



Investigating the Effects of Racial Stereotypes on Health



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Introduction

- Stereotype Threat (ST)**
 - Beliefs about typical traits associated with a group, pressure to confirm/deny can hamper performance
- Race-Related Vigilance (RRV)**
 - Constant awareness of racial status in society + modification of behavior to avoid racial situations
- Ethnic Identity (EI)**
 - Centrality: extent to which a person emphasizes racial group membership as part of their self-concept
- Past Research**
 - Discrimination & Anxiety
 - Continual awareness manifests psychosocial stressors
 - Discrimination & Sleep
 - Anticipation of stress-induced activities worsen sleep quality/efficiency especially prior to bedtime

Hypotheses

- Higher levels of stereotype threat & race-related vigilance increase the likelihood of anxiety and sleep issues. **H1**
- Higher ethnic identity (as a moderator) decreases anxiety and sleep issues. **H2**

Methods

Participants

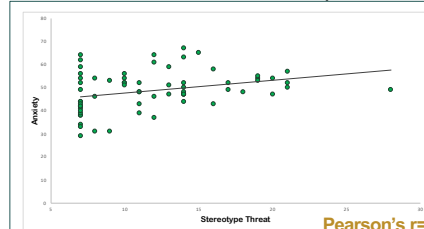
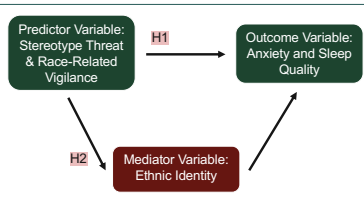
- N = 68
- Age M = 20.47, SD = 1.94
- White (25%); Hispanic/Latinx (7.4%); Black/African American (5.8%); Asian (60%); Native Hawaiian/Pacific Islander (1%)

Measures

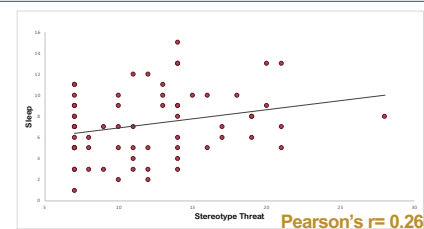
- State Trait Anxiety Inventory (STAI)** – Trait Only (Spielberg, 1963)
- Pittsburgh Sleep Quality Index (PSQI)** (Buysse et al., 1989)
- Stereotype Threat at School (STaS)** (Bedyńska et al., 2018, 2019, 2020; Stone and McWhinnie, 2008)
- Heightened Vigilance Scale** (Williams, 2016)
- Multidimensional Inventory of Racial Identity (MIRI)** – Centrality Online (Sellers, 2013)

Procedures

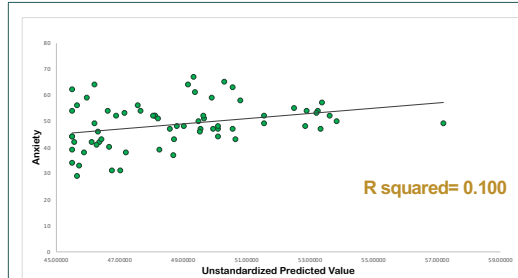
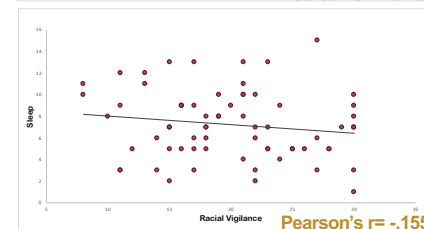
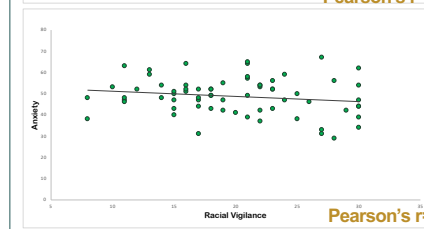
- Community recruitment through social media and online advertisements. Student recruitment through introductory psychology pool.
- Data collected through anonymous online survey using UT Qualtrics



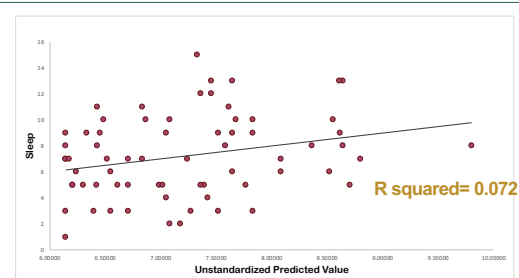
Multiple linear regressions show the highest correlation between anxiety and stereotype threat (Beta= 0.290) in comparison to anxiety and racial vigilance (Beta= -0.055)



Similarly, sleep has a higher correlation with stereotype threat (Beta= 0.239) than racial vigilance (Beta= -0.60)



10% of the data fit the regression model



7.2% of the data fit the regression model

Why unstandardized values?

By using the unstandardized predicted coefficients, it shows how much change in the dependent variable (anxiety & sleep) is predicted to occur per unit of change in one independent variable while the second independent variable is held constant. Since there was a lack of standardization with scoring both independent variables, these may be easier to interpret.

Due to strict timing, secondary analyses were not analyzed for significance.

Summary

- A positive (direct), yet negligible correlation was found between ST and anxiety and sleep.
- A positive, yet negligible correlation was found between RRV and anxiety and sleep.
- Scoring was not standardized among all variables, leading to negative Pearson coefficients. Above analyses interpret results taking into account discrepancies in scoring methods

Conclusions

While no significant relationships were found, greater sample size could yield more insightful results.

Limitations

UT student pool- small population of Black and Native American students.

Future Directions

- Due to the lack of research on discriminatory factors, future studies may want to replicate a version of this on:
 - High school students as there are less confounding variables and possibly a higher amount of stereotype threat
 - Adults experiencing discrimination in non-academic environments
 - Biracial/multiracial individuals

A larger sample size with higher counts of each ethnicity.

References

Alvares, T. (2020). Psychological stress and increased sleep. *International journal of health*, 2(10), 410-421.
 Alvarado, T., Kankang, G., & Kankang, J. (2021). Impaired sleep after bedtime stress and cortisol. *Biological psychology*, 170(1), 170-175.
 Alvarado, T., Garcia, M., Alvarado, L., Hernandez, P., & Kankang, G. (2021). Predicting chronic sleep complaints from bedtime values and changes in work demands, work control, and work participation—the WOLF project. *Sleep medicine*, 12(1), 73-85.
 Anderson, M. T., Lane, M., Anderson, J., Becker, J. A., & Williams, D. B. (2013). "Tired" but not "well slept": The role of race-related vigilance in residential dysfunction in sleep. *Health Affairs*, 32(12), 2012-2017.
 Fiske, D., Stangor, S., Woodzicka, D., Phoo, J. T., Singh, D., Kaufman, A. G., Minick, K., Davis, M. M., Harwood, T., & Williams, D. (2018). *Discrimination across intersections of race and age: Racial stereotyping among White adults working with children*. *PLoS one*, 13(9), e0202122.
 Williams, D. B., Lambert, J. A., & Davis, B. A. (2016). Racism and health: evidence and needed research. *Annual review of public health*, 37, 49-68.

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