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The Positive or Negative Impact of Stress: Exploring Differences Among Sociodemographic Groups

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WINONA STATE UNIVERSITY TRAVEL SUPPORT FOR UNDERGRADUATE STUDENT RESEARCH & CREATIVE PRESENTATIONS FINAL REPORT

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- This final report fully completed
 A copy of the project end product
 - A copy of the project end product. Indicate the format of your final product (*select all that apply*):
 - Presentation
 - ⊠ Poster
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Note: A copy of the project end product will be forwarded to Krueger Library for archival purposes.

Project Information				
Title of Project: The Positive or Negative Impact of Stress: Exploring Differences Among Sociodemographic Groups				
Student Name (Lead): Thomas Carlson	Student Email: tcarlson16@winona.edu			
Co-Investigators Names: Megan Reis, Taylor Kruse, Jenna Dale				
Faculty Sponsor: Amanda Brouwer, Ph.D	Faculty Department: Psychology			
Date of Presentation: 02/13/2021	Location of Conference: Virtual/Zoom			
Event Name: Society of Personality and Social Psychology Virtual Convention				
Was this a capstone, senior thesis, or other degree culminating project? No				

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The Positive or Negative Impact of Stress: **Exploring Differences Among Sociodemographic Groups**

Thomas Carlson, Megan Reis, Taylor Kruse, Jenna Dale & Amanda Brouwer, Ph.D

INTRODUCTION

Sociodemographics and Health Disparities

- Disparities in health exist.
- Minorities are more likely to have environmental hazards, be unemployed and live below the federal poverty level than those in the majority.¹
- Compared to whites, non-Hispanic Blacks have greater rates of premature death and more than double infant mortality rates.¹
- Those less educated are more likely to report poor physical health.¹ • Minorities are also more likely to have poorer mental health outcomes
- possibly due to inaccessibility of care, stigma, and discrimination.²
- People from racial/ethnic minority groups are less likely to receive mental health care.²

¹CDC, 2013; ²American Psychiatric Association, 2017

Stress and Health for Minorities

- Stress is linked to poorer mental and physical health.¹⁻³
- Perceiving life events as positive has less of a detrimental effect on health than perceiving life events as negative.⁴
- Socioeconomic factors such as income, race, and education impact how stress is perceived.
- The World Health Organization identifies stress among the top ten determinates of health disparities.⁵
- Individuals with low income are exposed to unfavorable environmental stressors (high crime rate, barriers to access health care, limited resources, etc.)⁶
- Racial minorities encounter a greater allostatic load burden than do those in the majority.¹
- Those with lower education tend to get placed into unsecured employment and pressured to work demanding hours.⁷
- Perceptions of stress as positive or negative can differentially affect health outcomes, but little research has explored how the perception of stressful life events might differ across sociodemographic groups.

Study Aims and Hypotheses

¹ Duru et al., 2012; ²Brody et al., 2013; Sperlich & Geyer, 2015; ⁴Cohen et al., 2019; The World Health Organization, 2013; 6ADAA; 7Indelicato 2016

- The aim of the current study was to investigate how different sociodemographic groups (i.e., race, income, and education) experience the impact of stressful life events as either positive or negative.
- We hypothesized that those in the minority race, those with lower income, and those with less education would reporting the impact of stressful life events as more negative and less positive compared to those in the majority race, those with higher income, and those with more education.

METHOD

Participants:

- 161 adults
- 75.3% (N= 120) Women
- 24.1% (N=38) Men
- 18-78 years (M=38.17, SD=12.53)

Ethnicity/Race:

- Caucasian: 91.4%
- African American: 2.5%
- Hispanic or Latino/a: 1.9%
- American Indian: 1.2%
- Asian: 1.2%

Procedures

Income:

- Less than 25K: 22.8%
- 25-50K: 25.3%
- 50-100K: 36.4%
- 100+K: 15.4%

Education:

- HS or less: 11.1%
- Some College: 32.1%
- College Degree: 32.7%
- Post-College Degree: 23.5%

Participants completed surveys assessing sociodemographics and the impact of stressful life events

Measures

<u>Behavioral Risk Factor Survey (CDC, 2014)</u>

- Race, Income, and Education
- The Life Experiences Survey (Sarason, 1978)
- Measures the impact of a variety of stressful life events (e.g., marriage, death of family member, new job) from extremely negative (-3) to extremely positive (+3). • Positive and Negative impact scores were calculated by taking the average negative and average positive ratings for stressful life events.

Statistical Analysis

- Frequencies and descriptive were computed for all study variables.
- One-way ANOVAs and independent t-tests were computed to compare race, income, and education groups on positive and negative stressful life events.

Less education and less income are associated with stronger negative evaluations of stressful life events.

Whites evaluated stressful life events as more positive and more negative than did minorities.



	RESULTS			
Sociodemographics	Impact of Positive Events M (SD)	Impact of Negative Events M (SD)		
Race:				Impact of Positive Events
White	4.6 (5.8)	-5.9 (7.9)	Sociodemographics	M (SD)
Minority	1.5 (3.5)	-0.9 (1.4)	Education:	
Income:			HS or less	4.5 (5.5)
25K or less	5.1 (5.7)	-8.9 (9.7)	Some College/AA	6.3 (6.6)
25K-50K	4.0 (4.7)	-7.3 (8.6)	BA/College Degree	3.6 (5.5)
50K-100K	4.9 (6.7)	-3.6 (5.5)	Post-College Degree	2.5 (4.1)
100k+	2.1 (4.3)	-1.8 (3.5)		

Education

- There was a difference in the impact of both negative (F(3,157) = 5.46, p =.001) and positive stressors (F(3,157) = 3.77, p = .01), depending on education.
 - Those with a high school education or less rated their negative stressful life events as having a *more* negative impact than did those with a college, (t(157) = -6.09, p = 0.12), or post-college (t(157) = -7.62, p = .002) degree.
 - Those with some college reported the impact of their positive stressful life events as *more* positive than those who had a post-college degree, *t*(157) = 3.80, p = .01.

Income

- There was a significant difference in the reported impact of negative stressors (F (3,158) = 6.92, p < .001), but not positive stressors (*F* (3,158) = 1.77, p = .16) depending on income.
 - Those that had an income of less than 25k rated their negative stressful life events as having a *more* negative impact than those who made \$50-100k, (t(158) = -5.29, p = .004), and over \$100k, t(158) = -7.04, p = .002.
 - Those that had an income between \$25-50k rated their negative stressful life events as having a *more* negative impact than those who made over \$100k, t(158) = -5.44, p = .02.

Race

- For both negative and positive stressors, there was a significant difference in the impact of those stressors depending on race.
 - Whites rated their negative stressful life events as having a *more* negative impact than did minorities, t(-6.53) = 89.39, p < .001.
 - Whites rated their positive stressors as having a more positive impact than did minorities, t(2.74) = 16.35, p = .01.



DISCUSSION

- The positive and negative impact of stressful life events differed depending on education, income, and race.
- Those with lower income and less education rated the impact of negative stressful life events as more negative than those with higher income and more education.
- Whites tended to rate the impact of both their positive and negative stressful life events as more extreme than did minorities.
- Having more education and income may allow for more support, resources and knowledge to help cope with stressful events and, in turn, reduce the degree to which the stressors feel negative.
- Providing more knowledge about coping resources, especially among groups who are evaluating stressful life events as more negative might mitigate the negative experience of the stressor and reduce the negative health impact.
- The sample did have a small number of minorities, which may explain the unexpected findings regarding positive and negative stressful life events. • Future researchers could explore:
- The role of cultural interpretations of stress on impact evaluations. • Whether educating about distress and eustress can change the evaluation of
- the stressful life event. • What kinds of external factors (e.g., volunteering, social connections, charitable donations) can mitigate the negative impact of stressful life events.



pact of Negativ Events M (SD) -10.4 (10.8) -6.6 (8.1) -4.3 (6.0) -2.8 (5.1) Race

The Positive or Negative Impact of Stress: Exploring Differences Among Sociodemographic Groups

Thomas Carlson, Megan Reis, Taylor Kruse & Amanda M. Brouwer

Winona State University

Perception of stress as positive or negative can differentially affect health outcomes, but little research has explored how differences across sociodemographic groups might explain existing health disparities. Therefore, the experience of stress across different sociodemographic groups was studied. Participants (N=162, M_{age} =38.17, SD=12.53) completed surveys including demographics and the perceived impact of various stressful life events. One-way ANOVAs and independent t-tests were conducted to determine differences in positive and negative evaluations of stressful life events among education, income, and racial groups. Differences in the number of positive and negative stressors were found in education, income, and racial groups. Those with less education and income had more negative stressors compared with those who had more. College educated individuals had more positive stressors than did those with a post-college degree. Whites reported more positive and negative stressors than did minorities. Results suggest that those in different demographic groups do experience the impact of stressful life events differently and interventions could be tailored to address such differences.

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Perceptions of stress can affect health and may explain health disparities. Therefore, the differential experience of stress across sociodemographic groups was explored. Those with less education and income had more negative stressors, college educated individuals had more positive stressors than those with a post-college degree, and whites reported more stressors than did minorities.