

# The Other Race Effect & Own Age Bias in Children & Adults

Chloe Hinrichs  
Winona State University  
Faculty Sponsor: Dr. Carrie Fried

## Introduction

The other race effect occurs when a person recognizes faces of their own race more quickly and accurately than a face from another race. Faces of other races are in general recognized less well (Lipp et al., 2009). This effect has been found across all ages in reaction time and accuracy (Kelly, Quinn, Slater, Lee, Ge, Pascalis 2007). The other race effect appears to be not as strong in both adults and children who have more contact with other races (Jackiw, Arbuthnott, Pfeifer, Macron & Meissner, 2008)

The own-age bias is similar to the other race effect. The own-age bias occurs when a person is more accurate at recognizing faces that are of their own age versus faces of other ages. Unlike the other race effect, own-age bias has not been studied extensively. Overall own-age bias has been found in young adults, middle adults as well as children. However, not all studies have found own-age bias in young and older adults (Hill, 2012).

Many theories exist to explain these phenomena. These include in-out group bias, lack of contact with other groups and that other group faces are processed differently (Hill 2012).

The goal of the present study is to further understand the other race effect and own age bias as. No other study has been found that looks at both the other race effect and the own age bias side by side. Based on the background research, two main hypotheses can be made. First, the other race effect will appear in both children and adults. Secondly, the own age bias will occur in both children and adults

## Methods

### Participants

The adult population consisted of 12 females and 1 male students from Winona State University. The child population consisted of 4 females and 3 males from a local daycare. In addition 2 children were uncooperative so their data was not included. All of the participants were Caucasian.

### Materials & Procedures

**Facial Stimuli.** Forty wallet-sized photos were used. Each photo had an individual looking directly at the camera with no glasses on and no tattoos showing. The faces used consisted of: 10 African American children, 10 Caucasian children, 10 African American adults, and 10 Caucasian adults. Half of all the photographs in each group were female and the other half were males.



African American Child

African American Adult

Caucasian Adult

Caucasian Child

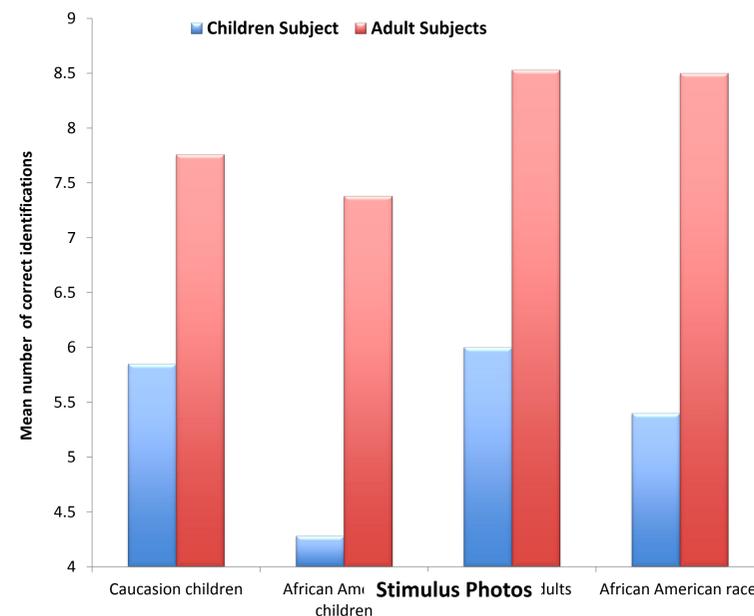
## Methods Cont.

**Overview.** This study was a 2(race of picture) X 2(age of picture) within subjects design. Participants were lead to believe they were performing a simple memory study. Participants completed a learning phase, filler task, and recognition phase. This procedure was first done with participants viewing children's faces. The procedure was then repeated viewing adult's faces.

		Race of Picture	
		African American Child	Caucasian Child
Age of Picture	Child		
	Adult		

**Round 1.** Participants viewed half of the photos of African American and Caucasian children in random order. Participants viewed one photograph at a time for approximately 3 seconds before viewing the next photograph. Participants then moved onto the distractor phase for 5 minutes. Lastly they viewed the original children faces in addition to 10 previously unseen photographs in random order one at a time. Recognition rates were recorded.

**Round 2.** In the second round participants went through the same procedure as round except with Adults faces



## Results

A 2 (race of picture) x 2 (age of picture) repeated measure ANOVA was conducted, with the age of the subject (child or adult) as a between subject variable. Individual means and SD of each condition can be seen in table 1.

Age of the subject had a significant effect ( $F(1,18) = 30.02, p < .001$ ). Means indicate that, in general, the adults were better on face recognition than the children were.

On the repeated measures variables there was no significant interaction between race and the age of the pictures,  $F(1,18) = .462, p = .733$ . There was a marginally significant main effect for race,  $F(1,1) = 2.84, p = .11$ , and the age of the picture,  $F(1,1) = 3.051, p = .098$ . Means seem to indicate that there was some evidence of a race effect (subjects had a harder time accurately recalling African American individual versus Caucasian individuals) and this difference was greater when judging pictures of children. It appears the children have a strong other race effect.

## Discussion

The original hypothesis that the other race effect would be seen in both population was partially supported in this study. However the second hypothesis that a own-age bias would be seen was not supported in this student. This study supports the general idea that people recognize faces of their own race more quickly and accurately. This study cannot clearly say that people recognize faces of their own age group more quickly or accurately.

This study has some limitations. To begin, this study was done in a laboratory and may lack ecological validity. In reality, people use several factors that were not analyzed in this study, such as hairstyle, clothing, personal mannerisms, voice tones and intonations, walking styles, and birth marks when viewing and remembering new faces. Another limitation is that this study had a very small sample size. As a result this was a within-subjects designs and each participant was tested twice. This study also had exclusively Caucasian faces

Future research in this area can include having a larger sample size and include children of various ages. Having a larger sample size will make it more externally valid. In addition taking in other factor (verbal, voice, walking styles) can be examined closer in future studies.

## References

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- Jackiw, L. B., Arbuthnott, K. D., Pfeifer, J. E., Macron, J., & Meissner C.A. (2008, January). Examining the cross-race effect in lineup identification using Caucasian and first nations samples. *Canadian Journal of Behavioral Science, 40*, 52-57.
- Kelly, D. J., Quinn, P. C., Slater, A. M., Lee, K., Ge, L., & Pascalis, O. (2007). The other-race effect develops during infancy. *Psychological Science, 18*(12), 1084-1089.