



# Exploring gesture use in children's strategies on mental rotation tasks



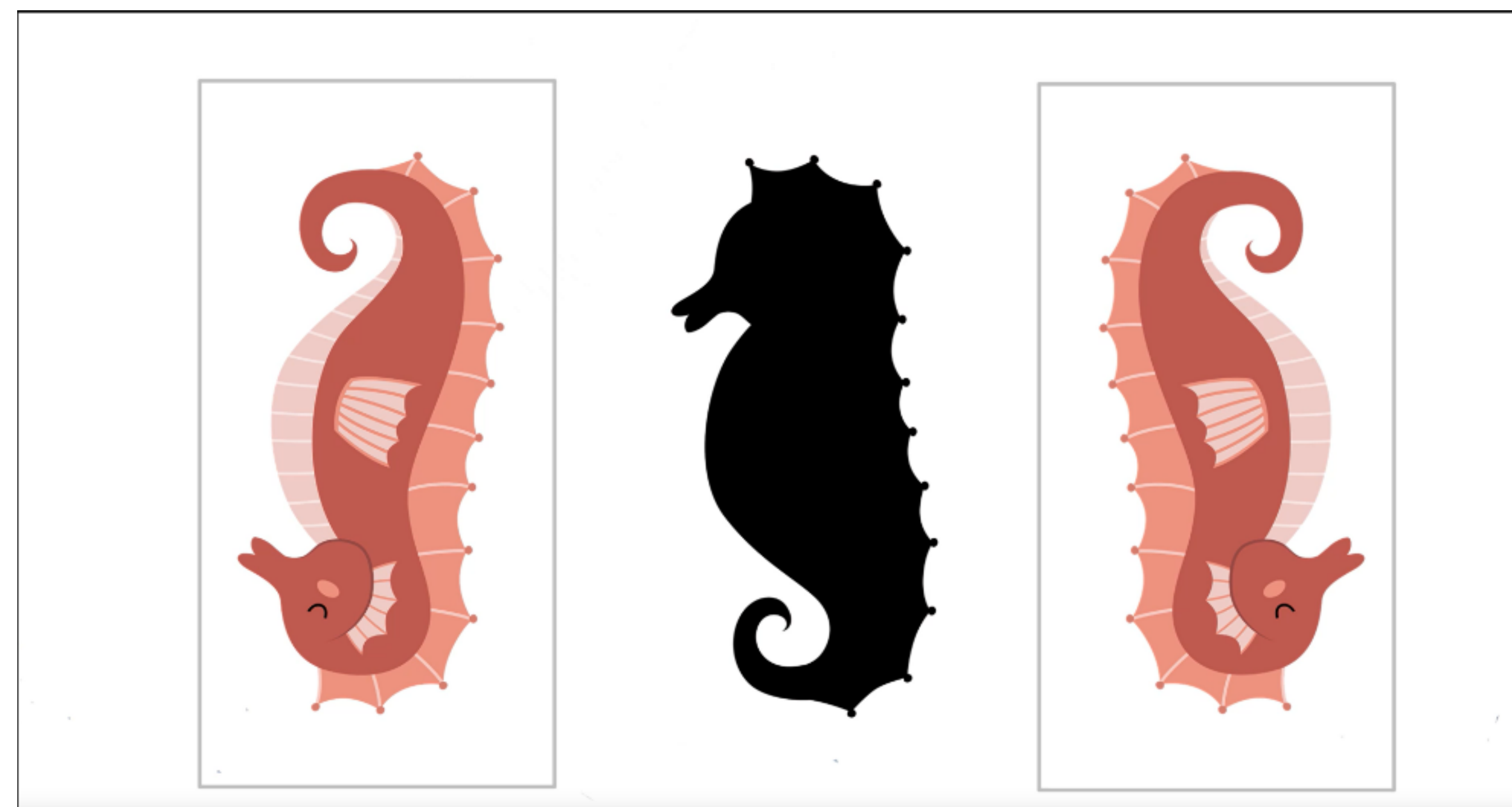
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## INTRODUCTION

- Gesture plays an important role in conveying spatial information<sup>1</sup>.
- Past research shows that gesture can communicate spatial task strategies in children as young as five<sup>2</sup>.
- Other research shows a positive correlation between analogical gestures and performance on a spatial analogies test<sup>3</sup>
- We examined the association of the use of gestures and performance on a children's mental rotation task

## METHODS

- A sample of 106 children (44 female, 56 male, 6 unreported) ages 4.5-7 years with a mean age of 5.55 ( $SD = 0.78$ ), completed a mental rotation task
- After completing the task, children were asked to self report their strategy
- Videos were coded for gesture use and type of gesture used



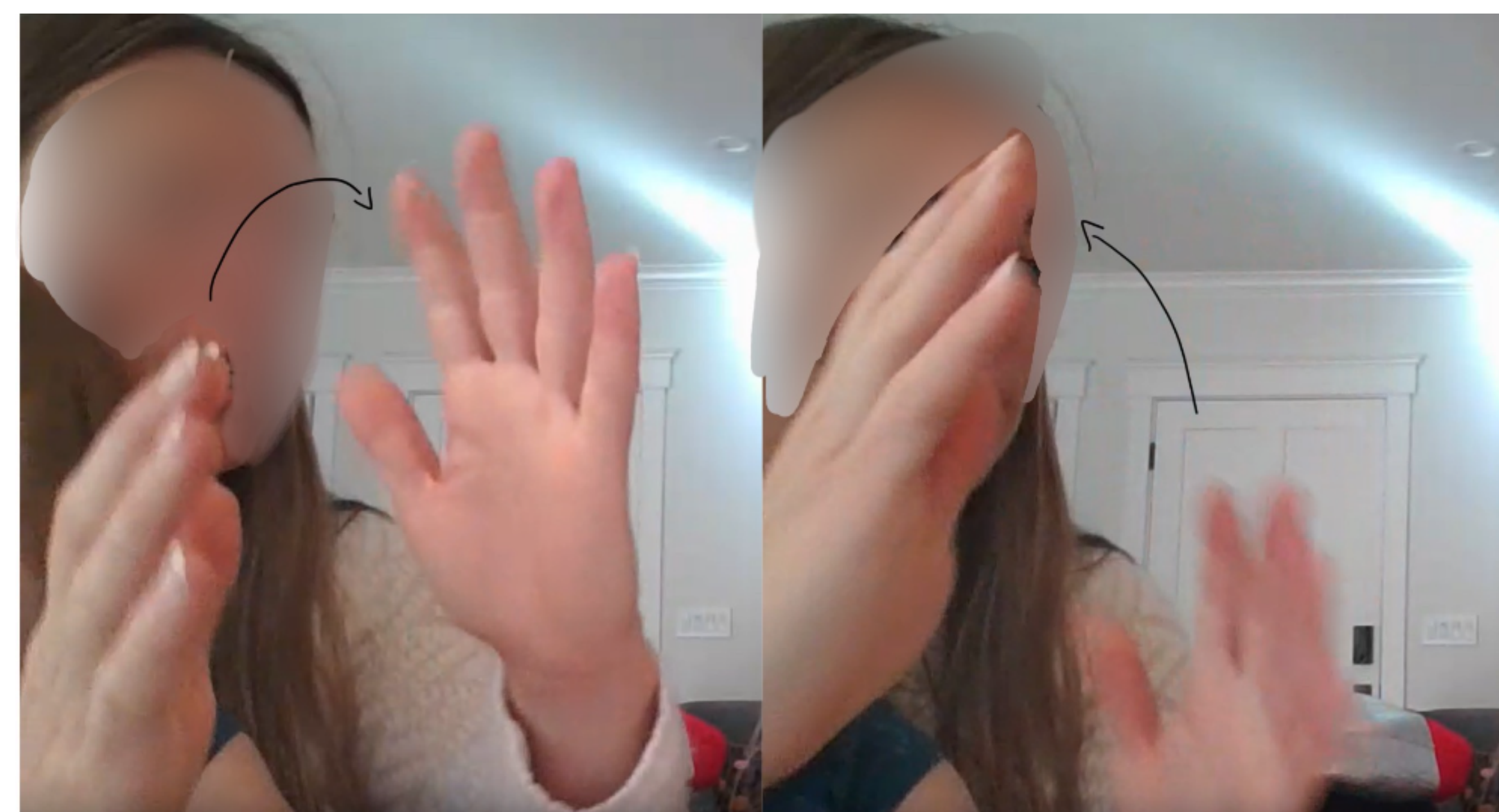
Example of a mental rotation task. Children were asked to select the rotated image that matches the shadow

## RESULTS

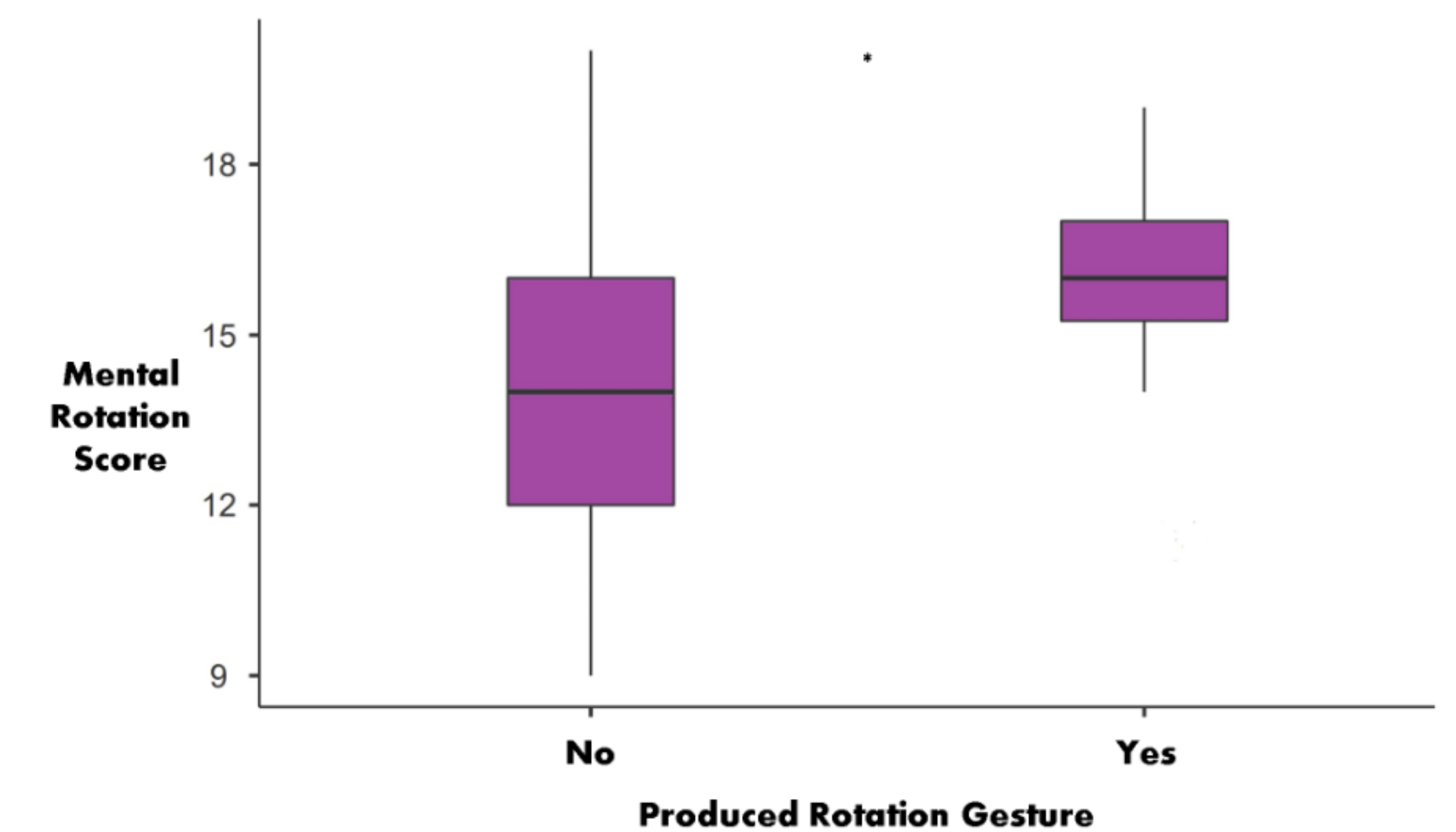
- Gesture use was not found to be predictive of scores on mental rotation tasks
- Age is positively correlated with any gesture use, specifically rotational, as well as score

Gesture Statistics

	Any Gesture	Rotational	Directional	Flipping
% of total sample	33	13.9	18.8	5
% of 4.5-5.5 year olds	23.5	19.6	7.8	3.9
% of 5.6- 7 year olds	46.9	26.5	24.5	8.2



Example of a flipping gesture



## CONCLUSION

- Contrary to previous research, gesture does not seem to be predictive of performance on spatial awareness tasks. Rather, age seems to be a confounding variable
- This difference may also be a result of the type of task used
- Further research is required to explore the role of age

## REFERENCES

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