Race and Representation: How Does Numeric Representation Relate with Career Choices for Middle Schoolers?

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Background: Exploring the role of numeric representation for aspirational career choice

The issue –
- Perhaps numeric representation, the actual quantitative representation of a group in a given career, is a way that cultural ideologies (e.g. patriarchy and White supremacy) are communicated.
- Numeric representation may shape aspirations by spreading these cultural messages.
- Less is known about how the actual numeric representation associates to aspirations, therefore, this study aims to fill this gap.

Past research –
- Numeric representation contributes to stereotype development and stereotypes influence aspirations (Creamer 2012; Dasgupta and Asgari, 2003; Koenig and Eagly, 2014; Miller, Eagly, & Linn, 2015; Buckley, 2018; Diekman, Clark, Johnston, Brown, & Steinberg, 2011).
- Thus, numeric representation may indirectly play a role in aspiration-development via stereotypes. Here, we explore the direct relationship between numeric representation and aspirations.
- Additionally, past research suggests that perceived fit, which is an indicator of how much one's identity aligns with their future goals, shapes aspirations (Debrosse, Rossignac-Milon, Taylor, & Destin, 2018).

Research questions –
- *Do middle school students envision future careers in which the representation of their collective identities mirrors their national proportion?*
- *Is numeric representation associated with perceived fit?*

Methods: Surveying middle school students

Sample 1 – *n*=103, 51 boys and 52 girls, 9 White, 9 Black, 10 Asian, 75 Latinx
**Sample 2 –** *n*=60, 18 White, 8 Black, 4 Asian, 30 Latinx

- **Numeric representation –** Numeric representation is a ratio of how much a group (race/ethnicity, gender) is represented in an occupation in comparison to how much that group is represented in the national population. To calculate numeric representation, we used the Bureau of Labor Statistics (BLS) 2012 report *Occupation by Race and Ethnicity*. For sample 1, we explored gender and race/ethnicity simultaneously (e.g. Latina girl). For sample 2, we explored race/ethnicity (e.g. Latinx).

- **Aspirational career –** Participants listed one job they thought they would have as an adult.

- **Perceived fit –** Participants listed 5 characteristics or skills that individuals with their aspirational career ideally possess. Then, participants considered if "most people" from their collective identity (ethnic/racial group) possess each characteristic/skill they listed earlier. Participants responded on a 5-point Likert scale from 1 (*Strongly disagree*) to 5 (*Strongly agree*).

Main findings: ANOVAs suggest that numeric representation varies by race/ethnicity
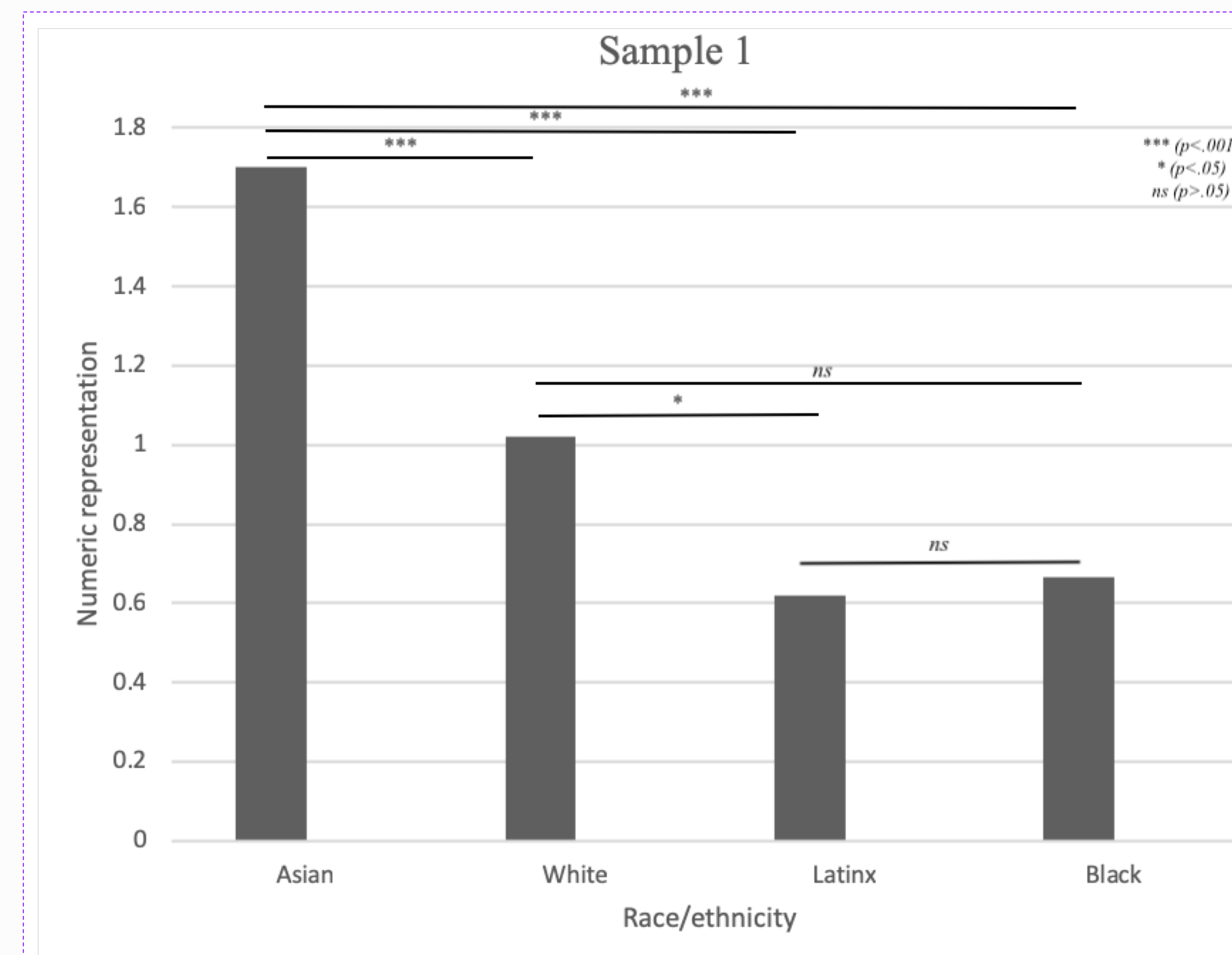
Sample 1

Sample 1 –
- *Results of a two-way ANOVA indicated a statistically significant difference between race/ethnicity, but not for gender ($F(3,95)=27.864$, $p<.001$)*
- *The means of Asian students were significantly different from White, Black, and Latinx students.*
- *There were significant differences between White students and Latinx students, but not for White and Black students.*
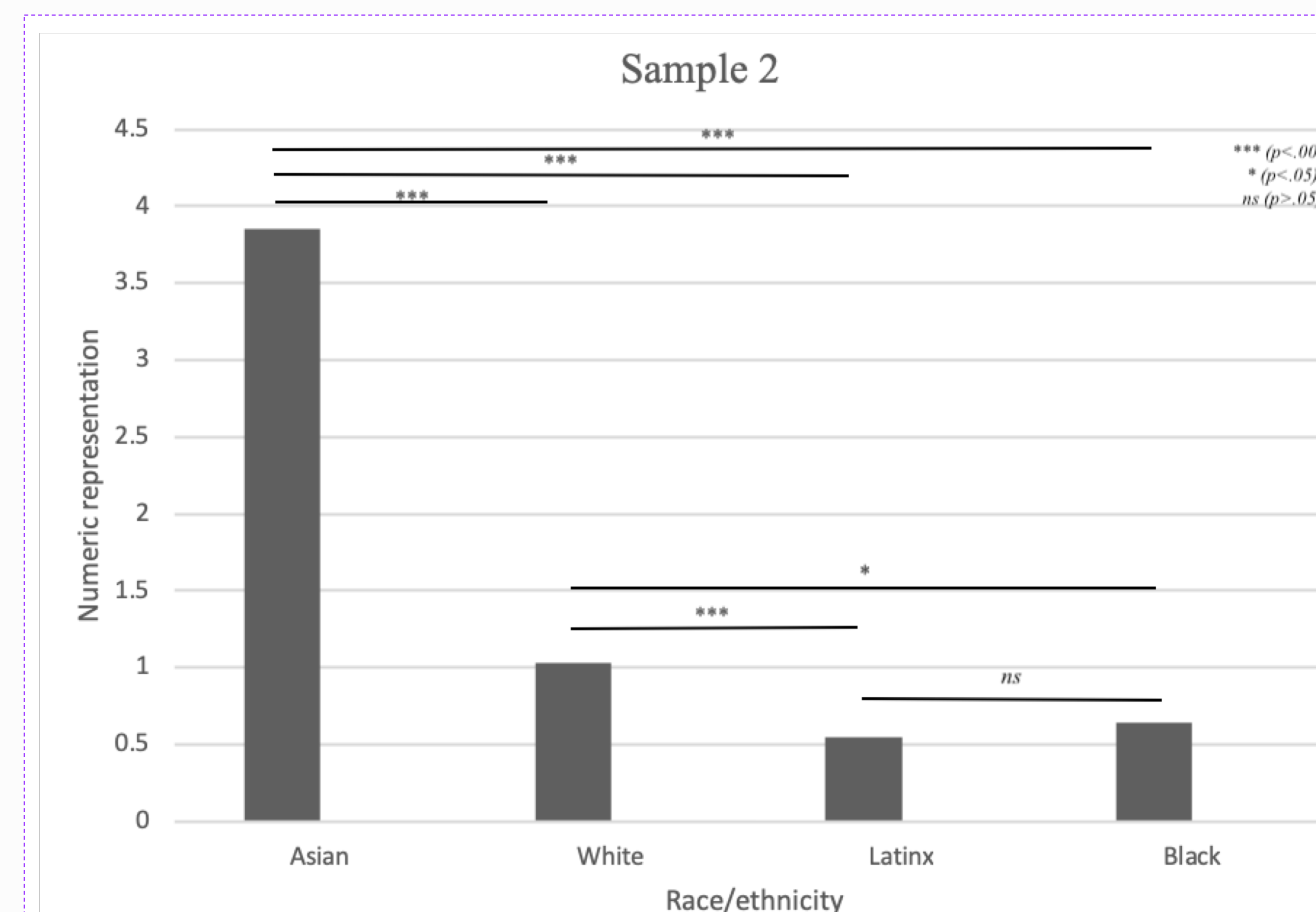
Sample 2

Sample 2 –
- *There was a statistically significant difference between race/ethnicity groups as determined by one-way ANOVA ($F(3,56)=119.187$, $p<.001$).*
- *The means of Asian students were significantly different from White, Black, and Latinx students.*
- *The means of numeric representation for White students were significantly different from Black and Latinx students.*
- *The means of Black and Latinx students were not significantly different from each other.*

Conclusions: Numeric representation is a relevant factor for middle school students' aspirations, and it functions differently for different races/ethnicities.

- Asian students' racial/ethnic group was overrepresented in their aspirational careers, White students' racial/ethnic group was proportionate, and Black and Latinx students' racial/ethnic groups were underrepresented.
- There were no significant results linking numeric representation and perceived fit.