

# Race Moderates the Impact of COVID-19 Pandemic Experiences on Self-Reported Changes in College Drinking

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## Introduction

The COVID-19 pandemic has presented many unique challenges to college students. In addition, social distancing measures may lead to poorer mental health through isolation or reduced social support, which in turn may be linked to greater drinking. Prior studies show that some college students are reducing their drinking during the pandemic whereas others are increasing, and that these differences may be due to different contexts of drinking, mental health factors, and demographics (Acuff et al., 2021; Jackson et al., 2021). Moreover, the pandemic has exacerbated existing racial disparities (Goldmann et al., 2021). We hypothesized that mental health symptoms (stress, anxiety, depression) would mediate the association between pandemic-specific stressors and both current drinking levels and changes in drinking compared to before the pandemic. We also examined in an exploratory manner if race (Black versus White racial identity) moderated either of these associations via moderated mediation.

## Method

### Participants

- $N = 469$  college students who reported past-month drinking
- Age 18+ (age  $Mdn = 21$  years,  $M = 24.30$ ,  $SD = 7.62$ )
- 74.8% Cisgender women
- 57.7% White, 26.1% Black

### Materials

#### Pandemic-specific Stressors

- 9 pandemic-specific stressor items created by the researchers

#### Mental Health

- *Past-month General Stress*
  - Psychological vulnerability subscale of the Perceived Stress Scale—Revised (PSS-R; Wickrama et al., 2013); 7 items
- *Past-month Anxiety*
  - Generalized Anxiety Disorder 7 (GAD-7; Spitzer et al., 2006)
- *Past-month Depression*
  - 10-item version of the Center for Epidemiological Studies Depression scale (CESD-10; Anderson et al., 1994)

#### Alcohol Use

- *Past-month drinking* using the Daily Drinking Questionnaire (DDQ; Collins et al., 1985)
- *Perceived changes in drinking*
  - Quantity: *more than usual, less than usual, or about the same* amount of alcohol compared to before the pandemic
  - Frequency: *more often, less often, or about the same* number of drinking days compared to before the pandemic

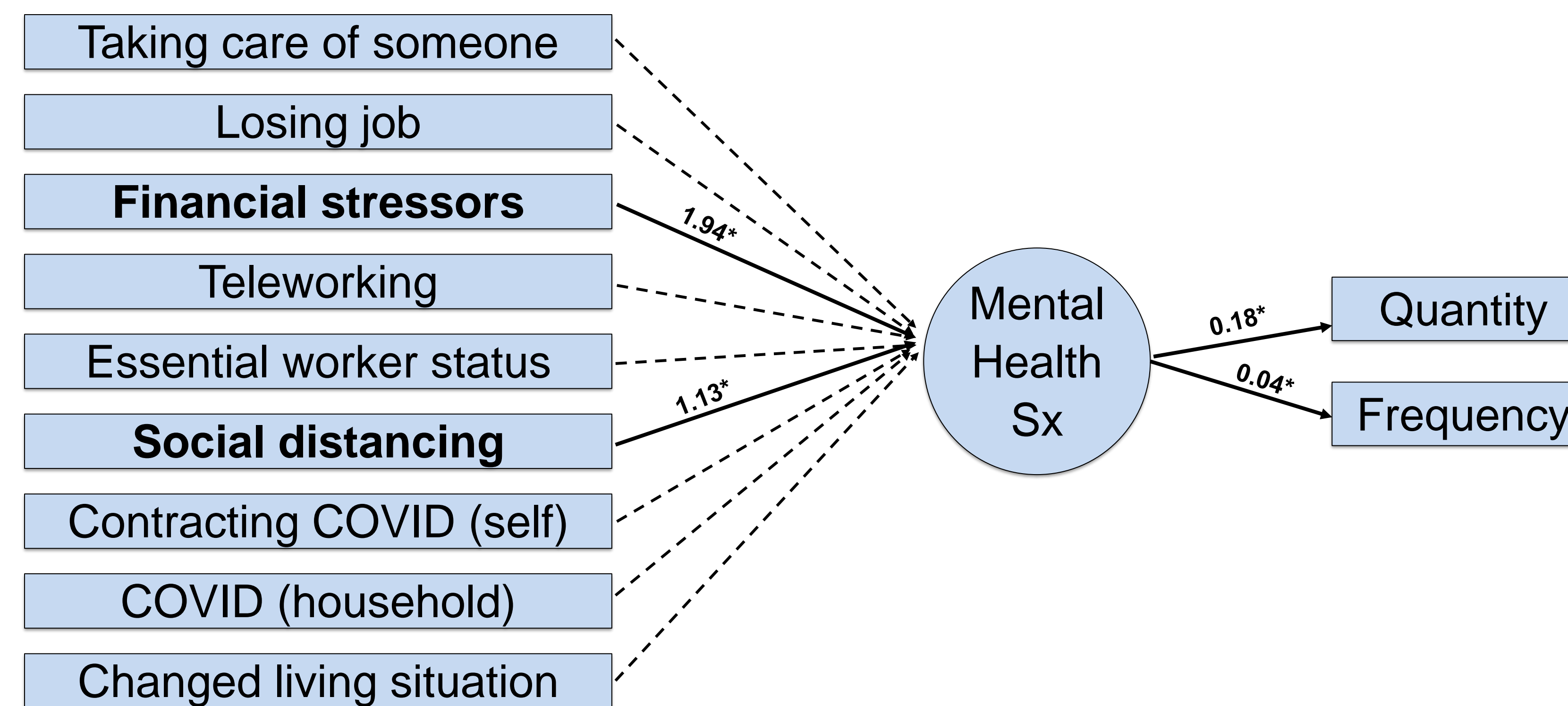
### Procedure

- A cross-sectional online survey conducted Oct-Dec 2020

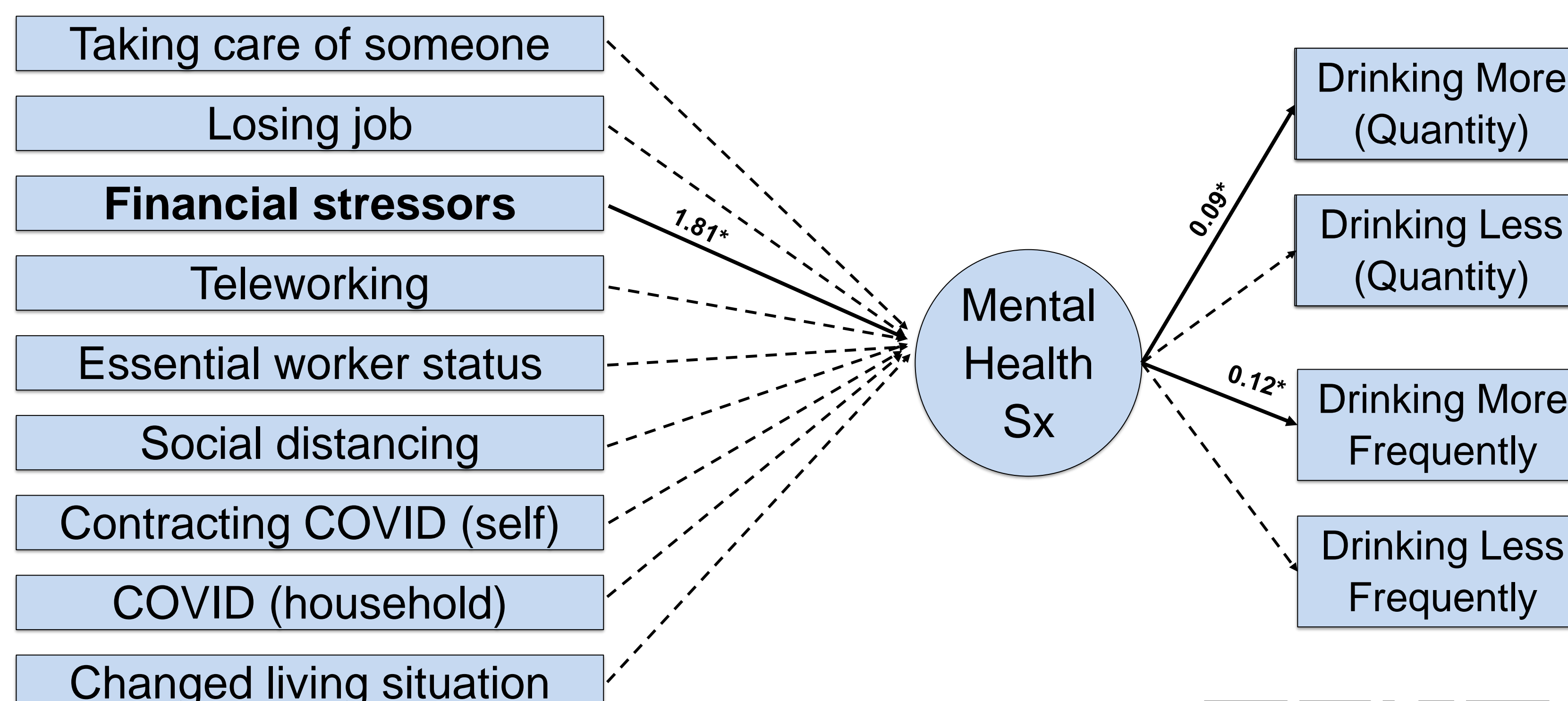
## Results

- Mediation models were conducted with the full sample ( $N = 469$ )
- Moderated mediation models narrowed the sample to only Black ( $n = 122$ ; 26.1%) or White ( $n = 270$ ; 57.7%) students ( $N = 392$ )
- Moderation examined using a product approach
- Robust maximum likelihood estimation in *Mplus* (v8; Muthén & Muthén, 1998-2019)
- Indirect effects assessed using 95% bias-corrected bootstrapped confidence intervals (BCCIs) based on 5,000 replications for continuous outcomes and 95% Monte Carlo Confidence Intervals (MCCIs) for categorical outcomes
- Sex and age were included as covariates

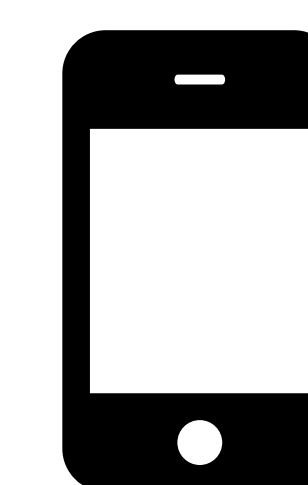
### Mediation: Pandemic Experiences on Past-Month Drinking



### Mediation: Pandemic Experiences on Perceived Changes in Drinking



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Table: Moderation of  $a$  and  $b$  paths by Race

Predictive Path	B	p	95% CI	OR
<b><math>\alpha</math> PATHS (PANDEMIC STRESSORS PREDICTING MENTAL HEALTH SYMPTOMS)</b>				
Taking care of someone $\rightarrow$ MH	0.87	.309	-0.808, 2.551	-
Losing job $\rightarrow$ MH	-4.01	.383	-13.026, 5.003	-
<b>Financial stressors <math>\rightarrow</math> MH</b>	<b>2.82**</b>	<b>&lt;.001</b>	<b>1.259, 4.371</b>	-
Teleworking $\rightarrow$ MH	-0.60	.474	-2.233, 1.039	-
Essential worker status $\rightarrow$ MH	-0.11	.902	-1.787, 1.576	-
<b>Social distancing <math>\rightarrow</math> MH</b>	<b>1.32*</b>	<b>.003</b>	<b>0.461, 2.171</b>	-
Contracting COVID-19 (self) $\rightarrow$ MH	0.52	.640	-1.664, 2.708	-
Contracting COVID-19 (household) $\rightarrow$ MH	-0.84	.489	-3.205, 1.533	-
<b>Changed living situation <math>\rightarrow</math> MH</b>	<b>1.77*</b>	<b>.047</b>	<b>0.022, 3.525</b>	-
<b>Black identity <math>\rightarrow</math> MH</b>	<b>7.89*</b>	<b>.015</b>	<b>1.487, 13.883</b>	-
Black*Taking care of someone $\rightarrow$ MH	-0.11	.943	-3.114, 2.893	-
Black*Losing job $\rightarrow$ MH	1.39	.770	-7.940, 10.719	-
<b>Black*Financial stressors <math>\rightarrow</math> MH</b>	<b>-3.78*</b>	<b>.007</b>	<b>-6.521, -1.047</b>	-
Simple: Black financial stressors $\rightarrow$ MH	-0.97	.398	-	-
Black*Teleworking $\rightarrow$ MH	1.80	.313	-1.697, 5.300	-
<b>Black*Essential worker status <math>\rightarrow</math> MH</b>	<b>-4.17*</b>	<b>.007</b>	<b>-7.189, -1.150</b>	-
Simple: Black essential worker status $\rightarrow$ MH	-4.28*	.001	-6.759, -1.792	-
Black*Social distancing $\rightarrow$ MH	-2.15	.057	-4.361, 0.065	-
Black*Contracting COVID-19 (self) $\rightarrow$ MH	3.09	.114	-0.741, 6.919	-
Black*Contracting COVID-19 (household) $\rightarrow$ MH	-0.81	.695	-4.833, 3.224	-
Black*Changed living situation $\rightarrow$ MH	-0.22	.886	-3.167, 2.734	-
<b><math>b</math> PATHS (MENTAL HEALTH PREDICTING CHANGES IN DRINKING)</b>				
<b>Outcome: Increase in frequency</b>				
<b>Mental health</b>	<b>0.14**</b>	<b>&lt;.001</b>	<b>0.070, 0.202</b>	<b>1.15</b>
Black identity	0.26	.529	-0.533, 1.076	1.30
Black*Mental health	-0.03	.624	-0.137, 0.082	0.97
<b>Outcome: Decrease in frequency</b>				
Mental health	-0.01	.829	-0.074, 0.059	0.99
Black identity	-0.10	.812	-0.882, 0.691	0.91
Black*Mental health	0.07	.274	-0.053, 0.187	1.07
<b>Outcome: Increase in quantity</b>				
<b>Mental health</b>	<b>0.12*</b>	<b>.001</b>	<b>0.051, 0.191</b>	<b>1.13</b>
<b>Black identity</b>	<b>0.87*</b>	<b>.035</b>	<b>0.061, 1.680</b>	<b>2.39</b>
Black*Mental health	-0.09	.087	-0.118, 0.103	0.91
<b>Outcome: Decrease in quantity</b>				
Mental health	0.01	.755	-0.055, 0.076	1.01
Black identity	0.62	.106	-0.133, 1.381	1.87
Black*Mental health	-0.01	.893	-0.118, 0.103	0.99

## Discussion

Financial stressors and social distancing were uniquely linked to poorer mental health, which in turn was linked to greater consumption. Moderation examinations revealed that select risk factors for worse mental health symptomology among White students (financial stressors, social distancing) were not significant among Black students. For many White students, these may be the first major, persistent stressors they have encountered. The coping mechanisms used by Black students may promote resilience (Daly et al., 1995; Utsey et al., 2007) against poorer mental health and increased drinking. Essential worker status served as a protective factor for Black students, but not White students (possibly an indicator of job stability and preventing isolation). Findings suggest campus administrators may want to focus efforts on connecting students with available resources for supporting students (e.g., counseling centers and health promotion offices). The current study is limited by the cross-sectional nature of the data collection, which precludes conclusions about temporal ordering or causation, as well as the self-report nature of drinking. In particular, changes in drinking relies on accurate retrospective reporting.