AMERICAN JOURNAL

OF PSYCHOLOGICAL RESEARCH

THE ROLE OF EXPOSURE TO CUMULATIVE ADVERSITY

ON RESILIENCE IN THE WAKE OF MULTIPLE NATURAL DISASTERS

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ABSTRACT

In the wake of Southwest Louisiana's experience of COVID-19, Hurricane Laura, Hurricane Delta, nearly record-breaking low winter temperatures, and torrential flooding, research is possible to examine the role of naturally occurring cumulative adversity on resilience in college students. The purpose of the study was twofold: To expand on findings presented by Bonanno (2010) and Cherry et al. (2021), which suggested degree of exposure to traumatic events plays a role in post-disaster responses, and to partially revisit and expand on findings by Fossion et al. (2013), which suggested repeated exposure to extreme trauma may have a significant effect on resilience. Participants consisted of psychology students at McNeese State University, who received extra credit or course credit for their participation. Materials included Informed Consent forms, Demographic Questionnaires, an adapted version of the Traumatic Events Severity Scale (Elal & Slade, 2005), the Connor-Davidson Resilience Scale – 10 (Connor & Davidson, 2003), and Debriefing Forms. I hypothesized an inverse relationship between degree of exposure and resilience. Results were not statistically significant for these two variables. Interesting trends and relationships between other variables of interest appeared.

INTRODUCTION

Previous research has taken a historically narrow examination of the quantity and frequency of environmental factors that prompt adaptive responses to manage stress and trauma, also known as psychological resilience. For the purpose of this study, the definition of resilience is the ability to maintain a relatively stable level of psychological and physical functioning in the wake of a potentially traumatic event (Bonanno, 2004). Further, an outdated but long-standing belief in the study of responses to trauma is that many, if not all individuals who experience trauma will experience prolonged, chronic, severe psychopathology. The development of such findings increased, at least partly, from the inclusion of Post-Traumatic Stress Disorder (PTSD) in the *Diagnostic and Statistical Manuel of Mental Disorders* (DSM-III; American Psychiatric Association, 1980). With the formal recognition of PTSD, historical research on trauma focused largely on maladaptive responses. Researchers have begun to investigate many outcome trajectories, including adaptive responses in the form of resilience (Bonanno, 2004). Findings from a more recently evolved body of research suggest that only a small portion of the population (rarely more than 30%) who experience a traumatic event develops PTSD (Bonanno, 2010).

Contemporary research on responses to potentially traumatic events has brought into focus a consummate understanding of the prevalence of chronic, long lasting severe psychopathology after disasters (Bonanno, 2010). Factors that influence behavioral reactions to traumatic events include the context in which the disaster occurs, proximity/degree of exposure to the disaster, and exposure to post-disaster trauma. Such factors often vary a great deal and carry with them an enormous confounding factor load (Bonanno, 2010), but increased degree of exposure to a traumatic disaster may increase the frequency of psychopathology in its wake. Findings from research by Cherry et al. (2021) indicated that respondents whose homes flooded as a result of the flooding in August 2016 in south Louisiana demonstrated elevated symptoms of depression and anxiety compared to the non-flooded population. Interestingly, results suggest that post-disaster recovery stressors such as gutting, removing floors, needing electrical work, and locating and working with contractors may extend already long-lasting distress in flood survivors.

Depression that occurs in the wake of natural disasters may exacerbate psychological issues for survivors, as the availability of resources for support is often sparse. However, there may be responsive behaviors that act to mediate the effects of post-disaster conditions and depression. For example, findings from Cherry et al. (2018) suggest that spiritual support and humor may lessen post-disaster depression. Their previous research suggested that exposure to multiple natural disasters may prompt the development of different adaptive coping styles in fishermen living in coastal communities after Hurricane Katrina (Cherry et al., 2017), who demonstrated problem focused, active emotional, and avoidant emotional coping. The latter was most commonly exhibited by those who experienced the effects of Hurricanes Katrina and Rita, and the BP Deepwater Horizon oil spill (Cherry et al., 2017).

In further exploration of the effects of hurricanes, findings from a study by Davis et al. (2010) indicated that, in comparison to their nondisplaced peers, New Orleans area college students exhibited significantly elevated levels of depression and PTSD after evacuation from Hurricane Katrina, and subsequent reestablishment in an unaffected university setting. Although the relocation and reestablishment routine may outwardly appear to be the most beneficial option for New Orleanian college students, results showed that such displacement was linked to increased levels of traumatic exposure and overall distress. In addition to symptoms of PTSD and depression, participants' reported levels of generalized anxiety and stress were significantly elevated when compared to their nondisplaced peers; specifically, scores for anxiety and stress ranged between the 60th and 77th percentiles (Davis et al., 2010).

Older people appear to be at increased risk for long-lasting psychopathology and impairment in functioning after disasters. Reasons often include mobility issues, dependence on care from others, and preexisting injuries (Bonanno, 2010). However, the increased risk due to old age does not necessarily equate to permanent issues or the absence of coping behaviors (Huerta & Horton, 1978). Opposing research findings have suggested that older adults may have fewer post-disaster psychological and emotional issues than younger adults (Huerta & Horton, 1978). Such positive adaptations may be due to older adults' prior life experiences, which prompted the development of stress inoculation (Knight et al., 2000). Stress inoculation, defined as the prior exposure to a potential trauma which may help to buffer against the effects of subsequent traumas, is a relatively new area of interest in psychology, and appears to facilitate variable degrees of resilience in older individuals (Knight et al., 2000).

An interesting body of research has emerged to support the idea of stress inoculation, or disaster inoculation, which may prove to be a psychologically protective factor for survivors. Knight et al., (2000) found that those with prior experience of the same or a very similar disaster type (ex: flood-flood, earthquake-earthquake) may prove to be more adequately adjusted to develop adaptive responses to traumatic events. However to contrast, findings from studies by Bonanno (2010) and Post and Weiss (1998) suggest that stress inoculation in this manner may actually have the opposite effect on resilience: Those with repeated exposure to traumatic events may be more psychologically reactive to subsequent traumas.

Many studies pertaining to resilience have arisen in the wake of discrete yet significant events; resilience is only one possible trajectory that Bonanno (2004) has suggested. Generally, people categorized within the resilient trajectory tend to experience fairly short-lived and mild disruptions in functioning in the wake of traumatic events. Other survivors fall into three differing trajectories: recovery, delayed, or chronically disrupted levels of functioning (Bonanno, 2004).

Individuals who meet the criteria for Bonanno's (2004) resilient trajectory are not necessarily entirely without psychological distress. Instead, they often experience mild disruptions in functioning due to restless sleep or preoccupation with the disaster. Such perturbations for resilient individuals are often isolated to only a few weeks post-experience and generally subside as time continues. Further, Bonanno and colleagues (2007) have also suggested three sets of variables that pose as either risk or protective factors. As described previously, demographic factors appear to play a significant role in resilience and the development of

resilience and PTSD. For instance, metanalytic data from Brewin et al. (2000) found that the availability of resources that foster resilience are also involved in the development of adaptive behaviors. Resources such as social support (groups, family, colleagues) as well as material resources (shelter, medication, transportation) all play a significant role in the development of resilience. Unfortunately, many of these beneficial resources are unavailable immediately following natural disasters. Third, additional life stressors, or the cumulative adversity an individual has experienced, also plays a part in resilience. This view of the role of cumulative adversity fits with the notion that older individuals may be more psychologically resilient than others who have less prior life experiences of trauma.

Supporting the aforementioned literature is a small but growing body of research examining the effects of multiple major traumatic events (cumulative trauma) on resilience. Behavioral studies examining the relationship between a variety of events leading to trauma and resilience are becoming increasingly available. Researchers May and Wisco (2014) elaborated on a generalized definition of cumulative trauma as the total number of traumatic experiences in a person's life. With this definition comes research findings from Karam et al. (2014), who suggested that lifetime direct exposure to four or more potentially traumatic events elevate the risk of developing PTSD in comparison to direct exposure to one to three events, as well as increased symptom severity, comorbidity, and functional impairments in exposed individuals.

The Experience of Multiple Natural Disasters

In the wake of COVID-19's tightening grip on Southwest Louisiana, Hurricane Laura made landfall near the coastal community of Cameron, Louisiana on August 27[th,] 2021 as a Category 4 storm. High winds, measured at nearly 150 miles per hour, also devastated the more inland city of Lake Charles, where more homes and property were destroyed. Many newly homeless individuals found great difficulty in securing shelter due to the scarcity of viable structures and COVID-19 restrictions. Widespread power outages and water shortages continued for weeks, and longer in areas in closer proximity to the Gulf of Mexico, which led to instances of heat-related illness. Whereas southwest Louisiana continues to recover from the storm's impacts, the effects of the immense storm are far reaching and extend well into Texas and northern Louisiana.

Six weeks after Hurricane Laura's landfall, Hurricane Delta moved ashore 12 miles east of Cameron, in Creole, Louisiana on October 10th, 2021. Once again, widespread power outages due to storm surge and winds over 100 miles per hour stripped away recovery efforts made in the wake of Hurricane Laura. Although Hurricane Delta was not as strong by windspeed as Hurricane Laura, the most destructive winds were more widespread than Hurricane Laura, which left hundreds of thousands of residents without power (Samenow & Livingston, 2020). Additionally, Hurricane Delta produced more rainfall; the Calcasieu Parish Police in Lake Charles measured over 17 inches of rain (Samenow & Livingston, 2020).

The next disaster to affect southwest Louisiana occurred in February, 2021. The coldest winter temperatures to settle in southwest Louisiana since 1989 were recorded at 16 degrees Fahrenheit. Three quarters of an inch of sleet fell in Lake Charles, followed by ice accumulations up to 1/8 inch thick, leading to automobile accidents and eventually the loss of power and water

in the city (Dolce, 2021). Many residents of Lake Charles and surrounding communities who were already displaced from Hurricanes Laura and Delta remained living in campers, damaged housing, or in tents at the time of the winter storm.

The most recent disaster was flooding; 12.5 inches of rain fell on May 17th, 2021 in Lake Charles, leading to immense flooding of both public and private property, which was the second highest recorded rainfall to occur in a single day in the city (Guidry, 2021). Many homes and businesses that sustained damage from Hurricanes Laura and Delta remained unrepaired, or only partially repaired, at the time of the flood event.

Lee et al. (2018) referred to such frequency of natural disasters as "stacked disasters." The term described the situation of the brief time between the culmination of one disaster before the threat and eventual arrival of the next occurs, leading to a complicated cycle of preparation, response, and recovery. Although many surrounding communities continue to reel in varying degrees from the effects of COVID-19, Hurricanes Laura and Delta, the February winter storm, and the flood in May, Lake Charles has been a federally declared disaster area four times in less than one year, and between 6% and 7% of the resident population has moved away from the area.

Purpose

There is a limited amount of research on multiple, or stacked, natural disasters and resilience. The paucity of research is mostly due to the infrequency of such occurrences. The purpose of the present study was twofold: to expand on findings presented by Bonanno (2010), and Cherry et al. (2021), which suggest degree of exposure to traumatic events plays a role in post-disaster responses, and to partially revisit and expand on findings by Fossion et al. (2013), which suggest repeated exposure to extreme trauma may have a significant relationship to resilience. These elements related to resilience were examined within the context of Lee and colleagues' (2018) concept of "stacked disasters," which occur in rapid sequence over a relatively short period of time. Specifically, the present study sought to examine the relationship between degree of exposure to multiple disasters, or uncontrollable adversities, and resilience, by determining if individuals are more or less resilient with increased exposure to uncontrollable adversities. The hypothesis was that results would indicate an inverse relationship between degree of exposure and resilience.

METHOD

Design

A quasi experimental design was utilized to assess resilience in participants. No manipulations or controls were utilized.

Participants

Participants were 85 students enrolled in a psychology course at McNeese State University. Participants were recruited by in-class announcements, and received extra credit or

satisfied course requirements in their psychology course in exchange for their participation. No students under the age of 18 were allowed to participate in the study without signed parental permission.

Materials

Materials included physical copies of informed consent forms, demographic questionnaires, the Traumatic Exposure Severity Scale (Elal & Slade, 2005), the Connor-Davidson Resilience Scale – 10 (Connor & Davidson, 2003), debriefing forms, and sign out sheets. The informed consent form ensured participants that they would not be harmed in any manner, that they were permitted to withdraw from the study at any time, and that their anonymity and confidentiality would be safeguarded. The demographic questionnaire, which was created by the researcher, contained 28 questions to assess participant age, gender, and individualized impacts of COVID-19, Hurricane Laura, Hurricane Delta, the February 2021 winter storm, and the May 2021 flood. All event-related questions were based on a 4-point Likert-type scale, also created by the researcher (0 = "not at all," 2 = "neutral," 4 = "severely/immediately/a very long time"). The Traumatic Exposure Severity Scale, which the researcher adapted with permission to assess for degree of exposure, contained 17 questions relating to areas that include resource loss/being in need, damage to home and goods, personal harm, concern for significant others, and exposure to the grotesque; possible scores range from 0 to 68, in which higher scores indicate greater exposure. The Connor-Davidson Resilience Scale – 10, obtained with permission for use, contained 10 questions to assess for overall resilience. Possible scores range from 0 to 40, in which higher scores indicate higher resilience. Finally, the debriefing form explained the intent of the study, provided the experimenter's contact information, and provided participants with information regarding the McNeese Counseling Center. Finally, the sign out sheet indicated that the participants received debriefing forms, read it, and understood its contents.

Procedure

Participants completed the study in person in a McNeese State University classroom. First, the experimenter confirmed that the participants were present to partake in the study and welcomed them, then distributed informed consent forms to participants and read the information on the form aloud. Participants were then asked if they had any questions regarding informed consent, and then received instruction to sign and date the informed consent. Once all were completed, participants passed the forms forward to be collected by the researcher. Next, the researcher informed participants that they were to receive packets containing three questionnaires and that they should read each question carefully and answer accordingly. He then instructed them not to write their names or any identifying information on the forms. Then, the packets were distributed, which contained demographic questionnaires, Traumatic Exposure Severity Scales, and the CD-RISC scales.

Upon participants' completion of the packets, they submitted their forms, and received the debriefing form. Participants had the opportunity to ask questions regarding the study, and retained the debriefing forms. Upon dismissal, participants printed their name on a sign-out sheet for SONA credit.

RESULTS

The analyses include observations from the results of the overall sample and a subset of the sample, which included participants who identified as primary residents of Lake Charles or a surrounding community at the time of the disasters, to be referenced as residents of the Lake Area.

Multiple Regression Analyses for Resilience

In order to examine the predictive relationship between resilience and COVID, Hurricane Laura, Hurricane Delta, the winter storm, and the May flood, a multiple regression analysis was conducted, with resilience scores as the criterion variable and each natural disaster as the predictor variables. The results of the multiple regression analysis for data from all 85 participants indicated no overall significant effects $F(5, 79) = 1.409$, $p > 0.05$, $R^2 = 0.08$ (See Table 3.1). However, the relationship between COVID and resilience showed a relationship that was approaching significance ($\beta = -0.25$, $t(79) = -2.09$, $p > 0.05$). Additionally, significant correlations appeared between Hurricane Laura and Hurricane Delta ($r = 0.66$, $p < 0.05$), and the winter storm and May flood ($r = 0.63$, $p < 0.05$).

Table 3.1

Correlation Matrix for Entire Sample; Overall Resilience by Event

		COVID	Laura	Delta	Winter Storm	May Flood
Correlation	Resilience	-0.133	0.174	0.133	0.073	0.085
	COVID	—	0.375*	0.233*	0.251*	0.305*
	Laura	—	—	0.662*	0.297*	0.356*
	Delta	—	—	—	0.434*	0.531*
	Winter Storm	—	—	—	—	0.625*

Note. Pearson Correlation Coefficients and p-values for resilience by event for the entire sample.

*$p < 0.05$

To further explore the possibility of differences between resilience for all participants and residents of the Lake Area only, an additional multiple regression analysis was conducted for all predictor variables. Results also indicated no significant relationships, $F(4, 47) = 2.51$, $p > 0.05$, $R^2 = 0.18$ for residents of the Lake Area (see Table 3.2). However, like the results from the entire sample, COVID was determined to be of note in this subset of the sample ($\beta = -0.35$, $t(47) = -$

2.46, $p > 0.05$). As with the prior analysis of the entire sample, the Lake Area subset showed a significant correlation between Hurricane Laura and Hurricane Delta $r = 0.77$, $p < 0.05$.

Table 3.2

Correlation Matrix for Lake Area Residents; Overall Resilience by Event

		COVID	Laura	Delta	Winter Storm	May Flood
Correlation	Resilience	-0.199	0.234*	0.209	0.201	0.122
	COVID	—	0.337*	0.232*	0.285*	0.382*
	Laura	—	—	0.769*	0.367*	0.484*
	Delta	—	—	—	0.481*	0.555*
	Winter Storm	—	—	—	—	0.493*

Note. Pearson Correlation Coefficients and p-values for resilience by event for residents of the

Lake Area. *$p < 0.05$.

Multiple Regression Analyses for Traumatic Exposure

Next, to examine the predictive relationship between traumatic exposure and COVID, Hurricane Laura, Hurricane Delta, the winter storm, and the May flood for the overall sample, another multiple regression analysis was conducted with exposure scores as the criterion variable and each natural disaster as predictor variables. Data for each event were collected via a demographic questionnaire which assessed exposure during each of the noted events (See Table 3.3). The overall regression showed a significant effect, $F(5, 79) = 13.25$, $p < 0.05$, $R^2 = 0.46$. Of the predictor variables, both COVID ($\beta = 0.39$, $t(79) = 4.19$, $p < 0.05$) and Hurricane Laura ($\beta = 0.29$, $t(79) = 2.45$, $p < 0.05$) showed significant effects. Additionally, significant correlations appeared between Hurricane Delta and Hurricane Laura ($r = 0.66$, $p < 0.05$), Hurricane Delta and the May flood ($r = 0.53$, p < 0.05), and the winter storm and the May flood ($r = 0.63$, $p < 0.05$).

Table 3.3

Correlation Matrix for Entire Sample; Overall Traumatic Exposure by Event

		COVID	Laura	Delta	Winter Storm	May Flood
Correlation	Traumatic Exposure	0.545*	0.549*	0.454*	0.279*	0.360*
	COVID	—	0.375*	0.233*	0.251*	0.305*

Laura	—	0.662*	0.297*	0.356*
Delta		—	0.434*	0.531*
Winter Storm			—	0.625*

Note. Pearson Correlation Coefficients and p-values for traumatic exposure by event for the entire sample. *$p < 0.05$

To check for differences in traumatic exposure for residents of the Lake Area only, a fourth multiple regression was conducted for all predictor variables. The overall regression analysis for the Lake Area residents showed a significant relationship, $F(4,47) = 18$, $p < 0.05$, $R^2 = 0.60$ (See Table 3.4). The one-tailed significance levels for each of the events were less than $p = 0.05$.

Table 3.4

Correlation Matrix for Lake Area Residents; Overall Traumatic Exposure by Event

		COVID	Laura	Delta	Winter Storm	May Flood
Correlation	Traumatic Exposure	0.644*	0.556*	0.567*	0.403*	0.503*
	COVID	—	0.337*	0.232*	0.285*	0.382*
	Laura	—	—	0.769*	0.367*	0.484*
	Delta	—	—	—	0.481*	0.555*
	Winter Storm	—	—	—	—	0.493*

Note. Correlation Coefficients and p-values for traumatic exposure by event for residents of the Lake Area. *$p < 0.05$

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DISCUSSION

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To test the hypothesis, the researcher conduced multiple regression analyses utilizing resilience and traumatic exposure as the criterion variables and each of the five natural disasters as the predictor variables using data from all 85 participants. Further analyses examined data from participants who identified as primary residents of the Lake Area.

Resilience

Examination of the results from the entire sample regarding resilience presented findings of note. Although the analyses showed no significant relationships between the factors and resilience, there was a weak negative correlation between COVID-19 and resilience $r(83) = -$

0.133, $p > 0.05$. In addition, the relationship between Hurricane Laura and resilience approached significance ($p = 0.055$).

Findings for resilience yielded from residents of the Lake Area, revealed a weak negative correlation between COVID-19 and resilience $r(52) = -0.199$, $p > 0.05$. Similar to findings from the entire sample, residents of the Lake Area also indicated a correlation between the two hurricanes $r(52) = 0.769$, $p < 0.05$.

Traumatic Exposure

Despite the lack of support for the hypothesis, interesting trends and relationships between other variables of interest appeared. For example, in the analysis for traumatic exposure from each of the five events for all 85 participants, results indicate that p-values from one-tail significance tests all fall well within the range of significant differences for each event. A further exploration of the correlations between each event indicate significant relationships between event types; $r(83) = 0.662$, $p < 0.05$ between Hurricanes Laura and Delta, $r(83) = 0.531$, $p < 0.05$ between the May Flood and Hurricane Delta, and $r(83) = 0.625$, $p < 0.05$ between the winter storm and May flood. The relationships among each of the three listed events appear to share the common factor of rainfall, especially for Hurricane Delta and the May flood, whereas the relationships for Hurricanes Laura and Delta may lie in the factor of a significant wind event.

Next, in the analysis of traumatic exposure to each of the listed events for residents of Lake Charles and surrounding communities, substantial relationships between events appeared. For instance, an even stronger correlation appeared between Hurricanes Laura and Delta for residents of the Lake Area than for the entire sample, $r(47) = 0.769$, $p < 0.05$. Most strikingly, a particularly strong relationship appeared between the May flood and the winter storm $r(47) = 0.493$, $p < 0.05$. The meaning of this relationship is unclear; however, the shared factor between the two variables may be time. At the onset of the winter storm and May flood, residents of the Lake Area had already experienced COVID as well as Hurricanes Laura and Delta. This value is perhaps an illustration of the compounding or synergistic effects of perceived trauma, or sensitivity to trauma, toward the end of an examined sequence of traumatic events. Further, results show the experience of COVID-19 to be of note for both residents of the Lake Area $r(47) = 0.664$, $p < 0.05$, and for the entire sample $r(83) = 0.545$, $p = 0.05$.

General Findings

Although the results of the study failed to support the hypothesis, there does appear to be some value to the absence of significant relationships for resilience in college students. Of note, the mean resilience scores for the sample aligned with the mean national resilience scores in college students (Bonanno, 2021). Such findings may suggest that resilience is not as significantly hampered as predicted by a rapid succession of naturally occurring adversity in the form of a global pandemic, two major hurricanes, a significant winter storm, and early summer monsoonal flood. Although these findings are of importance to clinical practitioners and both basic and applied researchers, it is important to note that there was a slight negative relationship noted between COVID-19 and resilience for the subpart of the sample from the Lake Area. It is

possible that with a larger sample size that was more representative of the population, significant relationships may have appeared between resilience and traumatic exposure.

However, it is clear that trauma alone, transcends location. Both the entire sample and the subpart from the Lake Area identified experiencing trauma throughout the succession of events being studied. Specifically, there is a particularly noteworthy relationship between the winter storm and May flood for Lake Area residents. Clinical practitioners may view these findings as illustrative of the need for increased trauma-focused education and mental healthcare services in the wake of not only one large-scale traumatic event, but especially a succession of them. Regarding implications for researchers, findings from this study should be viewed as early foundational knowledge in the pursuit of knowledge regarding the topics. To date, there have been no psychology-based studies that examine the factor load involved in this study.

LIMITATIONS

A noteworthy limitation of this study lies in its sampling and overall design. Findings in a review by Galatzer-Levy et al., (2018) suggested that post-event sampling of trauma reactions, without baseline data to assess for pre-existing psychological distress, tends to bias perceived estimates of the impact of the traumatic event toward greater psychopathology. This finding is reasonable, considering that individual recollections of events more closely approximate a cognitive reconstruction of the event, and are not necessarily always accurate.

It should be noted that the psychometric properties of the revised version of the TESS are unknown. The researcher revised the instrument to better capture the broad array of exposures possible in the contact of the variables. Although this revision better adapts the instrument for this particular use, it is not immediately clear how such changes impacted the reliability and validity of the measures.

Another particularly significant limitation of the study is that it fails to capture responses from members of the Lake Area who have relocated during the sequence of natural disasters. As previously referenced, between 6% and 7% of the population have relocated since the onset of the disasters; data from them may have altered the results of the study in some way. It is however unclear the directionality of any potential differences regarding to resilience or traumatic exposure for those individuals, as it is not immediately clear if they have relocated as a result of decreased resilience, increased resilience, or otherwise.

Finally, it must be noted that the study was carried out during the Fall, 2021 semester at a university in Southwest Louisiana which experienced two NOAA issued hurricane watches around the time of data collection. The experience of additional stressors associated with these two hurricane watches around the time of data collection may have altered the reported levels of resilience and trauma exposure in some way. It is unclear, however, the directionality of any influences these additional events had on self-report measures.

IMPLICATIONS FOR FUTURE RESEARCH

To date, there do not appear to be any published studies with specific regard to resilience after the series of stacked disasters experienced in southwest Louisiana. Because of this, the possibilities for expansion of the current findings for future research are nearly boundless, and many adaptations and extensions are necessary for both scholarly understanding and clinical mental health providers. The latter may be especially true regarding college students, which belong to a historically underrepresented population in resilience research.

Qualitative research focused on resilience in the wake of stacked disasters may prove to be especially illuminating of these issues, as this methodology would provide a particularly rich view of the data from the population that quantitative research may not capture. In doing so, patterns of responses between individuals who experienced the events in interest are likely to arise, yielding further need for exploration and close examination.

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