



Diversity and Inclusion in Academia: Workplace Climate Correlated with Turnover



Intentions and Mental Health

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INTRODUCTION

Racial Inequities in Academia

- In academia, people of color (POC) have disproportionately experienced negative workplace climate, mistreatment, and representation.
- The work of Underrepresented Minorities (URM) and marginalized academics continues to be devalued (Settles et al., 2021), with limited NIH funding allocated to Black scholars and research that focuses on structural issues (Ginther et al., 2011).
- At the department level, biases in hiring and promotion, as well as adverse climate, causes higher turnover in minority academics (Williams, 2019).

Impact of Workplace Climate on Mental Health and Turnover Intentions

- An inclusive department climate can lead to better work outcomes, including lower turnover and satisfaction (McKay et al., 2007), increasing productivity among URM and marginalized academics (Sheridan et al., 2018).
- In a broader sense, assurance in professional ability leads to decreased turnover in STEM (Cech et al., 2011), however devaluation of URM academics work can negatively impact confidence.

HYPOTHESES

Workplace Climate

- POC academics will experience more negative climate within their research group than white academics.
- POC academics will experience more negative climate within their department than white academics.
- POC academics will experience more negative climate within their field than white academics.

Mental Health

- POC academics will describe worse mental health compared to white academics.

Turnover Intentions

- POC academics will describe higher turnover intentions compared to white academics.

METHODS

International Pilot Study

- Study of N = 192 early-career scholars using Prolific survey software.
- Participants were surveyed about their workplace experiences at three levels of academia, mental health, and turnover intentions.

Demographics

- 120 graduate students, 30 postdocs, 25 assistant professors, 17 other
- 58 URM, 46 Asian, 85 White

Analytical Method

- One-way ANOVA tests were performed using STATA to investigate differences among three racial categories (URM v. Asian v. White) against three levels of academia, mental health, and turnover intentions.
- A post hoc test with a Tukey adjustment was conducted for department and field academic levels to determine where the significance was.

RESULTS

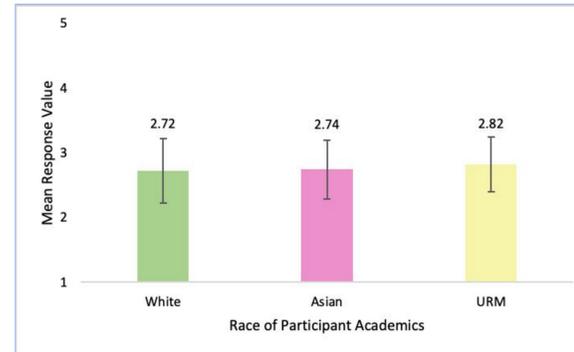


Figure 1. Mental Health by Race. While URM academics reported slightly greater mental health struggles on average than the white or Asian groups, no significant difference was found ($F=0.84, p=0.4338$).

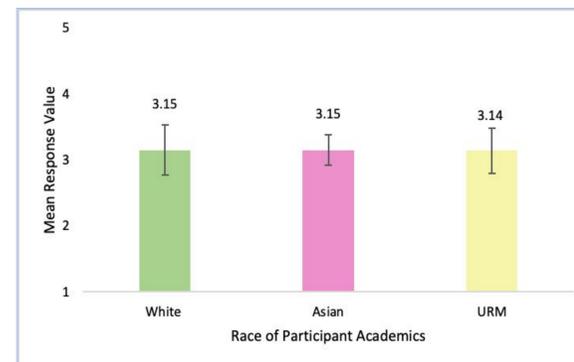


Figure 3a. Climate of Research Group by Race. All 3 Groups experienced relatively equal levels of psychological safety in climate at the research group level. ($F=0.03, p=0.9724$).

Summary of Results

- No inherent difference in mental health or intent to turnover, yet URM experience higher turnover rate.^{b, c}
- No difference in climate and psychological safety at research group level, but significant differences at department and field level with URM academics experiencing more negative climate than their white and Asian counterparts.^a
- Suggests that systemic barriers and persistent negative climate at higher levels in academic settings may be responsible for this difference in turnover rate for POC.

Figure 1	higher response value = worse reported mental health
Figure 2	higher response value = higher intent to turnover
Figure 3a-3c	Higher response value = more positive climate

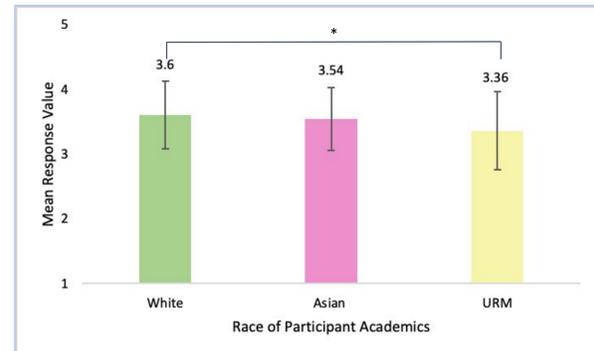


Figure 3c. Climate of Field by Race. At the field level, URM academics experienced the most negative climate, followed by Asian academics, with white academics experiencing the least negative climate ($F=3.46, p=0.0335$). $*p < 0.05$.

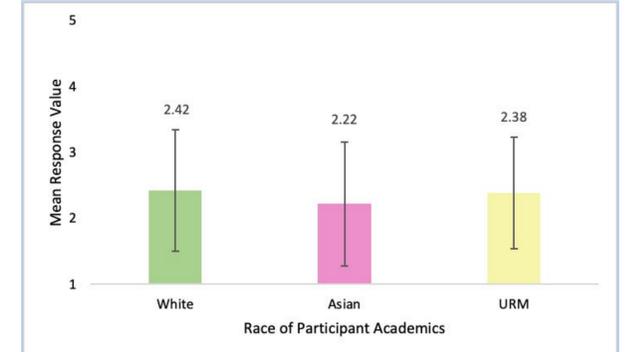


Figure 2. Turnover Intentions by Race. While white and URM academics had slightly higher intentions to turnover than Asian academics, no significant difference was found between groups ($F=0.71, p=0.4916$).

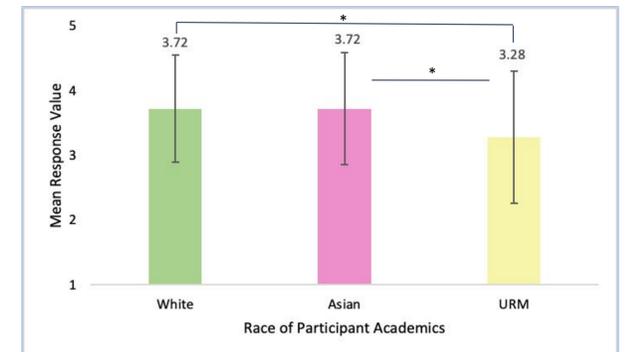


Figure 3b. Climate of Department by Race. URM academics experienced a more negative climate at the department level than either white or Asian academics did ($F=4.80, p=0.0093$). $*p < 0.05$.

DISCUSSION AND CONCLUSIONS

Unraveling Systemic Racism in Higher-Level Academia

- POC continue to face systemic barriers to success in academia, particularly through hostile workplace climate at the department and field levels.
- Conversely, no difference in climate between groups was observed at the research group level; this may be because people have greater say in choosing peers in their research group than in higher levels.
- Mitigating ingrained racial barriers and creating supportive environments in academia conducive to the success of all scholars is imperative to combat these disparities and create a more equitable scientific community.

Limitations and Future Research Needs

- The sample was relatively small.
- International sample without knowledge of country representation.
- Additional research into factors causing increased POC turnover on larger sample size will be helpful in remedying this disparity.

CLIMBS UP: Climate for Inclusion

- This research is a small facet of a much larger project (CLIMBS-UP) seeking to investigate how inclusive work environments affect career outcomes of early-career STEM academics.

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ACKNOWLEDGEMENTS

Our research is a fragment of a multidisciplinary collaborative project between Michigan State University and the University of Michigan. We want to thank the National Science Foundation (Awards: UM #200579, MSU #1954767) for the funding of this project. We gratefully acknowledge the CLIMBS-UP team for their hard work and commitment, including Dr. Kendra Spence Cheruvellil, Dr. Isis Settles, Dr. Georgina Montgomery, Dr. Kevin Elliott, Dr. Erin Cech, Dr. Hannah Douglas, Dr. Guizhen Ma, and Tangier Davis.



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