Investigating the Influence of an Individuation Storybook in Early Childhood Education

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BACKGROUND

- Implicit racial bias forms in early childhood and can shape social preferences
- Perceptual individuation training helps children attend to within -group differences, reducing reliance on racial categorieses[4]
- Perceptual individuation training teaches children to focus on unique traits (interests, features) rather than racial categories[3]
- Prior work shows individuation can decrease implicit bias in preschoolers, but studies rarely test this is naturalistic classroom settings [1]

Hypotheses

- Children who receive individuation storybook training will show greater reductions in implicit racial bias (lower D-scores) from pre-test to post-test than children in the mere exposure condition
- Children in the mere exposure condition will show little to no change in implicit bias
- Children with higher exposure to racial diversity may show lower initial bias or greater improvement

METHOD

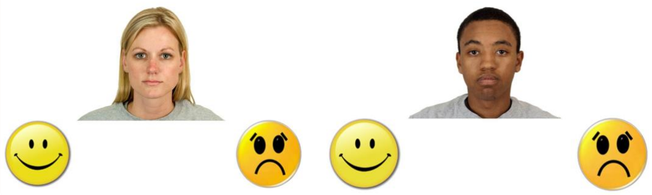
Participants

- N = 20 preschoolers (ages 4–5) recruited from UT Child Development Centers and the CRC lab database
- All children were English-fluent, 60% of sample was female
- Randomly assigned to Individuation (n = 10) or Mere Exposure (n = 10) conditions
- Parents completed a demographics and diversity-exposure questionnaire (e.g., q2: child's frequency of interacting with different races in the community)

Materials

Adult faces and child figures were pre-rated for attractiveness by UT undergraduate students in the SONA system to ensure balanced stimuli across races.

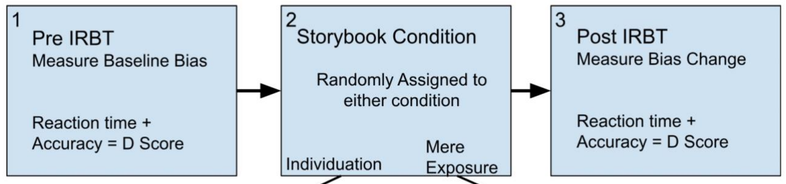
Implicit Racial Bias Test (IRBT): Tablet-based task where children categorized smiling/frowning faces belonging to their in-group or an out-group. Bias is recorded from slower responses to positive out-group faces (incongruent blocks) compared to in-group faces (congruent blocks). A practice block was included as a warm-up before each test block.[2]



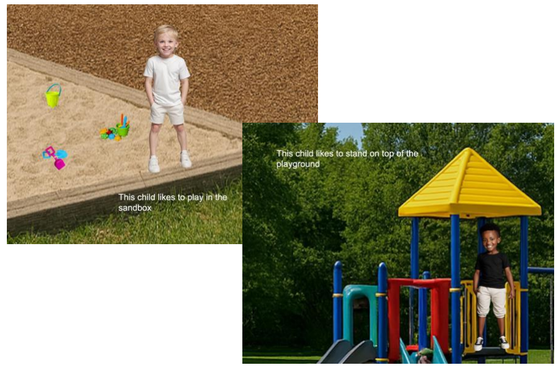
METHOD (cont'd)

Procedure

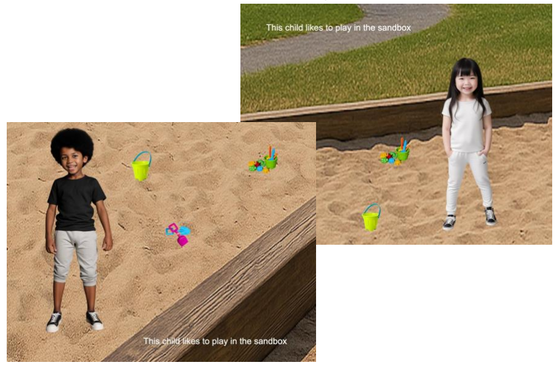
Participants: UTCDC Preschool Children, ages 4-5, randomly assigned to Condition
Dependent Variable: Change in IRBT D-Score
Independent Variable: Storybook condition



Individuation Condition: Out-group (Black) characters labeled with interests



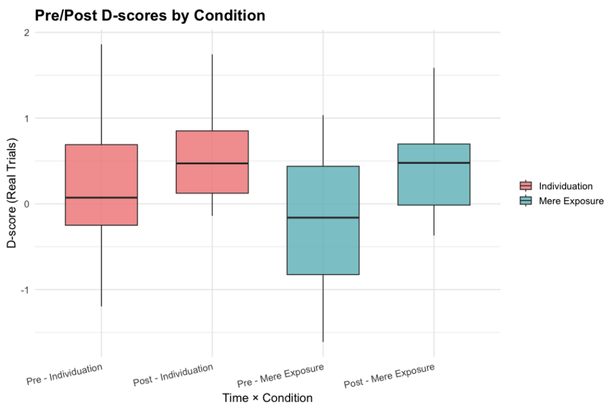
Mere Exposure Condition: All characters doing the same activity



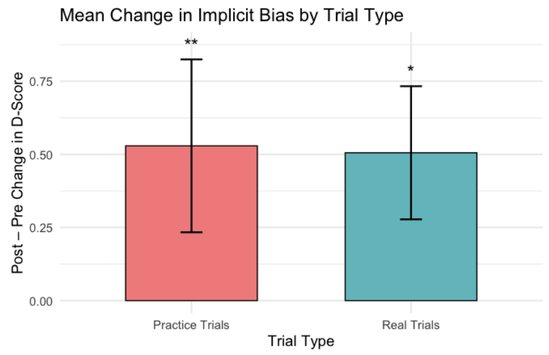
RESULTS

Key Findings

- Overall, implicit bias scores increased from pre-test to post-test ($p \approx .05$)
- Individuation and mere exposure did not differ in their effect on bias (Time x Condition n.s.)
- Bias increased significantly with the Mere exposure group but not within the Individuation group
- Large individual variability was observed

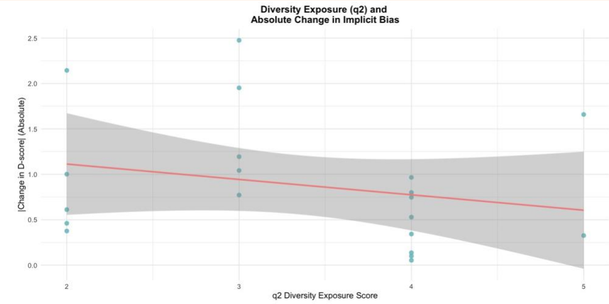


Pre- and Post-test D-scores by condition. Higher scores reflect greater implicit racial bias.

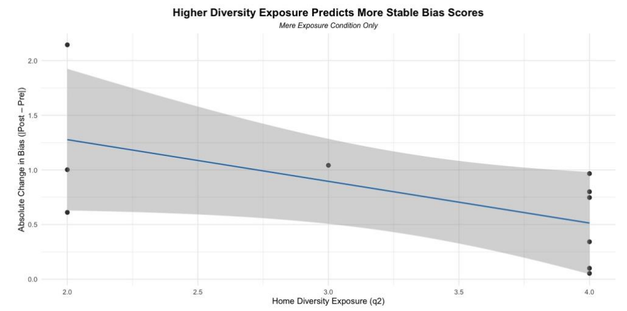


Mean change in D-scores (post-pre) by trial type. Practice trials showed a significant increase ($p < .01$); Real trials showed a smaller increase ($p < .05$).

RESULTS



Higher community diversity exposure (q2) predicted smaller absolute shifts in implicit bias (|post – pre|), indicating more stable responding among children who interact with more diverse people in their community (β = – 0.17).



Children with higher q2 exposure showed smaller absolute changes in d-scores, indicating more stable bias levels across the study (β = – 0.38, p = .06). Higher exposure to diverse peers may buffer against large fluctuations in implicit bias.

CONCLUSIONS & FUTURE DIRECTIONS

- Implicit bias increased from pre- to post-test overall, driven mainly by children in the Mere Exposure group; the Individuation group did not show a significant increase, and the two conditions did not differ statistically
- Children with higher community diversity exposure (q2) showed more stable bias scores, suggesting that community interactions with different races may buffer against large shifts in implicit bias
- Larger samples and extended or repeated individuation sessions are needed to better assess potential intervention effects
- Future work should test classroom-based, teacher-led storybook interventions to improve ecological validity and real-world feasibility
- Additional work is needed to refine child-friendly implicit bias measures, as young children's scores showed high variability across trials

REFERENCES

[1]Qian, M., Heyman, G., & Lee, K. (2017). Individuation training reduces implicit racial bias in preschool children. *Child Development*.
[2]Qian, M., Quinn, P., Heyman, G., Pascalis, O., Fu, G., & Lee, K. (2016). A preschool-friendly Implicit Racial Bias Test. *Developmental Science*.
[3]Hugenberg, K., Miller, J., & Claypool, H. (2007). Categorization and individuation in face perception. *Journal of Personality and Social Psychology*.
[4]Sangrigoli, S., Pallier, C., Argenti, A. M., Ventureyra, V., & de Schonen, S. (2005). Exposure to other-race faces and face recognition development. *Journal of Experimental Child Psychology*.

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