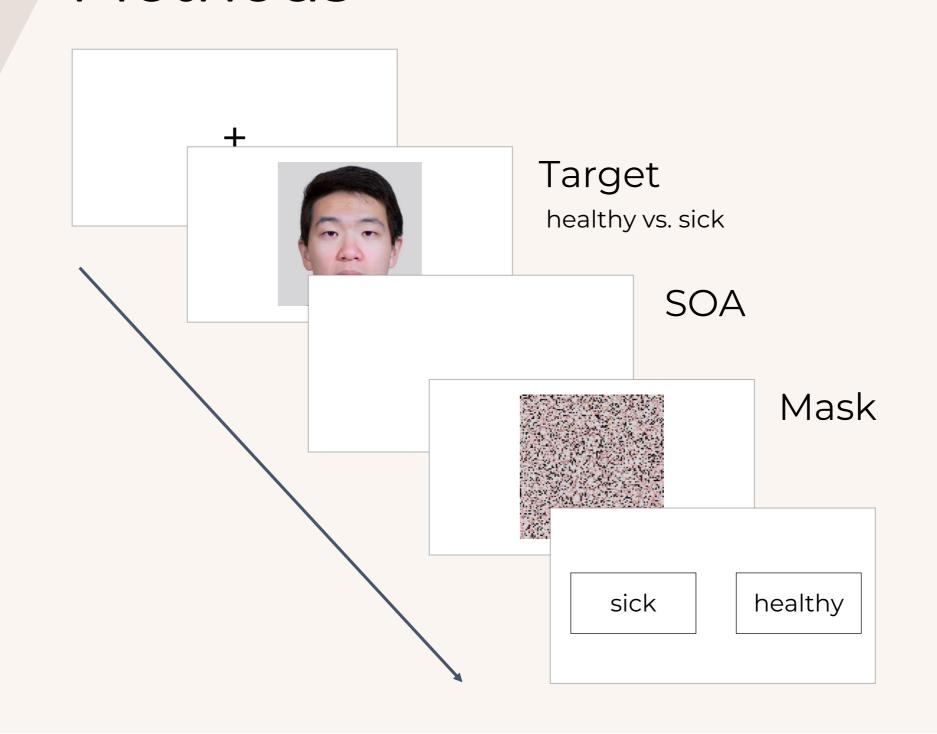


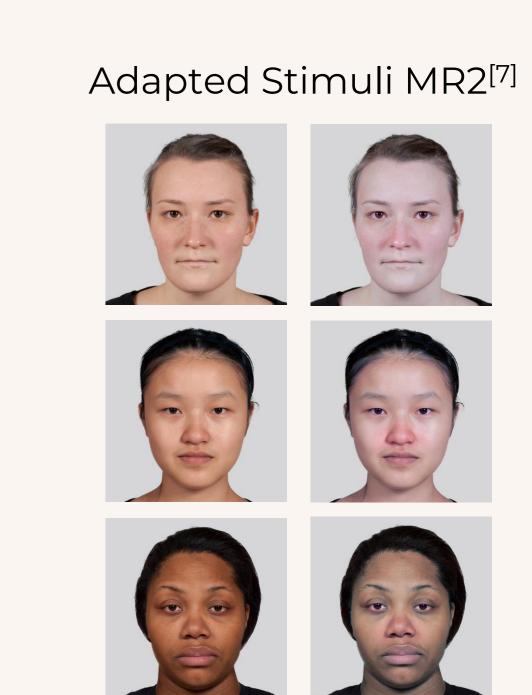
Introduction

Recognizing and avoiding cues of infection is a central challenge of the Behavioral Immune System^[1]. As false-negative decisions (i.e., not recognizing pathogen cues as such) are associated with high risk, individuals should show a bias for positive (i.e., low risk) decisions overall^[2,3]. Several studies have shown this pattern for cues indirectly related to disease^[e.g., 4]. This could be more pronounced for decisions regarding individuals from rather unfamiliar groups^[3, 5]. One salient marker for group membership is ethnicity^[6].

Aim: Development of a behavioral signal detection task to test a bias in categorizing cues directly related to disease in faces of different ethnicities.

Methods





Results

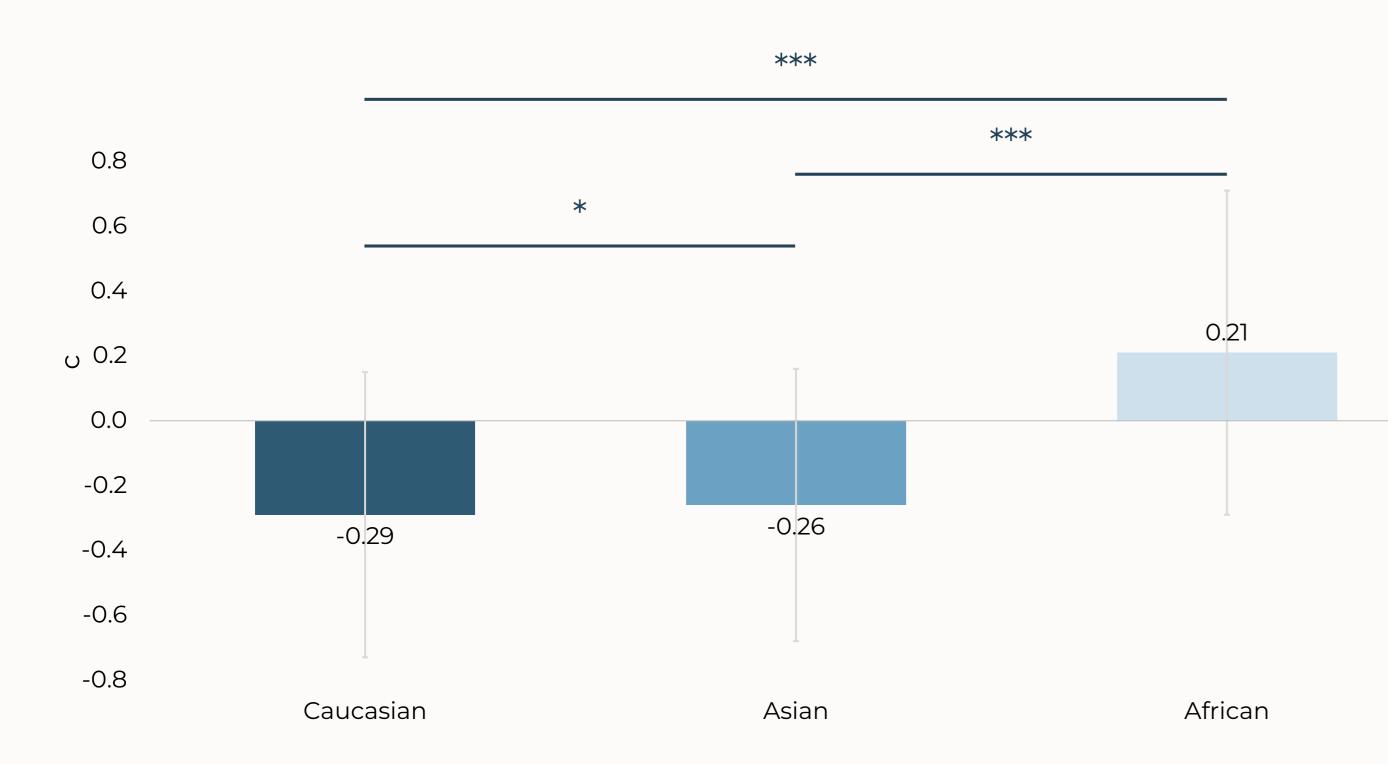
N = 297

18 - 70 years old (M = 33.49, SD = 12.39)

$$M_c = -0.07$$

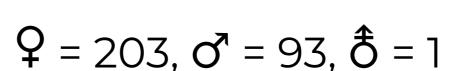
 $SD_c = 0.36$ *** $M_{d'} = 1.80$
 $SD_{d'} = 0.9$

Overall, there was a bias towards categorizing targets as sick (c) while the discrimination between healthy and sick targets was high (d').

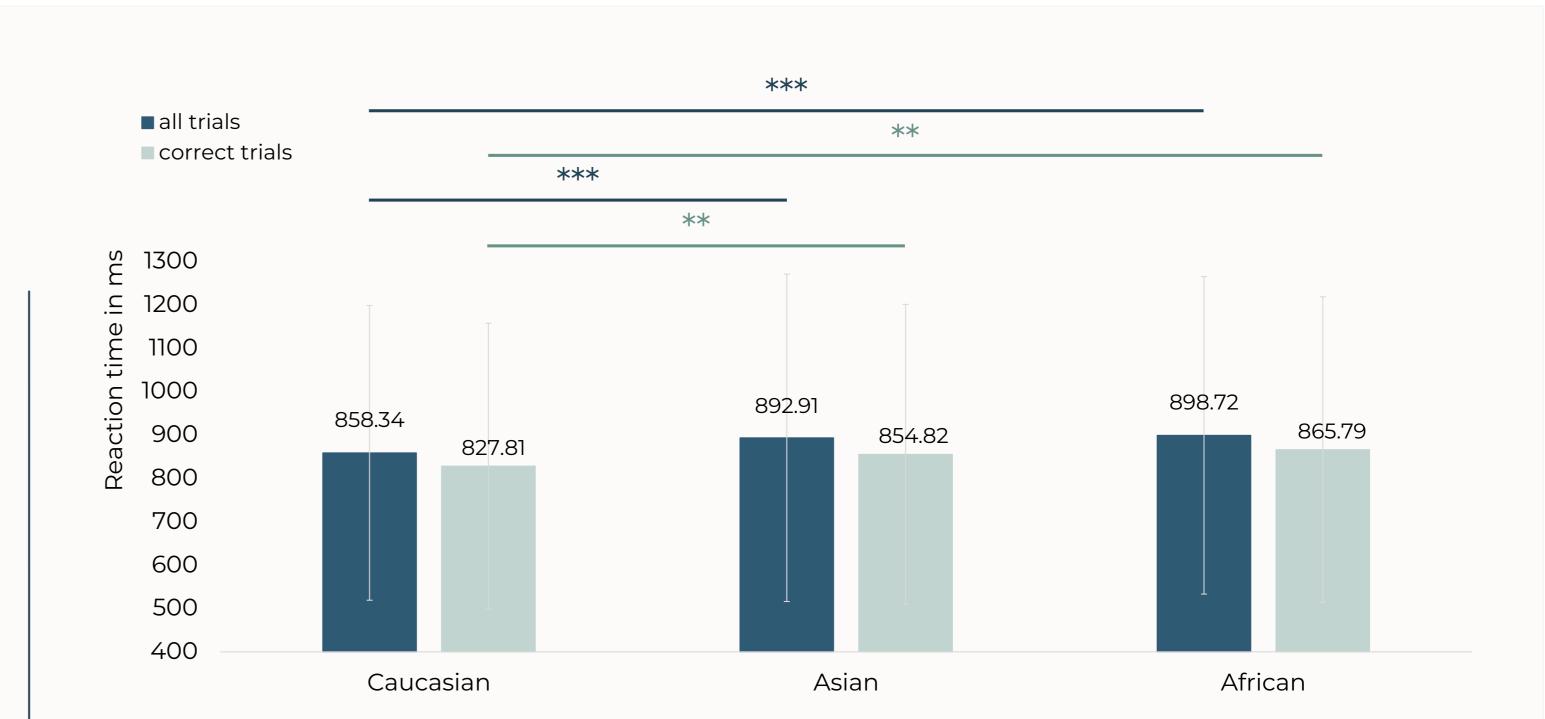


Contrary to expectations, the bias towards categorizing targets as sick was strongest for Caucasian targets while the opposite bias was found for African targets.

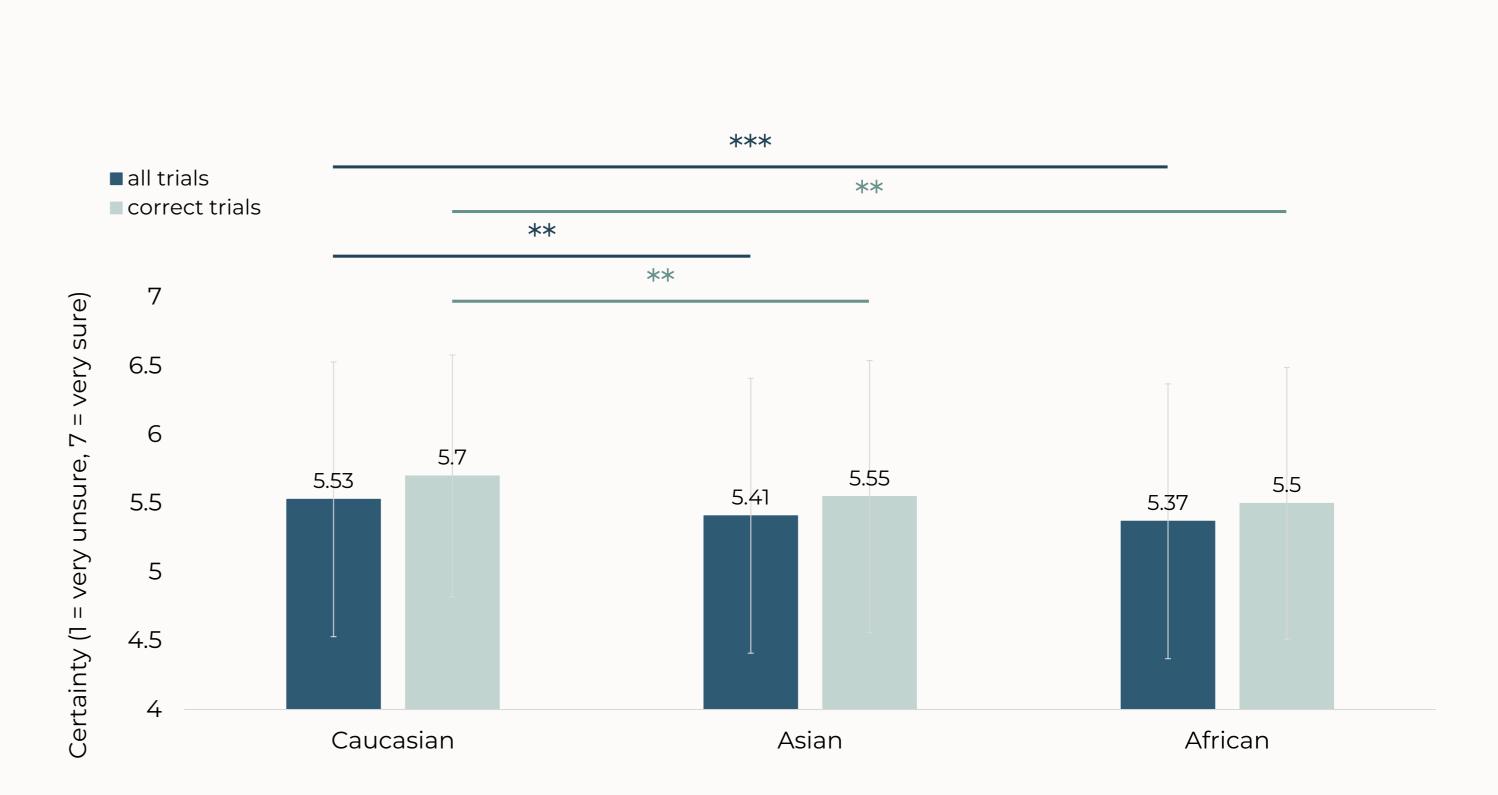
There were no consistent associations between c and self-report measures for the Behavioral Immune System.



279 Caucasian, 8 African, 2 East-Asian



Reaction times were faster for Caucasian targets.



Certainty was higher for Caucasian targets.

Error bars represent SD; *** p < .001, ** p < .01, * p < .05



Regarding total scores, the task seems to capture behavior consistent with the Behavioral Immune System.

Discussion

Despite being consistent with expectations of the Behavioral Immune System, there were no consistent associations with typical measures (e.g., Disgust Sensitivity). Recognition of pathogen cues could be independent from affective responses.

The strongest bias for sick categorizations for Caucasian targets could be explained with an ingroup effect for this sample. In disease contexts, individuals are more likely to contract diseases from ingroup members^[see 8].

African targets were the only group to have a bias toward healthy categorizations. They seem to have a special status which cannot be explained by more difficult or more uncertain decisions.

Conclusion

It is unclear whether these effects are caused by group membership or by specific facial features of different ethnicities.

Reaction times rather than accuracy could be relevant for pathogen decisions regarding unfamiliar groups^[see 9].

References

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