

Recent national/international traumatic events and links to internalizing symptoms, exacerbation by social media use

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Background

- Adolescents and emerging adults in the US have experienced an influx of **major national and international traumatic events**, including escalating climate change concerns¹, but also increasingly common school or mass shootings², police violence/political unrest³, the global COVID-19 pandemic⁴, threats to democracy, war (e.g., Russia-Ukraine; Israel-Hamas/Gaza), and restriction of women's reproductive rights (overturning of Roe vs. Wade)⁵

Background

- Using a socio-historic lens¹, we wondered about the extent to which **negative emotions** (e.g., feeling tense, worried, or terrified) associated with these recent national/international traumatic events would be relevant to explaining increasingly common mental health symptoms² in a sample of early emerging adults
- Though there is some, often limited research addressing the importance of each such indicators, less research has evaluated them together.

Further...

- Research has consistently demonstrated that adolescents and young adults spend ample time online viewing **social media**¹
- We expect their daily experiences in these contexts likely increase exposure to national/international traumatic events given advances in the 24-hour news media cycle and frequent integration of news in social media networking²
- Thus, we hypothesized that greater frequent/intense social media use would **amplify or strengthen** the association between negative emotions associated with recent national/international traumatic events and internalizing symptoms
- This aligns with a social risk amplification hypothesis³

Collective Trauma¹

- Regarding **school and mass shootings**, a recent study of over 4,000 youth and young adults (ages 14 to 30) showed that “51% reported being worried about a school shooting happening at their school or a school near them²”
 - Being concerned, worried, or stressed about school shootings is associated with greater odds for anxiety and panic symptoms longitudinally³
- Regarding **climate change**, a study⁴ of over 10,000 16–25-year-olds from 10 countries showed that most respondents (75%) said the future was frightening, (83%) that people have failed to take care of the planet, and (65%) that their governments are failing young people across the world
 - Negative emotions about climate change are linked to poor mental health and sleep⁵

Collective Trauma

- Though there have been many instances of **police violence** against Black, Indigenous, and other People of Color (BIPOC) in US history,¹ the murder of African American George Floyd by former police officer Derek Chauvin in June of 2020 catapulted the Black Lives Matter movement²
 - This occurred when the US was already under duress and amid lockdowns from the ongoing global COVID-19 pandemic
 - Research has distressed about police brutality directly to Floyd's murder³
- Other research has also linked viewing traumatic racial events online (e.g., police violence) to psychological distress and posttraumatic experiences of discrimination among Hispanic and African American adolescents⁴ and emerging adults⁵

Collective Trauma

- There is longitudinal research linking **COVID-19** to increased mental health symptoms¹, but unclear if COVID-19 still distresses adolescents and young adults
- Regarding **threats to democracy** receiving more attention (e.g., Jan 6, 2021 attempted coup, election integrity, political polarization)²
- Young people, including college students concerned about **war** (e.g., Russia-Ukraine, Israel-Hamas/Gaza)³
- Regarding **overturning Roe vs. Wade** and loss of reproductive rights, distress among women demonstrated⁴

Extending the research

1. School or mass shootings
2. Climate change
3. Police violence
4. COVID-19
5. Threats to democracy
6. War (in Ukraine, Syria)
7. Roe vs. Wade overturning

- Demonstrated evidence/rationale for each but limited research evaluating the potential **combined effects** of these national/international traumatic events
 - **H1:** Negative emotions regarding the national/international traumatic events will be significantly and **moderately** associated with internalizing symptoms and their shared variance may potentially have more impact than negative emotions associated with any one specific event
- Limited studies evaluating the potential **exacerbating effect of social media use frequency/intensity**
 - **H2:** The association between negative emotions associated with national/international traumatic events will be greater for those with **high** relative to **low** social media use frequency/intensity

Extending the research

- Considerations of controls and confounders also needed
- Though negative emotions are expected to occur at the state rather than trait level, **trait negative affect** could impact results
 - Personality no longer viewed as static or unchanging, particularly in adolescence and emerging adulthood¹, such events could also "scar" personality

1. Bleidorn et al., 2019; 2022

Extending the research

- Analysis of these hypotheses at a sensitive turning point in early emerging adulthood (the first year of college)¹
 - Continued **identity exploration, heightened vulnerability** to mental health challenges,² loneliness³
- Much of the research has focused on predominately Non-Hispanic White college students in predominately/historically White Institutions in the US⁴
 - We focus on a **mostly BIPOC first-year college student population** to be more inclusive,⁵ and to add insight to the growing population of racially/ethnically diverse college students⁶
 - To avoid de-contextualizing this population,⁷ we account for known risk factors of internalizing symptoms unique to this population
 - Microaggressions: experiences of overt, sometimes covert or subtle slights⁸



Sample

- $N = 195$ first-year college students attending a moderately-sized historically/predominately White university in the Southeastern US
 - First-year freshman in **Fall, 2022**; surveyed in Spring, 2023
 - 158 (**81.0%**) **BIPOC**, including 3.1% American Indian or Alaskan Native 22.1% Asian, 1.5% Native Hawaiian or Other Pacific Islander, 25.6% Black or African American, 32.3% Multiracial, 19.0% Non-Hispanic White
 - 53.3% female, 45.1% male, 1.5% non-binary gender identity
 - 20.0% LGBTQ+
 - The majority (58.5%) reported growing up in a suburban or (21.0%) small town setting
 - The majority reported their family's SES as middle (45.1%)

Measures

1. School or mass shootings
2. Climate change
3. Police violence
4. COVID-19
5. Threats to democracy
6. War (in Ukraine, Syria)
7. Roe vs. Wade overturning

- **Negative Emotions** associated with National/International Traumatic Events

- Following prior research on negative climate-related emotions¹, **the 7-item State-Trait Inventory**² was used. Instructed to “collect their thoughts and focus on their feelings about [topic] for each of the 7 national/international traumatic events. For each topic, answered on a 5-point scale where 1 = not at all to 5 = extremely for these questions: “I feel calm,” “tense,” “relaxed,” “anxious,” “peaceful,” “worried,” and “terrified.”
- Also completed the **5-item Anticipatory Traumatic Reaction – Feelings Sub-Scale**³ for each of the 7 national/international traumatic events. Instructed to answer on a 5-point scale where 1 = strongly disagree to 5 = strongly agree for these questions “Thinking about [topic] makes me feel generally pessimistic about the future,” “I feel anxious that [topic] might occur [again] in my life,” “The possibility of [topic] affecting me or my family makes me feel angry”
- Items from both scales averaged for each of the seven events; α s = .91-.96

Measures

- **Social media use frequency/intensity**

- 4-item intensity scale¹ measuring mostly active social media use; e.g., “How many times per week do you ‘like’ messages, photos, videos of others on social network sites?” $\alpha = .82$

- **Internalizing symptoms**

- 9-item Patient Health Questionnaire (PHQ);² $\alpha = .88$
- 7-item Generalized Anxiety Disorder (GAD) Scale;³ $\alpha = .89$
- 8-item Somatic Symptom Scale (SSS);⁴ $\alpha = .82$
- Analysis of those who met the moderate to severe clinical thresholds confirmed that 30.3%, 32.8%, and 24.6% met the threshold each disorder, respectively.

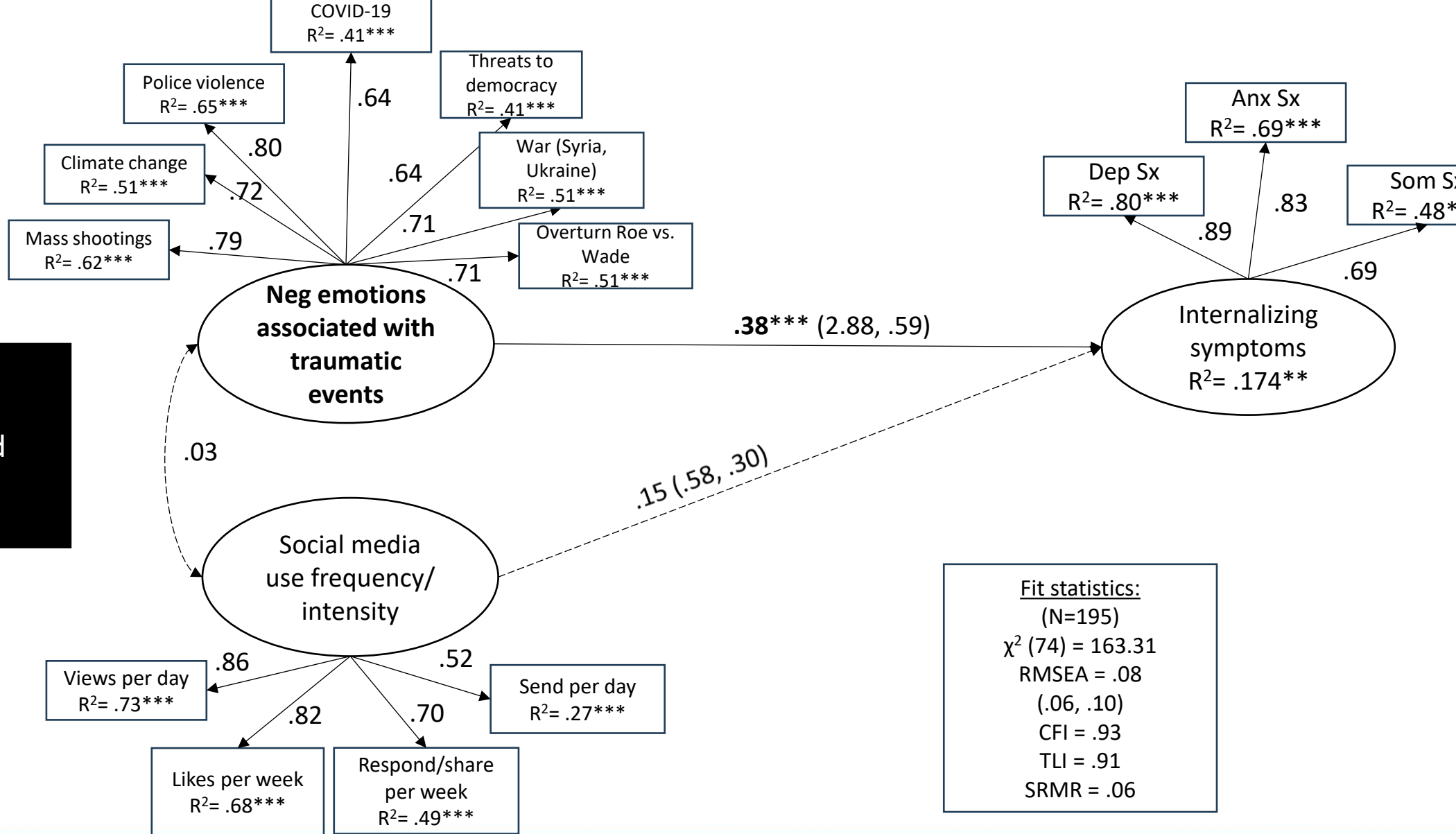
Table 1. Correlations and descriptive statistics for novel risk factor category ($N = 195$)

	1	2	3	4	5	6	7	8
1. School or mass shootings	1.0							
2. Climate change	.50***	1.0						
3. Police violence	.64***	.58***	1.0					
4. COVID-19	.53***	.44***	.50***	1.0				
5. Threats to democracy	.54***	.43***	.51***	.32***	1.0			
6. War (e.g., Ukraine, Syria)	.62***	.52***	.50***	.53***	.49***	1.0		
7. Overturning Roe vs. Wade	.46***	.62***	.65***	.46***	.43***	.44***	1.0	
8. Other (write-in)	.64*	.34	.34	-.47	.19	.73**	.23	1.0
<i>n</i>	193	193	193	193	193	193	194	14
<i>M</i>	3.30	3.06	3.32	2.49	3.16	3.19	3.24	4.17
<i>SD</i>	.90	1.01	.99	.83	.87	.87	1.23	.60
<i>Min</i>	1.00	1.00	1.00	1.00	1.00	1.00	1.00	3.17
<i>Max</i>	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00

Preliminary support
H1

Notes. This table shows descriptive statistics and correlations for the novel risk factor category: Negative emotions associated with recent national/international traumatic events. Participants were asked to collect their thoughts and focus on their feelings regarding each event in the last year (data collected in Spring, 2023) and answer a series of 12 questions about their emotional state and anticipatory traumatic reaction in connection to this event; higher scores (especially 4-5) representing greater negative emotions (see measures for more details). Statistical significance is demonstrated by *** $p < .001$, ** $p < .01$, * $p < .05$.

H1 supported



Fit statistics:
 (N=195)
 χ^2 (74) = 163.31
 RMSEA = .08
 (.06, .10)
 CFI = .93
 TLI = .91
 SRMR = .06

H2 supported

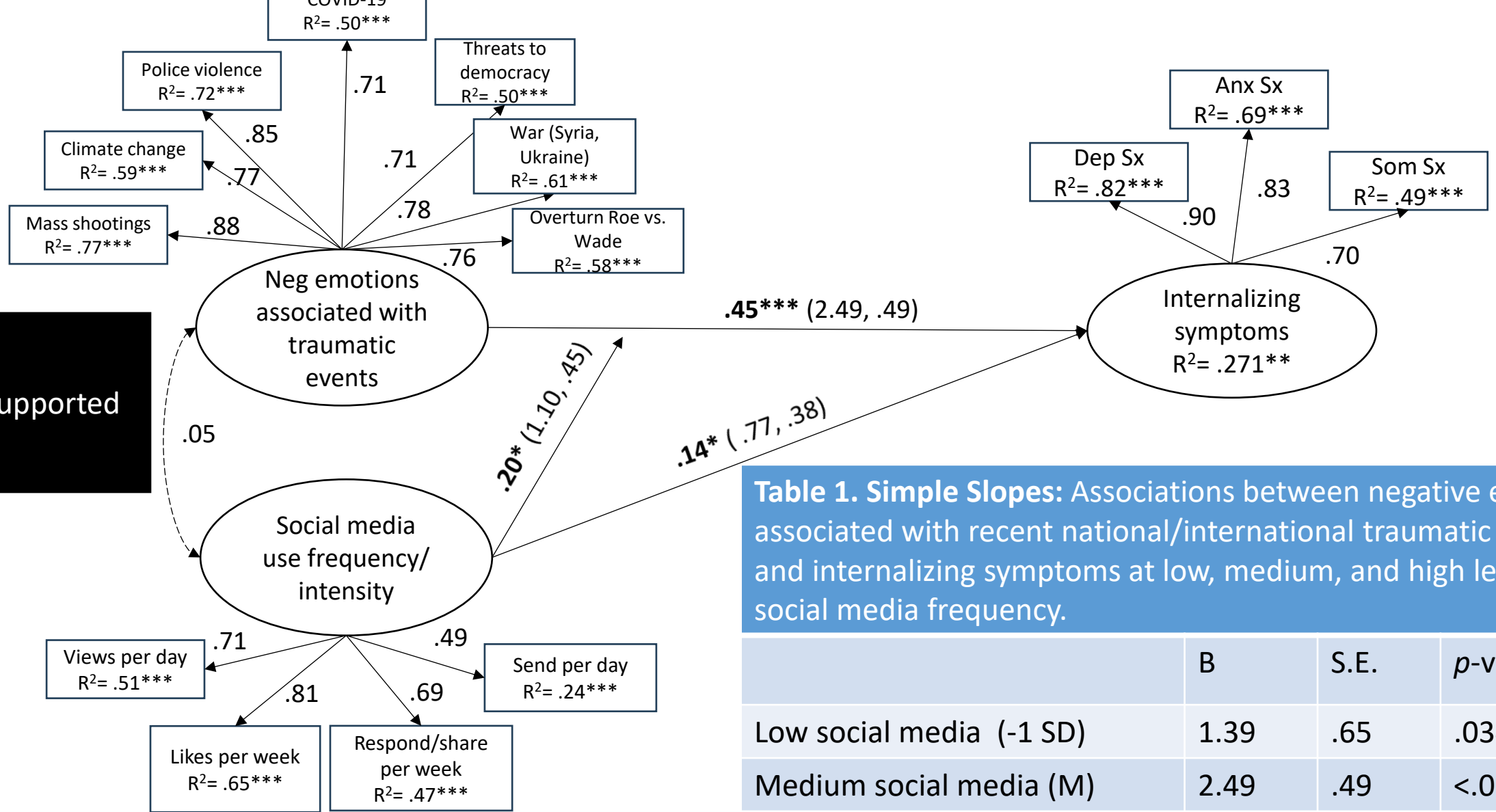
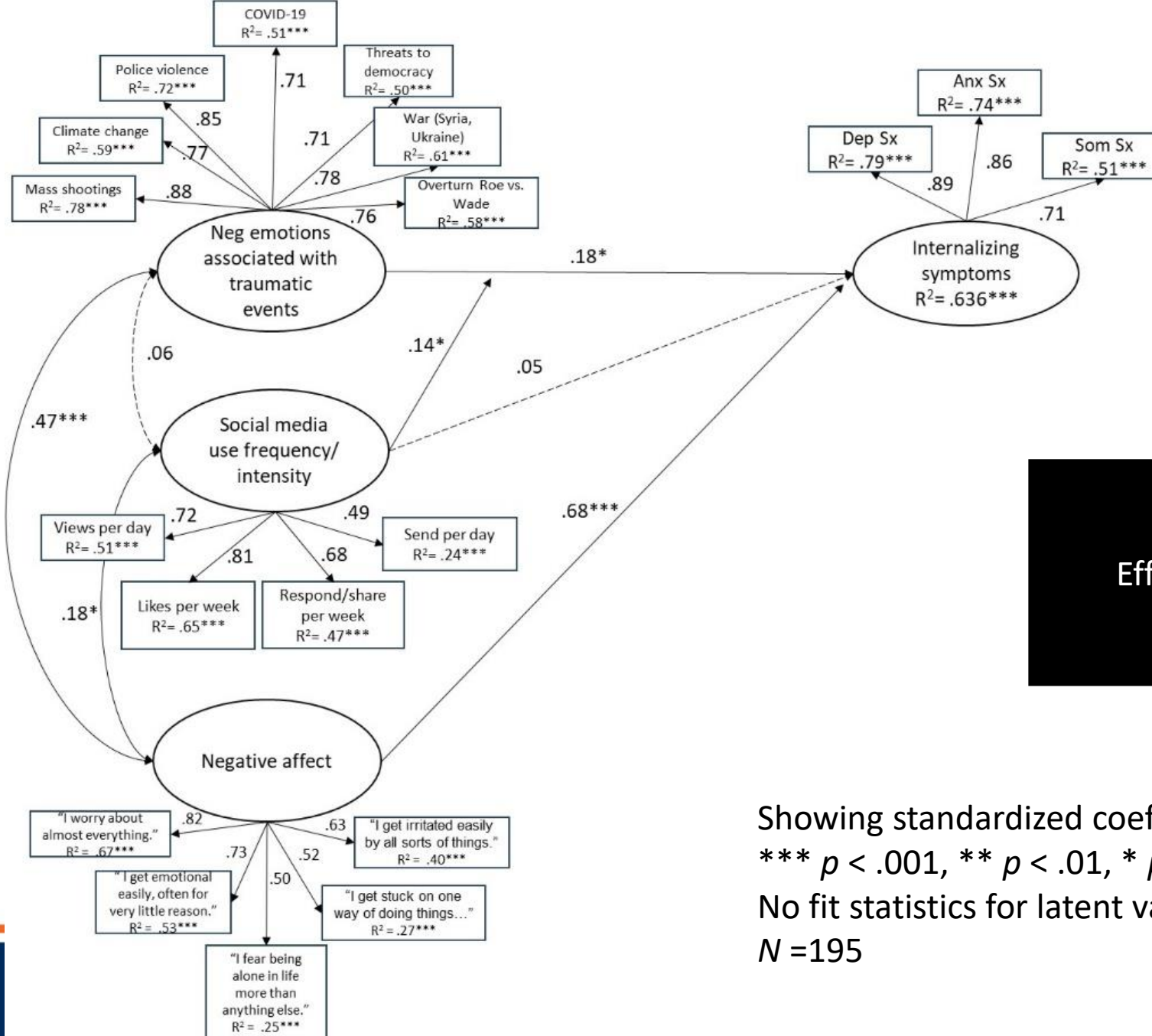


Table 1. Simple Slopes: Associations between negative emotions associated with recent national/international traumatic events and internalizing symptoms at low, medium, and high levels of social media frequency.

	B	S.E.	p-value
Low social media (-1 SD)	1.39	.65	.034
Medium social media (M)	2.49	.49	<.001
High social media (+1 SD)	3.59	.67	<.001



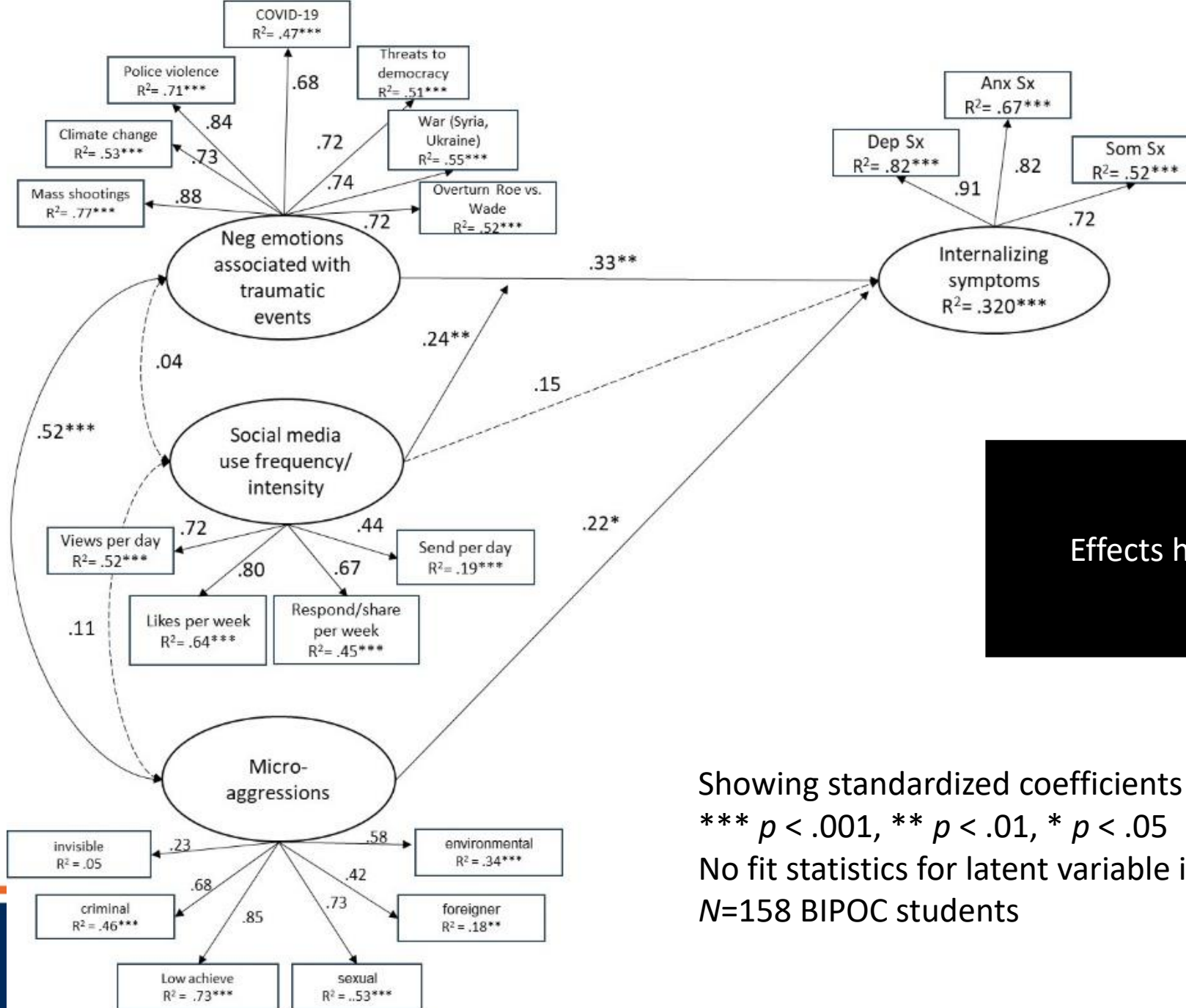
Effects held

Showing standardized coefficients

*** $p < .001$, ** $p < .01$, * $p < .05$

No fit statistics for latent variable interaction models

$N = 195$



Showing standardized coefficients

*** $p < .001$, ** $p < .01$, * $p < .05$

No fit statistics for latent variable interaction models

N=158 BIPOC students

Same pattern of results across the 7
national/international traumatic events

	Main effect	<i>p</i> -value	Interaction effect	<i>p</i> -value
Latent variable/shared variance	.45	<.001	.15	.014
1. School or mass shootings	.42	<.001	.14	.047
2. Climate change	.26	<.001	.07	.340
3. Police violence	.24	.001	.15	.033
4. COVID-19	.21	.006	.15	.038
5. Threats to democracy	.29	<.001	.14	.048
6. War (e.g., in Ukraine, Syria)	.27	<.001	.17	.022
7. Overturning Roe vs. Wade	.22	.004	.09	.218

But effect sizes
about **double** for
school or mass
shootings relative to
other events

Discussion

- Guided by a socio-historic lens¹, we found that negative emotions associated with recent national/international traumatic events (e.g., mass or school shootings, war, threats to democracy) were **moderate to strongly associated** with internalizing symptoms (depressive, anxiety, somatic) in a racially/ethnically diverse sample of first-year college students.
- Supporting our **shared variance** hypothesis, negative emotions associated with any one event was moderately to strongly correlated with negative emotions of any other event.
- Results supported a **social risk amplification** hypothesis², wherein there was a stronger link between negative emotions about national/international traumatic events and internalizing symptoms for those that engaged in greater relative to lesser social media use frequency/intensity.
 - This was true concerning to the latent factor representing shared variance between the seven national/international events as well as consistently across each of the seven events analyzed

Discussion

- Negative emotions associated with **school or mass shootings** mattered more than the other national/international traumatic events.
 - School/mass shootings increasing in frequency in the US¹
 - Nature of the sample: they are first-year college students who have likely experienced active shooter drills themselves²
 - Active shooter drills themselves associated with increases in depression, stress and anxiety, and concerns over death³
 - Perhaps we should stop active shooter drills?³

Implications

- **Targeted intervention/prevention** after new event occurrence
 - Stress adaptive coping mechanisms (mindfulness and meditation techniques)¹, check in on emotions, and taking breaks from social media and the news²
 - Cognitive behavioral therapy tailored to reduce psychological distress associated with climate change³
- **Policy implications**
 - Implement evidence-based school-wide bullying prevention and intervention programs to reduce chance of school shooting⁴
 - Reduce access to military-style guns, reduce carbon emissions, improve green energy, reducing bias in police training, de-escalating global conflicts, providing full reproductive rights to girls and women

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- **Interested in these questions, next steps, collaborating?** Let's chat!
drs0032@auburn.edu
- **Paper just published** (May 29, 2025):
 - Samek, D.R., Crumly-Goodwin, B., Akua, B.A., Duke-Marks, A. & Hinnant, B. (2025). Negative emotions associated with recent national/international traumatic events, links to internalizing symptoms, and exacerbation by frequent/intense social media use. **Emerging Adulthood**, online first publication, 1-21.
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