

Multiple minority status and stress in North Dakota college students

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Significance

Stress and Health

- Stress has been associated with adverse health outcomes including cardiovascular disease (Steptoe & Kivimäki, 2012), type 2 diabetes (Hackett & Steptoe, 2017), anxiety, and depression (Garfin, Thompson, & Holman, 2018).

Minority Health Disparities

- In the United States, minority status has also been associated with these health outcomes(i.e., heart disease, type 2 diabetes, depression, and chronic kidney disease) (Baciu et al., 2017).

Minority Status and Stress

- Furthermore, multiple minority status has been positively associated with experiencing more stress (Scandurra et al., 2021; Shangani, Gamarel, Ogunbajo, Cai, & Operario, 2020).

Multiple Minority Stress

- Psychology research has begun to examine the effects of multiple minority status or Intersectionality (Crenshaw, 1989) on adverse health outcomes with various approaches (Bauer et al., 2021). This research suggests that individuals may experience worse health outcomes due to the negative influence of intersecting social/institutional oppression.

Purpose

- This study considered how the number of minority groups college-aged students identified with was associated with stress, depressive symptoms, and anxiety.

Methods

A total of 335 college students responded to an online survey that included an adaptation of the Minority Stress Scale examining stress related to sexuality, gender identity, and race and ethnicity. Participants also reported depressive symptoms and anxiety. Demographic information can be found in Table 1.

297 participants with complete data were included in the analyses.

Psychological Measures

- The Center for Epidemiological Studies – Depression (CES-D)(Radloff., 1977).
- The State Trait Anxiety Inventory (Spielberger., 1971).
- The Perceived Stress Scale (Cohen., 1983).
- The Minority Stress Scale (MSS) (Pala et al., 2017).
 - Sexuality MSS (MSSsex)
 - Gender Identity MSS (MSSgender)
 - Race and Ethnicity MSS (MSSrace)

- The number of self-identified minority status variable was computed from dummy coded sexuality, race & ethnicity, and gender identity variables with the reference group: cisgender, white, non-Hispanic, and heterosexual.

- The minority stress total variable was the computed total of MSSsex, MSSgender, and MSSrace.

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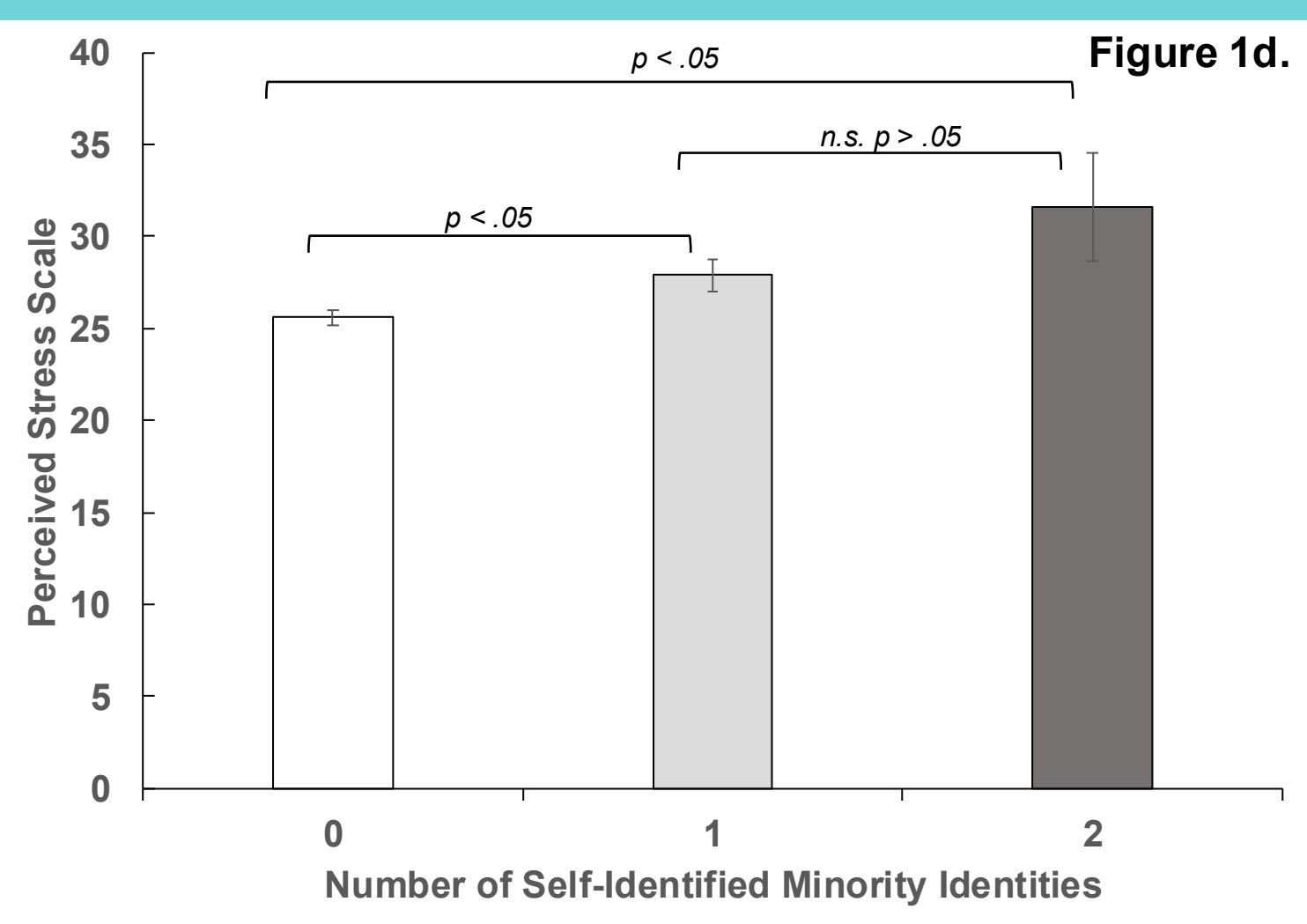
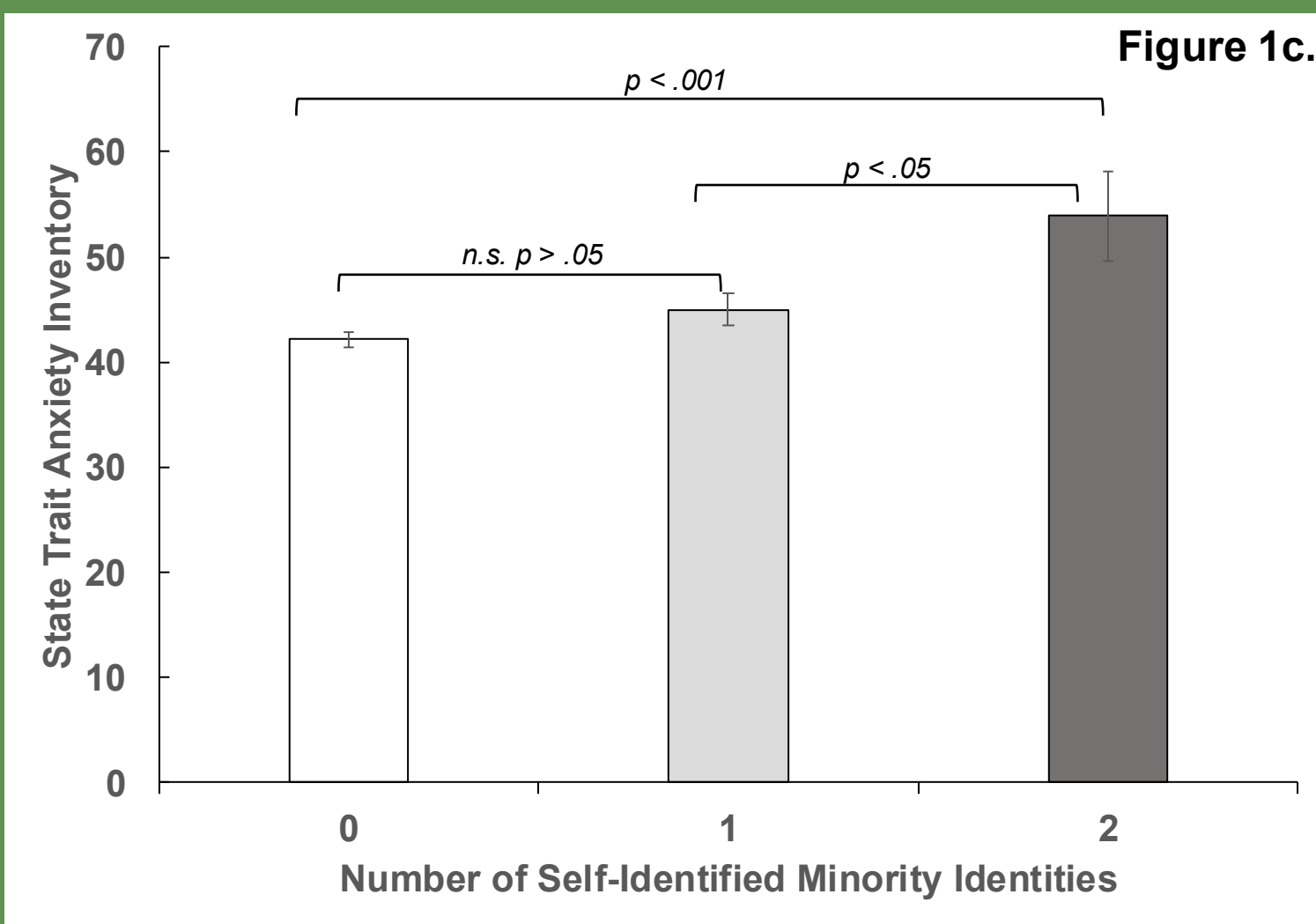
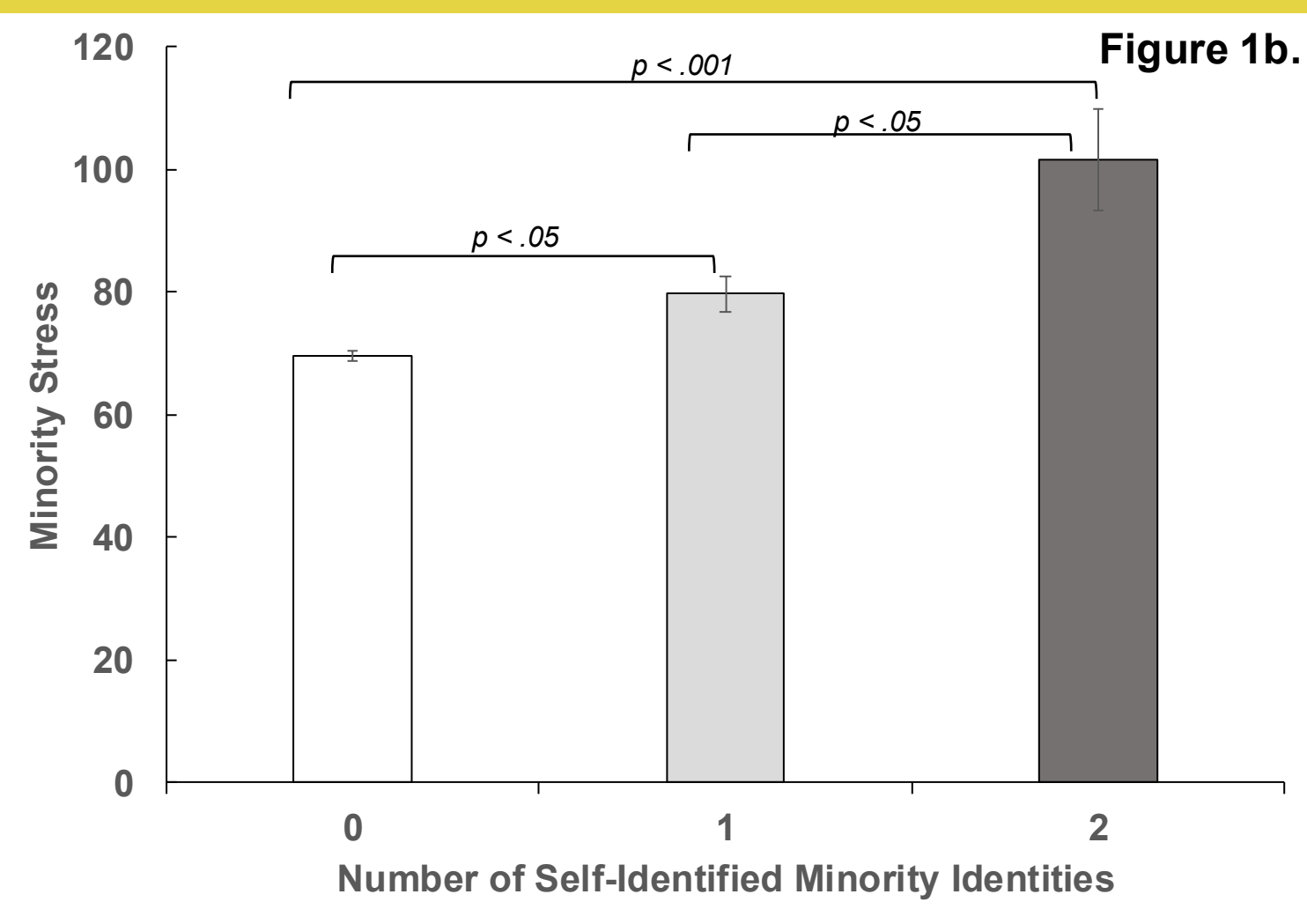
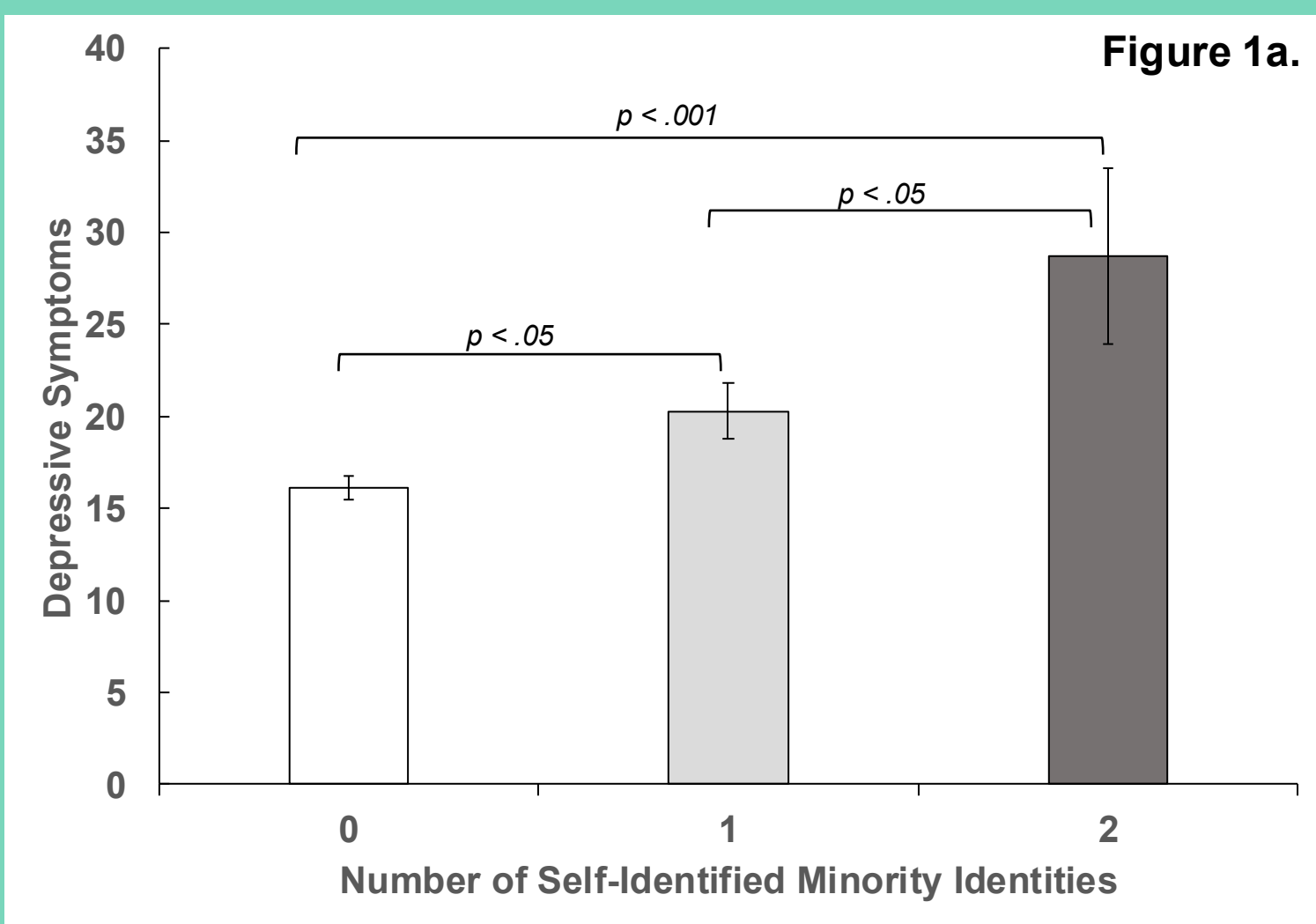
Tables & Figures

Table 1a. Demographics			
Characteristic	N	Mean	%/SD
Age		18.7	2.24
Years in college			
1	228	76.8	
2	42	14.1	
3	18	6.1	
4	2	0.7	
5	1	0.3	
Other	6	2	
Race			
White	268	90.2	
Black	9	3	
Native Hawaiian / Pacific islander	1	0.3	
Asian	10	3.4	
American Indian / Alaskan Native	3	1	
Multiple	6	2	
Ethnicity			
Hispanic	17	5.7	
Not Hispanic	280	94.3	

Table 1b. Demographics			
Characteristic	N		%
Biological Sex			
Female	204	68.7	
Male	93	31.3	
Sexuality			
Heterosexual	270	90.9	
Bisexual	15	5.1	
Gay	3	1	
Asexual	3	1	
Lesbian	2	0.7	
Pansexual	1	0.3	
Other	3	1	
Gender Identity			
Woman	202	68	
Man	92	31	
Trans Man	2	0.7	
Other	1	0.3	
Minority Status			
0	232	78.1	
1	56	18.9	
2	9	3	

Table 2. Correlations									
Study Variable	1	2	3	4	5	6	7	8	9
1. Age									
2. Years in College	.633**								
3. Minority Status	-0.061	-0.047							
4. CES-D	-0.091	-0.078	.234**						
5. PSS	-.165**	-.151**	.191**	.760**					
6. STAI	-.152**	-.133*	.195**	.846**	.812**				
7. MSSsex	-0.034	-0.037	.393**	.365**	.299**	.312**			
8. MSSgender	-0.043	-0.015	.151**	.376**	.376**	.365**	.548**		
9. MSSrace	.193**	.126*	.330**	0.113	0.058	0.072	.305**	.365**	
10. MSStotal	0.048	0.031	.368**	.368**	.318**	.324**	.787**	.834**	.710**

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).



Results

Analyses:

- Correlations among study variables can be seen in Table 2.
- Univariate ANOVAs were used to examine the relationship between the number of minority identities individuals identify with and a dependent variable (MSSTotal, CES-D, STAI, & PSS).
 - Post hoc least significant difference tests were used to follow up significant results.

Primary Analyses:

- The number of minority identities students' self identified as was significantly predictive of:
 - Depressive Symptoms: $F(2, 297) = 8.96, p < .001, \eta^2 = .06$
 - Minority Stress $F(2, 297) = 24.70, p < .001, \eta^2 = .14$
 - Anxiety: $F(2, 297) = 6.66, p < .001, \eta^2 = .04$
 - Perceived Stress: $F(2, 297) = 5.67, p = .004, \eta^2 = .04$

- Follow up LSD tests indicated that group means were different such that identification with more minority identities was associated with more psychological indicators of stress. (See Figure 1).

Discussion

The results of this study suggest that the number of minority identities college students identify with is predictive of more minority stress, more depressive symptoms, more perceived stress and more anxiety. This is consistent with past research that minority status has been associated with more stress (Scandurra et al., 2021; Shangani, Gamarel, Ogunbajo, Cai, & Operario, 2020) and depression (Baciu et al., 2017).

The purpose of this study was to establish a relationship between minority identity and indicators of distress (i.e., depressive symptoms, stress, and anxiety) in a rural mid-west population to provide grounds for future health disparities research.

Limitations

- This study specifically looked at gender identity, race and ethnicity, and sexuality as indicators of minority status. The study sample was primarily white, heterosexual, and cisgender, with little overlap, and thusly these complex interconnected identities were simplified to a numerical indicator of multiple minority status. Future work in this region will need to oversample groups of interest to employ more sophisticated statistical methods as recommended in the literature (Bauer et al., 2021).

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