ORIGINAL RESEARCH

Perceived Stress and Self-Care in Graduate Students Amidst the COVID-19 Pandemic

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ABSTRACT

Introduction: This study examines the perceived stress and self-care behaviors of graduate students as impacted by the COVID-19 pandemic. Students who participated had varying degree concentrations, with the majority of participants having a Clinical Mental Health Counseling, Couples and Family Therapy, Dance Movement Therapy, or Clinical Psychology focus. This study is particularly relevant to health care workers, especially those whose focus is mental health. Markedly elevated prevalence of reported adverse mental and behavioral health conditions associated with the COVID-19 pandemic highlight the broad impact of the pandemic and the need to prevent and treat these conditions. This study sought to examine the presence and significance of a relationship between perceived stress, self-care strategies, and participant characteristics and the impact of COVID-19.

Methods: Utilizing a quantitative approach, data were collected via survey method using related questionnaires and assessments; approximately 700 surveys were disseminated to the student-body, with a response rate of 24% yielding 170 initial participants. Pearson bivariate and multiple regression were used to determine the statistical significance of any potential relationship as posed by the research questions.

Results: A statistically significant relationship was found between perceived stress and the impact of COVID-19 for the students. Also, using multiple regression, age ($p = .005$) and race/ethnic identity ($p = .006$) contributed to the reported levels of perceived stress. Racial identity was a significant predictor of the reported scores on the impact of COVID-19 ($p = .01$). There was also a significant relationship ($p < .001$) between adequate sleep and eating nutritiously ($p = .016$) and reported perceived stress and the impact of COVID-19. Lastly, engaging in social activism was related to an increased impact of COVID-19 ($p=.037$), specifically for the subscale of hyperarousal ($p=.016$).

Conclusion: A summary of our findings indicates a significant relationship between participant's perceived stress and the impact of COVID-19; specifically, as the level of perceived stress increased for our participants, so did the impact of the COVID-19 pandemic. Seemingly, those who experience greater daily stress in their lives reported a more significant impact of COVID-19 on their daily lives. These results point to the need for wellness strategies specific to stress reduction strategies to also help in alleviating the distress associated with COVID-19. As universities transition to online learning, online accessible interventions aimed at helping students address stress, depression, and wellbeing, may prove beneficial.

INTRODUCTION

The Centers for Disease Control (CDC) reports that since January 21, 2020, the United States has more than 28 million current cases of COVID-19, with an average reporting of COVID positive tests equating to nearly 200,000 new cases daily this fall [1]. As of mid-February 2021, there have been more than 500,000 reported COVID-related deaths, with an average of +2500 deaths reported each day. Per Wang et al (2020), recent assessments of mental health in the general populations of China and Iran, countries that experienced significant COVID outbreaks, show increased levels of stress due to the pandemic, with a key concern during the pandemic relating to the mental health of vulnerable populations, including college students [2]. The 2019 Annual Report of the Center for Collegiate Mental Health reported that anxiety continues to be the most common problem (62.7% of 82,685 respondents) among students who completed the Counseling Center Assessment of Psychological Symptoms [3]. Per Czeisler et al., (2020), the COVID-19 pandemic has been associated with mental health challenges related to the morbidity and mortality caused by the disease and to mitigation activities, including the impact of physical distancing and stay-at-home orders [4]. The researcher report that "elevated levels of adverse mental health conditions, substance use, and suicidal ideation were reported by adults in the United

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States in June 2020" and that "the prevalence of symptoms of anxiety disorder was approximately three times those reported in the second quarter of 2019 (25.5% versus 8.1%), and prevalence of depressive disorder was approximately four times that reported in the second quarter of 2019 (24.3% versus 6.5%) [1]. Czeisler et al., (2020) also note that mental health conditions are disproportionately affecting specific populations, especially young adults, Hispanic persons, black persons, essential workers, unpaid caregivers for adults, and those receiving treatment for preexisting psychiatric conditions [4].

Recent studies of university students, a majority of which are out of the countries of China and Canada, have also demonstrated the impact of COVID-19 on their perceived stress and means of coping with the event. Particularly relevant to health care workers with a focus on mental health, Bono et al's (2020) early research on the pandemic's effects shows that many aspects of mental health have already been impacted [5, 6, 7, 8]. These impacts have occurred even in homes that do not contain family members who have contracted COVID-19. Stress can additionally be increased by the forced isolation of quarantine and forced proximity between family members with tenuous relationships [6, 7]. Additionally, early COVID-19 research suggests that traditional protective factors could be undermined by pandemic stressors [7]. In a study from China on the impact of COVID-19 on the mental health in youth groups, 40.4% of the participants reported psychological problems, with 14.4% experiencing PTSD symptoms [9]. Another study from Texas A&M examined both potential symptoms of anxiety and depression relating to the impact of COVID-19 [2]. Wang et al. (2020) found that among a pool of 2031 undergraduate and graduate students from Texas A&M, 48.14% showed a moderate-to-severe level of depression, 38.48% indicated a moderate-to-severe level of anxiety, and that over 18% of students surveyed reported suicidal thoughts. Additionally, a majority of the participants (71.26%) indicated that their stress and anxiety levels significantly increased during the beginning of the pandemic [2]. For health care workers such as mental health counselors, psychologists, and psychiatrists, this research is quite impactful to the care and welfare of patients and clients who are experiencing increased symptomatology exacerbated by the pandemic.

Aims

Markedly elevated prevalence of reported adverse mental and behavioral health conditions associated with the COVID-19 pandemic highlight the broad impact of the pandemic and the need to prevent and treat these conditions. Identification of populations at increased risk for psychological distress and unhealthy coping can inform policies to address health inequity, including increasing access to resources for clinical diagnoses and treatment options. Focusing on the mental health and well-being of young adults, an identified target population for increased anxiety, is at the focus of this study. This study looked at the perceived stress of graduate students during the COVID-19 pandemic, and how they attempt to cope with identified stressors. The specific research questions guiding this research study were: 1) Does the impact of COVID-19 affect the reported level of perceived stress from graduate students? 2) Do self-care strategies of graduate students mitigate the negative impact of COVID-19? 3) Is there an association between participant characteristics and the negative impact of COVID-19? The researchers hypothesized that there is an effect on perceived stress, specifically that those with higher levels of perceived stress will report higher levels of distress (i.e. intrusive thoughts, hyperarousal, and avoidance) related to COVID-19. Additionally, it was hypothesized that those who engaged in self-care strategies would report lower levels of distress related to COVID-19. Lastly, specific factors such as participant demographics may contribute to the reported levels of perceived stress and the reported negative impact of COVID-19. The null hypotheses are that there is no significant difference in perceived stress, the impact of COVID-19, nor are these impacted by participant characteristics.

METHODS

Procedures and Participants

This study's primary focus was to explore the mental health and wellness of graduate students, with the intent to provide meaningful information for mental health and general health care providers to be able to appropriately assess for mental health symptomatology related to and exacerbated by the pandemic. Using convenience sampling, the research team identified and selected participants from the roster of graduate students enrolled in a small private northeastern U.S. university. Participant recruitment began with the researchers sending an email invitation to complete an online survey using Survey Monkey to the entire student body. Inclusion criteria required that the students be actively enrolled at the university and currently taking classes. The informed consent document was placed at the beginning of the survey, and only students who consented were able to complete the actual survey. Of the 750 graduate student population with degree concentrations such as Clinical Mental Health Counseling, Clinical Psychology, Education, and Environmental Studies, 171 students completed the online survey. The final sample size was 151; twenty participants did not complete the full surveys and were thus excluded. The online survey was constructed to collect demographic data, as well as utilize the following assessments: The Impact of Events Scale-Revised, The Perceived Stress Scale, and the Self-Care Behavior Checklist. All data collected was imported to SPSS Version 26, and analyzed using inferential statistics.

Instrumentation

The instrumentation used for this study includes a demographic questionnaire, the Impact of Events Scale-Revised, the Perceived Stress Scale, and the Self-Care Behavior Checklist. The researchers collected demographic information from study participants to use for data analysis using a specific study-generated questionnaire. The questionnaire collected the following information: gender, age, race/ethnicity, marital status, occupational history/work status, and educational status.

Impact of Events Scale-Revised (IES-R)

Weiss and Marmar's (1997) IES-R is a 22-item self-report measure for Diagnostic and Statistical Manual-IV (DSM-IV) that assesses subjective distress caused by traumatic events.

Graph 1: Demographic Information
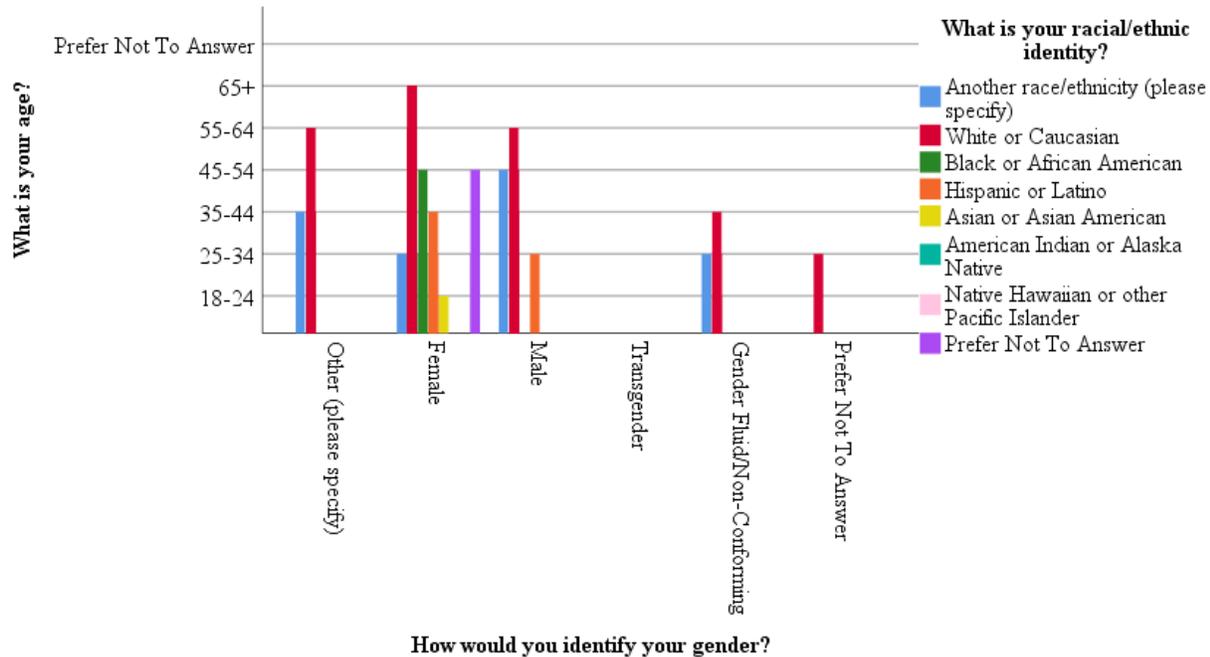
Items correspond directly to 14 of the 17 DSM symptoms of PTSD. Respondents are asked to identify a specific stressful life event and then indicate how much they were distressed or bothered during the past seven days by each "difficulty" listed. Items are rated on a 5-point Likert scale ranging from 0 ("not at all") to 4 ("extremely"). The IES-R yields a total score (ranging from 0 to 88) and subscale scores can also be calculated for the Intrusion, Avoidance, and Hyperarousal subscales.

Perceived Stress Scale (PSS)

The Perceived Stress Scale (PSS) is the most widely used psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful. Items were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives, asking about feelings and thoughts during the last month. In each case, respondents are asked how often they felt a certain way. Regarding reliability and validity, Roberti et al. (2006) endorses the PSS as a reliable and valid measure for assessment due to supportive normative results, internal consistencies, and construct validity [15].

The Self-Care Behavior Checklist (SCBC)

The SCBC (Lounsbury, 2006) is a 15-item self-report measure including items related to personal strategies, professional strategies, and environmental strategies to prevent the deleterious effects of secondary traumatic stress (STS) [16]. Participants are asked to rate how often they engage in each self-care behavior with 0 = none, 1 = several times a year, 2 = several times a month, 3 = every week, and 4 = more than once a week.

Data Analysis

The primary means to analyze participant responses involved coding and inputting data in IBM SPSS Statistics, Version 26 for all descriptive and inferential statistical analyses. Descriptive statistics for the sample demographic characteristics included frequency, means, standard deviations, and range. The research questions were tested through the use of Pearson bivariate correlational and multiple regression analyses. The final sample size was 151; twenty participants did not complete the full surveys and were thus excluded.

RESULTS

Participant Characteristics

In general, the demographics of this study (**Graph 1**) was mostly consistent with the reported demographics of the university which are as follows: 63.1% White, 5.48% Hispanic or Latino, 4.31% Black or African American, 2.33% Asian, 2.1% Two or More Races, 0.466% American Indian or Alaska Native, and 0.117% Native Hawaiian or Other Pacific Islanders. Of the 151 participants who participated in the study, 120 identify as female (80.5%), 19 identify as male (12.8%), 5 identify as gender fluid/gender non-conforming (3.4%), 1 identified as agender nonbinary (0.7%), 1 identified as non-binary (0.7%), 1 identifies as non-binary female (0.7%), and 1 identified as two-spirit (0.7%); this is also mostly consistent with the gender makeup of the university which is White Female (53.7%), followed by White Male (10.7%) and Hispanic or Latino Female (4.04%). The age range of our participants was from 18 to 65+ years old; with the mean (M) age range of participants being 25-34 years old. Our participants represent the racial/ethnic makeup of the university, including White/Caucasian (89.3%), Black/African-American (2.7%), Hispanic/Latinx (2.7%), and Asian/Asian American (0.7%); this is consistent with the demographic makeup of the university and of the geographic area where the university is located. All participants were enrolled in school, with 107 (71.8%) enrolled full-time and 42 (28.2%) enrolled

Table 1: Correlational Analysis of Perceived Stress and Impact of Events Scale

Variable	n	M	SD	IES	IES AVD	IES INT	IES HYP	Perceived Stress
1. Perceived Stress	151	22.84	6.44	***$p < .001$	***$p < .001$	***$p < .001$	***$p < .001$	
2. Impact of Events	151	37.92	15.3					***$p < .001$

part-time. Additionally, 40.9% of our participants work full-time in addition to their academic work, while 23.5% work part-time, 11.4% receive work study, and 14.8% are unemployed citing the COVID-19 pandemic as the contributing factor of their unemployment. The mean score for perceived stress of the participants surveyed was 22.84, indicating moderate stress. Regarding the Impact of Events Scale-Revised, the mean total score was 37.92, which is indicative of moderate PTSD symptoms that are, according to the IES-R, "high enough to suppress your immune system's functioning." Specifically, with respect to the identified subscales, the mean scores were as follows: Avoidance, 12.81; Intrusive Thoughts, 13.59; and Hyperarousal, 11.50.

Research Question #1

For the question of "does the negative impact of COVID-19 affect the reported level perceived stress from graduate students?" the result of a Pearson bivariate correlational analysis indicates there was a significant relationship between participant's perceived stress and the impact of distress (total IES score) related to COVID-19 ($r = .569$, $p <.001$). This indicates that the greater the impact of the COVID-19 pandemic, the greater the reported level of perceived stress. As perceived stress increased, so did avoidance (AVD, $r = .334$, $p <.001$), intrusive thoughts (INT, $r = .534$, $p = <.001$), and hyperarousal (HYP, $r = .616$, $p = <.001$) related to the COVID-19 pandemic. See **Table 1** above.

Research Question #2

Regarding the question, "do self-care strategies of graduate students mitigate the negative impact of COVID-19?" the current findings indicate there was a significant association between the composite score on the Self-Care Behavior Checklist and Perceived Stress ($r = -.247$, $p = .002$), as outlined in Table 2. Participants total self-care scores were not significantly associated with the total IES-R score ($r = -.098$, $p = .232$), nor the avoidance ($r = -.073$, $p = .376$), intrusive thoughts ($r = -.072$, $p = .379$), and hyperarousal ($r = -.114$, $p = .164$) subscales of the IES-R. When examining specific self-care behaviors, engagement in leisure activities was associated with decreased total impact ($r = -.247$, $p = .003$), as well as lower scores on the subscales of Avoidance ($r = -.198$, $p = .016$), Intrusion ($r = -.204$, $p = .014$), and Hyperarousal ($r = -.232$, $p = .005$). Getting adequate sleep was also associated with decreased total impact ($r = -.242$, $p = .003$), less intrusive thoughts and images ($r = -.246$, $p = .003$), and decreased Hyperarousal ($r = -.294$, $p < .001$). Eating nutritiously as well, was related to less of a total impact of COVID 19 on participants day-to-day lives ($r = -.189$, $p =$

.023), as well as decreased reports of Hyperarousal ($r = -.210$, $p = .011$). In contrast, those who engage in social activism reported an increased total impact related to the COVID-19 pandemic on their lives ($r = .172$, $p = .037$). Increased participation in social activism/community engagement was associated significantly with increased hyperarousal responses ($r = .199$, $p = .016$), but not avoidance or intrusion, in relation to the COVID-19 pandemic.

Table 2: Correlational Analysis of Self-Care Behaviors and Impact of Events Scale

Variable	n	M	SD	IES	IES AVD	IES INT	IES HYP
1. Exercise	151	4.05	1.29	$p = .650$	$p = .725$	$p = .662$	$p = .211$
2. Massage	151	1.76	.98	$p = .933$	$p = .650$	$p = .764$	$p = .989$
3. Adequate Sleep	151	3.93	1.09	$p = .003$**	$p = .230$	$p = .003$**	$p = .000$**
4. Eating Nutritiously	151	4.27	.89	$p = .023$*	$p = .101$	$p = .085$	$p = .011$*
5. Leisure Activities	151	3.86	.98	$p = .003$**	$p = .016$*	$p = .014$*	$p = .005$**
6. Relaxation (e.g. listening to music, reading)	151	4.09	.86	$p = .061$	$p = .075$	$p = .188$	$p = .096$
7. Contact with Nature (e.g. outdoor walks and activities)	151	4.25	.89	$p = .785$	$p = .370$	$p = .944$	$p = .683$
8. Creative expressions (e.g. photography, dancing, music, woodworking)	151	2.92	1.26	$p = .264$	$p = .787$	$p = .074$	$p = .123$
9. Skill development (learning skills to help manage stress)	151	2.75	1.22	$p = .796$	$p = .991$	$p = 879$	$p = .580$
10. Meditation/ Spiritual Practice	151	2.92	1.41	$p = .240$	$p = .065$	$p = .728$	$p = .493$
11. Self-evaluation/ self-awareness	151	3.83	1.06	$p = .197$	$p = .561$	$p = .228$	$p = .105$
12. Use of humor	151	4.33	.95	$p = .904$	$p = .130$	$p = .305$	$p = .283$
13. Playing with children	151	2.87	1.55	$p = .998$	$p = .890$	$p = .580$	$p = .660$
14. Allowing others to help	151	3.15	1.19	$p = .997$	$p = .998$	$p = .935$	$p = .918$
15. Social activism/ community involvement	151	2.77	1.17	$p = .037$*	$p = .153$	$p = .115$	$p = .016$*

Research Question #3

With respect to the question, "is there an association between participant characteristics and the negative impact of COVID-19?" a multiple regression analysis was conducted to determine whether individual participant characteristics (e.g., race/ethnicity, age, gender, etc.) could significantly predict reported levels of perceived stress and the reported impact of the COVID-19 pandemic. The results of the regression indicate that differences in individual characteristics explain 12% (R^2 = .120, R = .346) of the variance in reported levels of perceived stress. Individual characteristics are significant predictors of perceived stress, $F(6, 142)$ = 3.22, p = .005. While age (B = -1.33 , p = .005) and racial/ethnic identity (B = -1.707, p = .006), contributed significantly to the variance of perceived stress, gender (B = -2.12, p = .768), program of study (B = -.232, p = .372), education status (B = 1.424 , p = .248), and work status (B = -.511 , p = .245) did not. Another multiple regression was conducted to determine whether participant characteristics could significantly predict the impact of the COVID-19 pandemic as reported on the Impact of Events Scale-Revised (IES-R). As highlighted in Table 3, the results of the regression indicate that participant characteristics explain 5.4% (R^2 = .054, R = .232) of the variance of the reported scores on the IES-R. Overall, participant characteristics were not significant predictors on the reported impact of COVID-19, $F(6,142)$ = 1.34, p = .243, with the exception of racial/ethnic identity, (B = -3.968, p = .01).

Table 3: Multiple Regression Analysis of Individual Participant Characteristics on Perceived Stress, and Impact of Events Scale

Variable	Perceived Stress				IES-R			
	B	*SE B*	β	p	*B*	*SE B*	β	p
1. Age	-1.332	.468	-.234	.005	-.791	1.161	-.058	.497
2. Racial/Ethnic Identity	-1.707	.616	-.221	.006	-3.968	1.529	-.215	.010
3. Gender Identity	-.212	.718	-.024	.768	-.162	1.782	-.008	.928
4. Program of Study	-.232	.260	-.071	.372	-.295	.644	-.038	.648
5. Educational Status	1.424	1.227	.100	.248	1.449	3.045	.042	.635
6. Work Status	-.511	.438	-.096	.245	-.280	1.087	-.022	.797
R^2		.120				.054		
F for change in R^2		3.22				1.341		

DISCUSSION

This study sought to examine the impact on the daily lives of students at a small northeastern graduate institution. In the findings, it was noted that the mean score for perceived stress of the participants surveyed indicated moderate stress [18]. Regarding the Impact of Events Scale-Revised, the mean total score was indicative of moderate PTSD symptoms, specifically with respect to the identified subscales, the mean scores supported mild to moderate stress related to the COVID-19 pandemic. A summary of our findings indicates a significant relationship between participant's perceived stress and the impact of COVID-19; specifically, as the level of perceived stress increased for our participants, so did the impact of the COVID-19 pandemic. Seemingly, those who experience greater daily stress in their lives reported a more significant negative impact of COVID-19 on their daily lives.

Additionally, there was statistical significance between participant's self-care behaviors and the negative impact of the COVID-19 pandemic; specifically, engaging in leisure activities, adequate sleep, and eating nutritiously were associated with decreased symptomology related to the impact of COVID-19. Though these results align with previous research (Bassett et al, 2015) on the disruption of sleep as related to stress [19], it is important to contextualize these findings such that there was no significant association between self-care scores and the IES-R or any of its three subscales. It is interesting to note that those with greater access to leisure activities report less of an impact overall. This finding lends itself to the potential need for those in academia to provide guidance to students with regard to the identification and participation in activities that promote joy and connection, particularly at times of great challenge. Self-care behaviors which involve taking care of one's body and engaging in activities which relax and replenish the body can help to mitigate the hyperarousal, avoidant, and intrusive reactions related to the pandemic. These findings support the necessity of considering the neurophysiological reactions to the "threat" of the pandemic, perhaps incorporating strategies to address the activated limbic system.

Implications for Students

Our research findings regarding the relationship between self-care strategies and the negative impact of COVID-19 indicates that there was a significant relationship between participant's self-care behaviors and the negative impact of the COVID-19 pandemic; specifically, engaging in leisure activities was associated with a decrease in avoidant reactions and a decrease in intrusive thoughts. Additionally, adequate sleep, engaging in leisure activities, and eating nutritiously was associated with decreased hyperarousal. There is a significant body of research regarding the importance of self-care for mental health and wellness, particularly for students in medical, allied and mental health disciplines. In line with this, Bono et al., (2020) noted that the impact of the pandemic may be partially controlled by positive thinking and resilience [5]. Yang et al. (2020) concluded in their research on college students in Wuhan, China found that COVID-19 negatively impacted mental health, but that the effect seems strongly mediated by resilience and positive thinking [8]. Bono et al. (2020) noted the significance of what they defined as "grit" [5]. Grit is a personality trait that can be used as a non-cognitive factor in performance and success. Grit is also synonymous with resilience, a quality of passion and determination toward long term goals in the face of challenges and failures [20].

Interestingly, social activism/community engagement was associated with increased hyperarousal. This may be attributed to the co-occurring epidemic of racialized violence and social unrest. These race-based stressors are thought to have an impact on the psychological and physical health both of individuals and of society as a collective body [21, 22, 23]. Though an interesting finding in this study, it is not the principal focus; this development may yet be an area for further study.

Implications for Higher Education

Bono et al. (2020) suggests that as universities transition to online learning, that this may provide an opportunity to support students and their mental health, specifically that in the face of changing university structure during the COVID-19 pandemic, online accessible interventions aimed at helping students address stress, depression, and wellbeing, may prove beneficial [5]. It would seem that making telehealth and online counseling services available to students during this time may be an excellent way for university administrators to provide support during a time of such uncertainty. Telehealth has been applied to mental and substance use disorders and has been advocated by policy makers and practitioners as a cost-effective means for accessing and delivering high-quality health care [26]. Synchronous telehealth psychotherapy was as effective as non-telehealth services for treating depression [27]. Internet cognitive behavior therapy was effective in treating post-traumatic stress disorder [28]. This last study seems important to our findings and implications, particularly since many of the participants had perceived stress at clinical levels consistent with PTSD. University resources can be secured or acquired by grant or endowment to work with existing providers or national online counseling sites to provide low-cost counseling services for students. This is assistance at a systemic level.

A closer examination explores ways that university educators can support students. Some suggestions offered by the researchers would be granting extensions for assignments, providing space for a student "check-in" at the beginning and/or end of a virtual class session, and also having a class dedicated to student self-care and wellness. These virtual social gatherings, per Bono et al. (2020) are consistent with the researchers finding that social support was negatively correlated with the level of anxiety [5]. This also extends prior research which seemed to lay the foundation for later wellness studies which suggested that the presence of and satisfaction with social support could be predictive of total wellness [29, 30, 31]. Myers and Sweeney (2008) noted the mainstay of social support is family, and that friendships and intimate relationships enhance one's quality of life [31]. Lightsey (1996), Lu and Shih (1997), Myers and Shurts (2002), and Stalnaker-Shofner and Manyam (2014) suggest that social support can be the best predictor of positive mental health and wellness over the lifespan [29, 32, 33, 34]. Perhaps universities and higher education institutions could consider incorporating activities such as virtual community meetings to create a sense of connectedness and grounding to a collective body. While the COVID-19 pandemic has created barriers to socialization, it is evident that substitutions may need to be developed in order to promote positive social relationships and

wellness. Myers and Sweeney (2008) noted the importance of positive social relationships and wellness, specifically that mattering, or a sense of belonging and social relationships positively correlated with individual wellness levels [31].

LIMITATIONS

Specific limitations noted within this study include the accidental omission of Item 14 on the IES assessment; while the Avoidance and Hyperarousal subscales are unaffected, Item 14 falls under the Intrusive Thoughts subscale. Additional limitations include the limited sample, restricted to one university with both campus-based and online instruction. These students, as well, were all completing their graduate studies and thus, the results might not represent the other stressors associated with the disruptions for undergraduate students.

Also, worth considering is the low response rate of the survey. Though this is not unusual for survey research, it is still important to note. This raises the question of the levels of perceived stress and impact of COVID-19 on the 76% of non-respondents; essentially, are they too stressed to complete a survey or participate in a research study. Additionally, the primary respondents identified as White and female. Nine participants identified as an ethnic minority, which is a very low number representing approximately 1.2% of the student body. These numbers are consistent with the demographic of the university, and it is noted as a limitation as there was less than ideal diversity in respondents.

CONCLUSION

In summary, it was noted that a statistically significant relationship exists regarding perceived stress and the impact of distress related to COVID-19. It was noted that participants' characteristics such as age and racial/ethnic identity contributed to the reported levels of perceived stress and that regarding participants' characteristics and the impact of events, only age and race/ethnicity were statistically significant. There was also a significant relationship between self-care behaviors and reported perceived stress and the impact of COVID-19, and that with increased engagement in social activism, there was increased perceived stress. As universities transition to online learning, that this may provide an opportunity to support students and their mental health, specifically that in the face of changing university structure during the COVID-19 pandemic, online accessible interventions aimed at helping students address stress, depression, and wellbeing, may prove beneficial. It would seem that making telehealth and online counseling services available to students during this time may be an excellent way for university administrators to provide support during a time of such uncertainty. Successful implementation of adaptive coping strategies may aid in reducing the impact of stress and related symptoms. Educators can support students with the implementation of granting extensions for assignments, providing space for a student "check-in" at the beginning and/or end of a virtual class session, and also having a class dedicated to student self-care and wellness. These virtual social gatherings, are

consistent with the researchers' finding that social support was negatively correlated with the level of anxiety. This is also indicated that the presence of and satisfaction with social support could be predictive of total wellness. Essentially, during these turbulent times of the COVID-19 pandemic, there appear to be significant actions that may be beneficial to students' overall mental health and wellness, thereby providing some mitigation against the social isolation and disengagement that students reported experiencing.

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