

The Vulnerability Gap: Group Differences in Childhood Trauma and Resilience on a Florida College Campus

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Abstract

Colleges are increasingly seeking ways to promote the behavioral health and wellbeing of their students. The current study conducted at a large public university in Florida identified a significant relationship between students' ($N = 1,043$) adverse childhood experiences (ACEs) and their self-reported resilience. Across the entire sample, as the number of reported ACEs increased, resilience scores, an indicator of wellbeing, decreased. Group comparisons revealed that women, non-whites, and non-heterosexual students reported significantly more ACEs and less resilience than their male, white, and heterosexual peers, respectively. A linear regression analysis revealed that the relationship between ACEs and resilience is moderated by gender, such that for women—who make up a majority of college students in the U.S.—an increase in the number of ACEs predicted a decrease in reported resilience. Others have emphasized the need for the K–12 system to be “trauma-informed.” This study reveals the need for Florida’s institutions of higher learning to be aware of the prevalence and impact of ACEs to better serve students. Campus strategies and targeted intervention efforts are discussed.

Keywords: ACEs, resilience, trauma, college women, minority students

Introduction

National studies of college student mental health reveal a troubling trend: Rates of depression, anxiety, non-suicidal self-injury, and suicidal ideation have markedly increased in recent years (Eisenberg et al., 2018). As institutions of higher education seek to address the issue of student mental health, research has identified an association between mental health problems in emerging adults and adverse childhood experiences (ACEs) (Monnat & Chandler, 2015). ACEs are detrimental events experienced during childhood including severe neglect; physical, emotional, and sexual abuse; and household dysfunction caused by parental mental illness, substance misuse, parental domestic violence, an incarcerated parent, and parental separation or divorce. More than two decades of research has linked these experiences with an increased risk of disrupted brain development, physical and behavioral health problems, and engagement in health-risk behaviors (Monnat & Chandler, 2015).

The effects of ACEs typically manifest in a dose-response manner: The more ACEs suffered by an individual, the higher their risk for detrimental, long-term adult outcomes. A greater amount of exposure to serious childhood adversity has been found to increase the risk of substance abuse (Dube et al., 2003; Forster et al., 2018), mental health problems (Kessler et al., 2010) and suicide (Dube et al., 2001). CDC researchers have estimated that 21 million cases of depression could potentially be avoided with effective prevention of ACEs (Merrick et al., 2019). Among people who have reported four or more ACEs, there is an increased risk for poor health outcomes (Merrick et al., 2019). ACEs are common in the United States. Among adults, 62% have reported experiencing at least one ACE, and 25% have reported experiencing three or more ACEs.

Emotional abuse, parental separation/divorce and parental substance misuse were the top three ACEs reported (Merrick et al., 2018).

ACEs among the college student population are far less frequently researched than they are among other populations (Kalmakis et al., 2019; Khrapatina & Berman, 2016). The lack of evidence suggests a need for further exploration. Approximately two-thirds of college students have indicated they experienced at least one ACE (Wiehn et al., 2018). Undoubtedly, ACEs affect student health risk behaviors such as increased polysubstance use (Forster et al., 2018), alcohol use (Dube et al., 2002; Rothman et al., 2008), smoking (Edwards et al., 2007; Windle et al., 2018), substance use disorders (Douglas et al., 2010; Dube et al., 2003), and risky sexual behaviors (Wiehn et al., 2018). College students with high ACE scores are twice as likely to experience poor mental health in college (Karatekin, 2017; Merians et al., 2019). Importantly, students with high ACE scores have been found to be more vulnerable to the effects of stress (Kalmakis et al., 2019) and to perceive higher levels of stress and less social support than students with lower ACE scores (Karatekin & Ahluwalia, 2016).

There is also evidence of the effects of students' trauma histories on their educational attainment (Metzler et al., 2017). ACEs effects include acute post-traumatic symptoms that have deleterious consequences for college retention (Brogden & Gregory, 2019; Duncan, 2000). Additionally, students with ACEs are more likely to experience psychological distress and family difficulties that can create barriers to successful academic careers (Elliott et al., 2009; Hinojosa et al., 2018).

Resilience

Resilience is a dynamic process of positive adaptation within the context of significant adversity (Luthar et al., 2000). When the development of these adaptation skills is impacted by trauma, stress conditions often manifest. One suspected mechanism in health-risk-behavior outcomes is that the high levels of stress caused by ACEs interferes with critical development of positive coping and adaptation skills in childhood (Shonkoff & Garner, 2012). Skills such as emotional regulation and coping with stress are often considered elements of resilience (Shonkoff, 2016).

Another element of resilience is the ability to use prosocial skills. One important prosocial skill is maintaining personal relationships, which is considered to be a major buffer to stress. When young adults lack the benefit of the important social capital of supportive friendships or a stable family, their resilience can be negatively impacted and their successful transition to adulthood can be diminished (Avery & Freundlich, 2009). Correlations have been found between characteristics considered to be components of resilience (i.e. social support, coping skills, and optimism) and individuals' abilities to recover from stressful events (Smith et al., 2008). The conceptualization of resilience in this context does not mean an individual is immune from the effects of stress and adversity. Rather, resilience refers to one's ability to navigate an adverse experience using personal abilities as well as resources from external sources. Such resources can include familial support, social support, and support offered by institutions and community agencies.

Health Inequities

Although people in every demographic group experience some adversity, certain groups, including people identifying as women, as people of color, and as LGBTQ, experience higher ACEs than others (Merrick et al., 2018; Merrick et al., 2019). The concept of intersectionality acknowledges that identities of race, gender, sexual orientation, class, and ability intersect to influence one's lived experience (Crenshaw, 1989). No examination of one group's characteristics can fully capture the complexity of an individual's experiences.

Gender Health Inequities

Gender differences have been noted: College women have reported higher levels of stress and greater incidence of many types of mental health problems than college men (Elliott et al., 2009; Hubbard et al., 2018; Richmond et al., 2009). Women have been found to suffer greater amounts of violence worldwide, including physical violence and sexual violence (UN Women, 2018; World Health Organization, 2017). Across the globe, women have been found to be twice as likely to suffer depressive disorders as men, and women who live in societies with greater gender inequality suffer depression at higher gendered rate disparities (Yu, 2018). Compared to men, women have also been found to suffer higher rates of exposure to adversities throughout their lifetimes. These adversities include childhood abuse and neglect, sexual abuse (Asscher et al., 2015; Baglivio & Epps, 2016; Kerig & Ford, 2014), sibling abuse, witnessing the victimization of others (Elliott et al., 2009), gender discrimination, sexual harassment, and structural sexism (Harnois & Bastos, 2018; Homan, 2019; Hubbard et al., 2018). Adversity experienced by women includes not only individual traumatic events, but also a lack of support and perpetrator accountability when trauma is disclosed (DeCou et al., 2019). High rates of depression in women have been linked to the different stressors and social experiences created by gendered social structures (Harnois & Bastos, 2018; Homan, 2019; Marchand et al., 2016).

These gendered social structures still exist when women arrive on campus. They may be faced with misogynistic campus sub-cultures that include entrenched power imbalances and microaggressions so pervasive that the impact is rendered invisible, such as demeaning terms for young women on social media, fraternity events about women's bodies, catcalling, sexist insults, and feeling invalidated in the classroom (Chrisler et al., 2012; Gartner & Sterzing, 2016; Sax, 2008). Among college women, a correlation has also been identified between poly-victimization and psychological distress (Elliot et al., 2009; Richmond et al., 2009) as well as with drinking to cope with trauma and depression (Goldstein et al., 2010; Stappenbeck et al., 2013).

Racial Health Inequities

The research on the impact of racial discrimination also reveals that non-white students experience a higher number of ACEs (Merrick, 2019) and can be subjected to heightened stress throughout the lifespan, compared to white students. The correlation of racism with negative social, economic, legal, environmental, and health consequences among communities of color has been well-documented (LaVeist & Isaac, 2012). Studies have noted examples of explicit, implicit, individual, or structural discrimination or racially disparate impacts in housing policy (Goetz, 2013); the criminal justice system (Marable et al., 2007); and healthcare services (National Partnership for Action to End Health Disparities, 2011). Racial disparities and discrimination have also been identified in rates of poverty (Pager & Shepherd, 2008); physical health (LaVeist & Isaac, 2012; Thornton et al., 2016; Williams & Mohammed, 2009); preterm births (Gavin et al., 2018); and depression, anxiety, and PTSD (Paradies, 2006; Pieterse et al., 2012). The mental health of racial minorities is negatively impacted by police brutality, which especially threatens the lives of young Black men (Edwards et al., 2016). Individuals of color who are affected by police brutality report experiencing PTSD symptoms such as intrusive thoughts, flashbacks, nightmares, and hypervigilance (Aymer, 2016); and feelings of fear, mistrust, isolation, dehumanization, and a disinclination to seek out assistance (Grills et al., 2016).

Researchers have noted that many racial and ethnic minority college students do not seek mental health services on campus until they are experiencing high rates of distress and are more likely to turn to family and friends for help. This may be due in part to higher levels of stigma for mental health help-seeking, lack of awareness of available services, and perception that health services lack cultural competency (Lipson et al., 2018).

LGBTQ Health Inequities

Health inequities also exist for those who identify as LGBTQ. A recent study found that 51% of transgender and gender nonconforming people reported having experienced high numbers of ACEs (at least 4 ACEs) compared to 30.5% of LGB adults and 12.6% of heterosexuals (Schnarrs et al., 2019). Researchers have also found that gender nonconforming children were more likely to experience sexual abuse and PTSD than gender conforming children (McCormick et al., 2018). In addition, almost 60% of LGBTQ students in a recent study reported feeling unsafe at school because of their sexual orientation (Kosciw et al., 2018). LGBTQ adults have also reported a greater incidence of mental health problems: Sexual minorities in college were more likely to have a mental health diagnosis, engage in self-injury, and report suicidal ideation than heterosexual students (Johns et al., 2019; Kann et al., 2018; Liu et al., 2018). Nearly 30% of LGBTQ high school students attempted suicide, compared to about 6% of heterosexual students, with transgender students being a particularly high-risk group (Johns, Poteat, et al., 2019). In addition, lifetime prevalence of substance use rates for LGBTQ individuals have been found to be up to five times as high as those for heterosexual and cisgender individuals (Johns, Lowry, et al., 2019).

Gay and bisexual youth and other sexual minorities were more likely to have been rejected by their families, experienced intense bullying and physical abuse when they come out, and experienced homelessness because of family rejection (Friedman, 2014). For some, the social context of oppression led to social alienation, low self-esteem, and psychological distress (Díaz et al., 2001). These severe and chronic social stressors impacting LGBTQ individuals due to living in hostile, homophobic, or transphobic environments are sometimes referred to as minority stress (Meyer, 2003). Some of these stressors include increased social isolation, runaway phenomenon, risky sexual health behaviors, violence and abuse, and limited police protection (Mink et al., 2014). These dynamics may further exacerbate the health disparities experienced by LGBTQ emerging adults and should be addressed to improve health outcomes for this vulnerable population (Macapagal et al., 2016).

Purpose and Hypotheses

The purpose of this study was to add to the general knowledge base about ACEs among college students and to determine whether ACEs and reported resilience differs among groups based on gender, race, and sexual orientation at a large public university in Florida. Thus, based on previous research, the following hypotheses and research questions were posed:

H1 (a–c): Higher numbers of ACEs will be reported by (a) women, (b) non-whites and (c) non-heterosexuals than by their respective counterparts.

H2 (a–c): Among students who report the highest levels of trauma (i.e., four or more ACEs) (a) women, (b) non-whites and, (c) non-heterosexuals will report significantly higher ACEs than their respective counterparts.

H3 (a–c): Resilience among (a) women, (b) non-whites and c) non-heterosexuals will be lower than among other groups.

H4 (a–c): Among students who report the highest levels of trauma (i.e., four or more ACEs), (a) women, (b) non-whites, and, (c) non-heterosexuals will report less resilience than other groups.

H5 (a–c): As the number of ACEs increases reported resilience will decrease.

RQ1 (a–c): Is the relationship between reported number of ACEs and resilience influenced by (a) gender, (b) race, and/or, (c) sexual orientation?

Method

Participants and Procedure

Undergraduate students in Florida ($N = 1,043$) at a large public university participated in an online survey in the fall semester of 2018. Students were recruited to complete the survey after reviewing an online campus project called the Student Resilience Project (SRP) online. The SRP is a website that teaches students about the impact of trauma and components of resilience. Students' voluntary participation (HSC NO. 2018.25012) was requested on the final screen of the SRP's website. Students clicked on a link, which directed them to a survey hosted on an entirely separate website.

Respondents in this convenience sample were ages 18–21 ($M = 18.54$, $SD = .82$), and most identified as female (63.4%). The majority of respondents were white (70.4%), with 29.6% reporting other ethnicities (e.g., Asian, African American). Most respondents, 87.5%, identified their sexual orientation as heterosexual, while 12.5% identified with other orientations (e.g., bisexual, gay, lesbian, pansexual).

Measures

Adverse Childhood Experiences

Fifteen questions adapted from the Behavioral Risk Factor Surveillance System assessed ACEs (Centers for Disease Control and Prevention [CDC], 2018; Felitti et al., 1998; Teicher & Parigger, 2015). All items presented offered “yes,” “no” or “prefer not to answer” response options that referred to respondents' first 18 years of life. The questions were about household challenges, abuse, neglect, and community violence. The questions were grouped into eleven subcategories representing “types” of ACEs (See Table 1). If students answered “yes” to any question in a particular subcategory, they were given one point per category, for a total of eleven possible points ($M = 2.02$, $SD = 2.30$). See Table 2 for the full list of ACE score frequencies.

Resilience

Resilience was measured using the six-item Brief Resilience Scale (Smith et al., 2008), using a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*). Sample items included: (a) I tend to bounce back quickly after hard times, and (b) I usually come through difficult times without any struggle. Items were averaged to create a scale ($\alpha = .802$, $M = 4.40$, $SD = 1.12$).

Table 1. *Types of ACEs Reported*

ACE Category	Frequency	%
Parental Separation	356	16.6%
Bullied	355	16.6%
Emotional Abuse	334	15.6%
Parental Mental Illness	238	11.1%
Parental Substance Abuse	218	10.2%
Sexual Abuse	127	5.9%
Physical Abuse	119	5.5%
Parental Incarceration	111	5.2%
Emotional Neglect	105	4.9%
Community Violence	97	4.5%
Parental Domestic Abuse	85	4.0%

Table 2. *Reported Number of ACEs*

# of ACEs	Frequency	%
0	383	36.7
1	165	15.8
2	147	14.1
3	119	11.4
4	77	7.4
5	50	4.8
6	43	4.1
7	23	2.2
8	16	1.5
9	13	1.2
10	5	.5
11	2	.2

Results

Data Analysis

To test hypotheses H1–H4, independent samples *t* tests were conducted to test group differences by (a) gender, (b) race, and (c) sexual orientation on the reported number of ACEs (H1a–c) particularly among those who reported the highest levels of trauma (H2a–c). Independent samples *t* tests were also conducted to test group differences by (a) gender, (b) race, and (c) sexual orientation on self-reported resilience (H3a–c), especially among those who reported the highest levels of trauma (H4a–c). For the hypotheses regarding only students with the highest levels of trauma (H2a–c & H4a–c), a subset of the overall sample ($n = 229$) was used.

Regression analyses were conducted to test H5 and RQ1. A simple linear regression was conducted for H5, which predicted that number of ACEs would influence resilience. RQ1a–c (three models in total) were tested via regression analysis using Hayes’ PROCESS Model 1. For each model, ACEs was entered as the predictor variable, resilience as the outcome variable, and either gender (Model 1), race (Model 2) or sexual orientation (Model 3) entered as the moderator.

Descriptive Statistics

Descriptive data (frequencies) revealed a majority of respondents (63.3%) reported they had experienced at least one ACE. Of those students, 229 (34.7% of the total sample) reported experiencing four or more ACEs. The top three types of ACEs reported were: (1) parental separation, (2) being bullied, and (3) emotional abuse.

Group Differences on Reported Number of Aces

The first set of hypotheses predicted that the reported number of ACEs would differ by: (H1a) gender, (H1b) race, and (H1c) sexual orientation. To test these hypotheses, independent samples *t* tests were conducted. As predicted, women reported a greater number of ACEs than men, $t(1,021) = 3.55, p < .01$. Non-whites reported a greater number of ACEs than whites, $t(1,061) = 4.37, p < .01$. Non-heterosexuals reported significantly higher ACEs scores than heterosexuals, $t(1,032) = 7.90, p < .01$. Thus, H1a–c were supported. See Table 3 for means and standard deviations.

Table 3. Means and Standard Deviations of Gender, Race, and Sexuality on # of ACEs and Resilience

		Gender		Race		Sexuality	
		Men	Women	White	Non-white	Hetero	Non-hetero
# of ACEs (<i>n</i> = 1,043)	Mean (SD)	1.66 (2.09)	2.18 (2.32)	1.81 (2.07)	2.50 (2.70)	1.81 (2.14)	3.52 (2.85)
# of ACEs & high trauma (<i>n</i> = 229)	Mean (SD)	5.67 (1.55)	5.52 (1.68)	5.33 (1.51)	6.15 (1.85)	5.53 (1.64)	5.92 (1.85)
Resilience (<i>n</i> = 1,043)	Mean (SD)	4.71 (1.12)	4.23 (1.07)	4.45 (1.14)	4.29 (1.06)	4.44 (1.11)	4.02 (1.16)
Resilience & high trauma (<i>n</i> = 229)	Mean (SD)	4.65 (1.26)	3.39 (1.15)	4.03 (1.26)	4.16 (1.20)	3.70 (1.11)	4.20 (1.27)

Group Differences on ACEs among Students Reporting Highest Levels of Trauma

It was also hypothesized that students who reported high levels of trauma (i.e., four or more ACEs) would vary by (H2a) gender, (H2b) race, and (H2c) sexual orientation. Contrary to expectations, there was not a significant difference between the number of men and women reporting high levels of ACEs, nor was there a difference between heterosexuals and non-heterosexuals reporting high levels of ACEs. Thus, H2a and H2c were not supported. However, as predicted by H2b, among students reporting four or more ACEs, non-whites reported more ACEs than whites, $t(220) = 3.48, p < .01$. See Table 3 for means and standard deviations.

Group Differences on Resilience

Furthermore, t tests were conducted to determine if resilience levels varied according to gender (H3a), race (H3b), and sexual orientation (H3c) reported by research participants. As predicted: men reported higher levels of resilience than women, $t(978) = 6.715, p < .01$; whites reported higher levels of resilience than non-whites, $t(971) = 2.074, p < .05$; and heterosexuals reported higher levels of resilience than non-heterosexuals, $t(987) = -3.85, p < .01$. Thus, H3a–c were supported. See Table 3 for means and standard deviations.

Group Differences in Resilience among Students Reporting Highest Levels of Trauma

The fourth set of hypotheses predicted that, among people who experienced the greatest amount of trauma (i.e., four or more ACEs), women (H4a), non-whites (H4b) and non-heterosexuals (H4c) would report less resilience than men, whites, and heterosexuals, respectively. As expected, among participants reporting four or more ACEs, women reported significantly less resilience than men, $t(219) = -4.01, p < .01$, and non-heterosexuals reported significantly less resilience than heterosexuals, $t(224) = -2.65, p < .01$. However, H4b was not supported. See Table 3 for means and standard deviations.

The Effect of ACEs on Resilience

A simple linear regression was conducted to test H5, which posited that resilience could be predicted based on respondents' reported number of ACEs. As expected, this linear model was

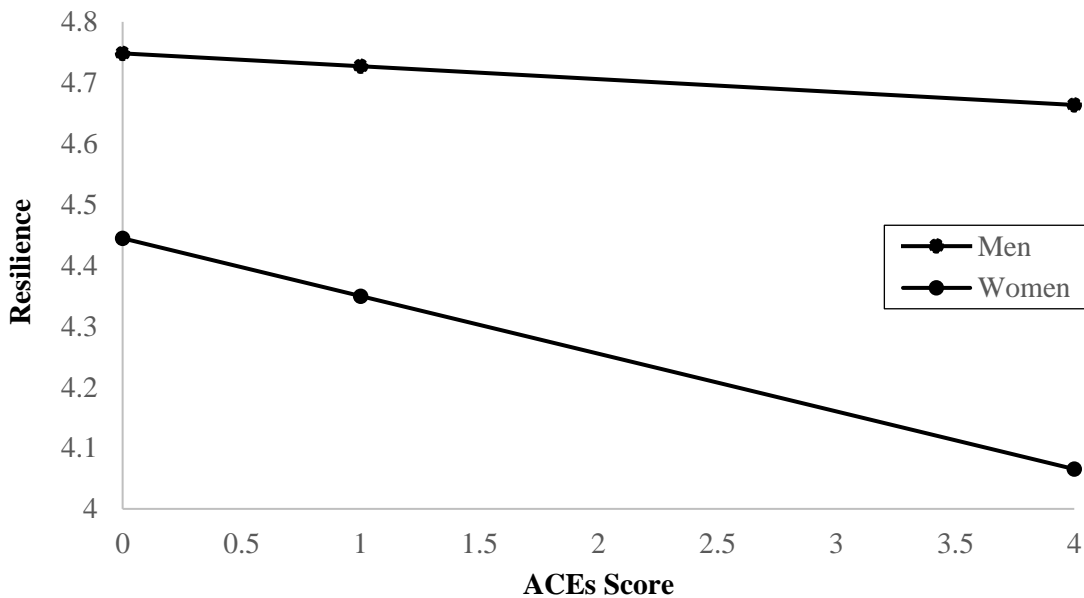
significant, $F(1,996) = 36.005, p < .01$, with an R^2 of .035. Thus, as an individual's ACE score increased by one point, reported resilience decreased by .091.

The Moderating Role of Gender on Resilience

Regression analysis was also used to determine if gender moderated the relationship between reported number of ACEs and resilience (RQ1). The overall model was significant, $F(3,976) = 24.23, p < .01, R^2 = .07$, and the interaction of gender and ACEs was significant, $b = .07, t(976) = 2.25, p < .05$. Probing the interaction revealed that among women, an increase in the number of ACEs predicted a decrease in reported resilience of .09. (See Figure 1). However, the relationship between ACEs and resilience was not significant among men.

Regression analysis was also used to investigate whether race (RQ1b) or sexual orientation (RQ1c) would moderate the relationship between resilience and reported number of ACEs. However, neither of these interactions were significant.

Figure 1. *Moderating Role of Gender on the Effect of ACEs Score on Resilience*



Discussion

This study explored whether ACEs and resilience differed among student groups based on gender, race, and sexual orientation. The data indicated that women reported higher numbers of ACEs than men, students who identify as LGBTQ reported higher numbers than students who do not identify as LGBTQ, and non-white students reported higher numbers than white students. These results are consistent with large national datasets (Merrick et al., 2018; Merrick et al., 2019) and college cohorts. In addition, this study's regression analysis also determined that female gender moderated the relationship between the reported number of ACEs and reported resilience, with women's resilience scores falling as their history of trauma (ACEs scores) increased. Despite the scientific recognition that ACEs can have a detrimental impact on learning (Dube, 2018), awareness of the implications of ACEs on post-secondary education and the development of potential resilience interventions for college students have been slow to develop (Chandler et al., 2015; Oehme et al., 2018). Some colleges have tested resilience interventions for college students with a number of approaches including targeting stress prevention (Steinhardt &

Dolbier, 2008), online stress management (Hintz et al., 2015), incentivizing behavioral change (Hudziak & Tiemeier, 2017), and promoting characteristics of resilience such as social connectedness and positive-thinking styles (DeRosier et al., 2013). However, universal trauma and resilience training across institutions for all students is rare, even though the CDC recommend primary, secondary, and tertiary trauma-informed prevention efforts (described further in Table 4) to better protect the next generation from abuse, disease, mental health disorders, and substance use disorders (CDC, 2019). Providing universal resilience interventions along with demographically targeted, trauma-informed resources, which reflect distinct vulnerabilities, represents a new campus approach (Oehme et al., 2018). Colleges that adopt trauma-informed approaches will be more likely to acknowledge the widespread prevalence and disproportionate impact of trauma and adopt practices that will benefit affected students (Substance Abuse and Mental Health Services Administration [SAMHSA], 2014).

Educating faculty and administrators about ACEs and students' need for support is an achievable goal. Structures for delivering these strategies, such as health, student support, and/or bridge programs may already be in place in many campuses. Universities already engage in faculty and graduate student-teacher training on a variety of issues. ACEs education is a natural next step for a system-wide campaign. After all, student wellbeing affects everyone on campus, not just individual students.

ACEs researchers also recommend that colleges offer practical support services to students with ACEs in order to reduce their barriers to success and to assist them in building resilience (Brogden & Gregory, 2019; Hinojosa et al., 2018; Forster et al., 2018). College administrators may believe that because they have invested in supportive resources, students are aware of campus resources and will readily utilize them. However, institutions need to increase the knowledge and availability of supportive resources to students, including those who live off campus (Sax, 2008), as the majority of students enrolled in higher education in Florida do not live in campus housing.

College affinity groups can also play an important role in ensuring that students feel empowered to succeed at the institution they are attending (Hargrave, 2019). Those groups that are already set up to support women, students of color, and LGBTQ students should be provided information about trauma and resilience. Because this study identified these groups as particularly vulnerable to the lasting effects of prior trauma, it is critical that these groups are reached, not only with general academic support, but with demographically specific trauma-informed support services. This data provides evidence that the effects of childhood trauma follow female, LGBTQ, and young adult students of color to college and especially affect women's ability to be resilient when faced with adversity.

Most universities have leadership groups, such as Pride Student Union, Women's Student Unions, Black Student Union, and a variety of groups that support specific racial/ethnic minorities. Information about trauma and resilience, as well as campus resources emphasizing the value of diversity and inclusion should be widely disseminated in a positive, strength-affirming manner to these organizations. Additionally, academic-based groups that support women and racial and sexual minorities, such as Women in STEM or Minorities in STEM (the field of science, technology, engineering, and math), should be created and championed. These groups and resources are put in place so students can support each other and build confidence and leadership skills (Magnus, 2019). University administrations should ensure that these groups and their faculty advisors understand the impact of trauma and are aware of the campus/community resources available to them.

Table 4. *Primary, Secondary, and Tertiary Trauma Prevention Strategies for College Campuses*

Primary prevention (Universal strategies)
<ul style="list-style-type: none"> • Based on CDC-informed approaches, campuses can widely disseminate information about ACEs and the impact of traumatic stress: Student affairs officials, housing officials, resident advisors, campus recreation, student affinity groups, disability services, campus police, faculty, and staff can conduct information campaigns to create a campus that is “trauma informed.” • Orientation for new students can alert students to the trauma-informed behavioral health resources on campus. • Resources on stress reduction and healthy coping strategies can be disseminated campus wide to destigmatize behavioral health help-seeking by students, and to encourage campus-wide discussions about the impact of trauma and the benefits of resilience strategies. • All campus public health campaigns, such as for suicide prevention, mental health awareness, and substance abuse prevention, should include material that acknowledges the effects of traumatic stress on student emotional and behavioral health. • Universities can encourage establishing diverse peer-led student groups that advocate for student mental health awareness, support, and healthy student coping skills. • Written material (posters, digital screens) can be posted in prominent campus locations in a way that destigmatizes help seeking.
Secondary prevention (Students in high-risk groups)
<ul style="list-style-type: none"> • University administration can ensure that staff and faculty have best-practices knowledge about groups at higher risk for prior trauma exposures, such as women, minorities, and students who identify as LGBTQ+. However, this should be done in a strategic, sensitive way that does not further stigmatize students. • Such knowledge increases the likelihood that staff are sensitive to and aware of group risks, even though individual risk varies. • Faculty advisors of student support groups to which higher risk students commonly affiliate, e.g., Women’s Student Union, Pride Student Union, Black Student Union, can be educated about ACEs and the impact of trauma. This can also include faculty advisors for groups created to promote women and minorities’ full participation in careers such as STEM and business.
Tertiary prevention (Students exhibiting problems)
<ul style="list-style-type: none"> • Mental health services on campus can educate staff and counselors on the impact of trauma to improve likelihood that links between trauma and behavioral health problems such as depression, anxiety, trauma, PTSD, and substance abuse are validated and explored to advance clinical intervention outcomes. • Professionals in campus health services can be educated on the links between traumatic stress and physical/psychosomatic problems, such as gastrointestinal distress, headaches, eating disorders, and stress-related health problems. These professionals can connect students to behavioral health services as indicated. • Academic disciplinary committees on campus can be trauma-informed to recognize the impact of prior trauma on student performance during stressful periods, refer students to health services to address that trauma, and provide additional academic support as needed.

Finally, students who are vulnerable to lower resilience and have mental health needs while in college will benefit from campus leadership that prioritizes student mental health services funding, creates a campus culture that normalizes help-seeking, and employs diverse campus health services personnel who are well trained in trauma-informed care (Eisenberg et al., 2018).

Limitations and Future Directions

The results of this study have potential limitations. Students were recruited from one university in the southeast and therefore, may not be reflective of other student populations across the country. Moreover, most study participants identified as female, white, and heterosexual. Therefore, men, non-whites and non-heterosexuals may have been underrepresented. Future studies should consider sampling more diverse groups of students located around the United States.

Additionally, although some of the regression models were statistically significant, the variance explained was fairly small. However, “small amounts of variance explained can still make big practical differences” (Fichman, 1999, p. 12). For instance, as human behavior is often subject to greater amounts of unexplained variance, even a small effect indicating that ACEs and reported resilience are influenced by gender can help mental health counselors better identify groups with the greatest need. In turn, interventions that enhance well-being can be crafted around this knowledge.

Conclusion

As university administrators work to find ways to promote student wellbeing, these data demonstrate the potential importance of providing students targeted, gender-specific information regarding the impact of trauma and ways to build resilience. With a renewed call for universities to promote wellness skills for women, students of color, and students who identify as LGBTQ, institutions can seize a vital opportunity to assist the majority of students on their campuses to heal from trauma and develop resilience.

Table 5. *Resources to Assist College Campuses Implement a Trauma-Informed Approach*

Trauma-informed resources	Source	Description
Introduction to the effect of ACEs	Centers for Disease Control and Prevention (CDC)	CDC Technical Package <i>Preventing Adverse Childhood Experiences (ACEs): Leveraging the Best Available Evidence</i> https://www.cdc.gov/violenceprevention/pdf/preventingACES.pdf
Introduction to consequences of substance misuse and causal factors	Substance Abuse and Mental Health Services Administration (SAMHSA)	<i>Behavioral Health Among College Students Information and Resource Kit</i> https://store.samhsa.gov/product/Behavioral-Health-Among-College-Students-Information-and-Resource-Kit/SMA19-5052
Help for interacting with students in distress	Psychological First Aid	National Child Traumatic Stress Network https://learn.nctsn.org/enrol/index.php?id=38
Introduction to trauma and trauma-informed approach	SAMHSA	Concept of Trauma and Guidance for a Trauma-Informed Approach https://ncsacw.samhsa.gov/userfiles/files/SAMHSA_Trauma.pdf

References

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