

The effects of voice pitch and race on perceived leadership ability and threat

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Background

- People assess threat potential from others using a combination of cues, including group membership and vocal characteristics¹⁻³
- Perceptions of leadership ability are likely to be affected by stereotypes and personal characteristics because people do not want leaders that they perceive as a threat to their group^{4,5}
- Individuals within groups that are perceived as threatening (e.g., Black people) may be more successful in leadership positions if they have disarming mechanisms (i.e., personal characteristics that reduce perceptions of threat)⁴
- Black men with higher-pitched voices may be attributed leadership traits to a greater extent than Black men with voices that are perceived as threatening (i.e., lower-pitched voices)
- There is no research examining the interaction between race and voice pitch upon perceived leadership ability

Hypotheses

- We hypothesized that participants would rate Black men with high-pitched voices lower on traits associated with threat and higher on traits associated with leadership ability compared to Black men with low-pitched voices.
- On the other hand, White men with a low-pitched voice will be rated higher on traits associated with leadership ability compared to White men with a high-pitched voice, as suggested by previous research⁶

Design

- 2X2 within-subjects design with two independent variables: voice pitch (high or low) and race (White or Black names)

Procedures

Materials

- Threat manipulation: We recorded the voices of eight men quoting the first sentence of the Rainbow Passage and each voice was manipulated to have a higher or lower pitch⁷
- Race manipulation: We used four names that are typically associated with Black people (i.e., Tyrone, Keyshawn, Deshawn, Terrell) and four names that are typically associated with White people (i.e., Scott, Brad, Brett, and Logan)⁸

Methods

- Participants recruited from AMT
- Learned the confederate's name, location, date; then, listened to the participants' recording
- Rated the voice on perceived trustworthiness, perceived dominance, perceived threat, leadership ability (intelligence, effective communication, confidence, and problem-solving ability)
- Completed demographic questions, a suspicion check, and a series of manipulation checks before debriefing

Results

- Final sample consisted of 507 (278 Women, 229 Men; $M_{age} = 40.07$)

Primary hypothesis 1: Race and voice on perceptions of threat (Figure 1)

- There was a main effect of voice pitch upon perceived threat, $F(1, 506) = 62.225, p < .001, \eta^2_p = .11$.
- Race did not significantly predict perceived threat, $F(1, 506) = 0.170, p = .680, \eta^2_p = .000$.
- The interaction between the variables was not significant, $F(1, 506) = 1.351, p = .246, \eta^2_p = .003$.

Primary hypothesis 2: Race and voice on perceptions of leadership ability (Figure 2)

- Both voice pitch, $F(1, 506) = 10.109, p = .002, \eta^2_p = .02$, and race, $F(1, 506) = 10.622, p = .001, \eta^2_p = .021$, significantly predicted leadership composite ratings
- The interaction was not significant, $F(1, 506) = 0.079, p = .779, \eta^2_p = .000$.

Figure 1

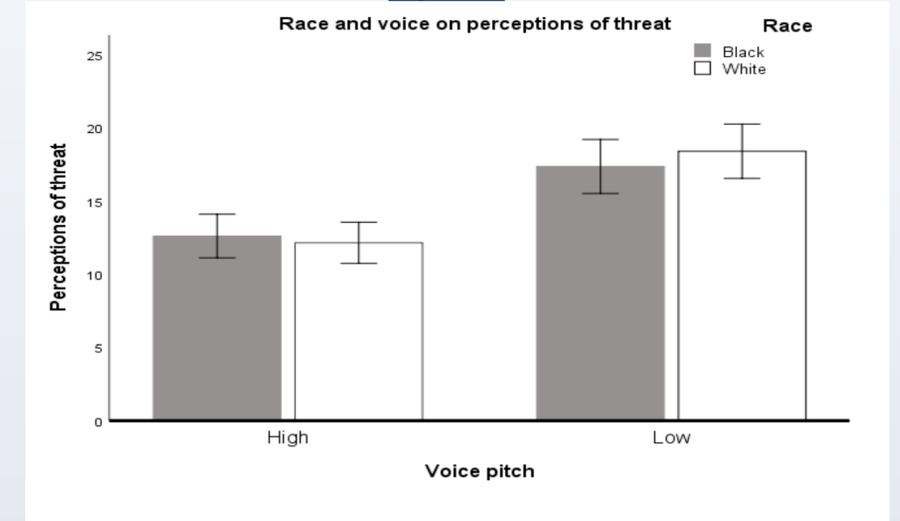
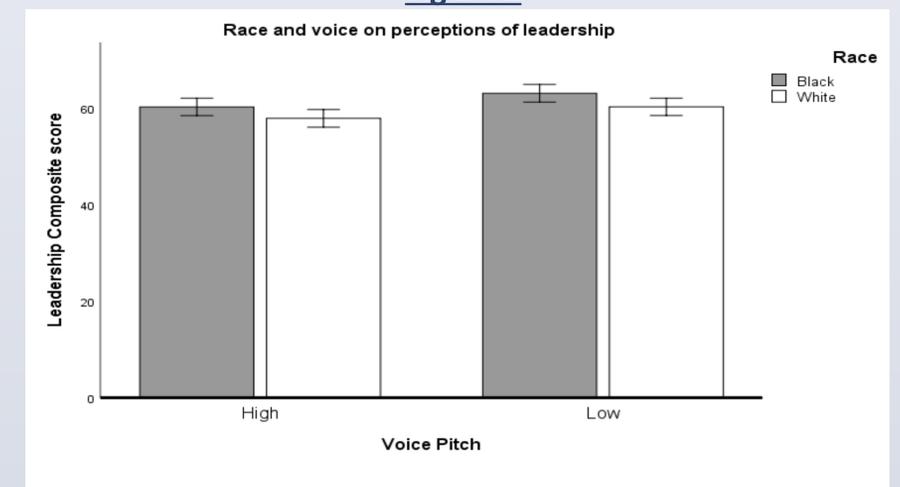


Figure 2



Conclusions

- Overall, we found that voice pitch has a significant effect upon perceived threat and leadership
- We also found an unexpected effect of race upon leadership
- Our original primary hypotheses were not supported
- Future studies should recruit a more diverse sample for vocal stimuli

References

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3. Neuberg & Schaller, 2016
4. Livingston & Pearce, 2009
5. Wilson, Remedios, & Rule, 2017
6. Klofstad et al., 2012
7. Boersma & van Heuven, 2001
8. Gaddis, 2017