

# Recovery and Trauma Among Urban African Americans With Serious Mental Illness

Patrick W. Corrigan, Miranda Twiss, Katherine Nieweglowski, Lindsay Sheehan, and The Behaviors for Healthy Lifestyle Community-Based Participatory Research Team  
Department of Psychology, Illinois Institute of Technology

**Objective:** Traumatic experiences are prevalent among people with serious mental illness and can significantly worsen outcomes. This study aimed to identify an urban cluster of trauma types, compare continuous distress ratings versus categorical experience of trauma for predicting outcomes such as depression and quality of life, and investigate the mediating role of recovery orientation in the impact of trauma exposure on outcomes. **Method:** Data came from an intervention study on African Americans with serious mental illness living in a large urban area; 212 participants completed baseline self-report measures of past trauma experiences, related distress levels, recovery, depression, and quality of life. Data were assessed using correlations and regressive path modeling. **Results:** Overall, 56.6% of participants reported experiences with trauma. Analyses suggested an urban cluster of trauma types that was self-reported by over 25% of participants. Distress due to trauma strongly correlated with greater depression as well as reduced quality of life and recovery. Interestingly, the categorical presence of trauma history (yes/no) had no significant relationship with any outcomes. Path analyses revealed that recovery mediated the impact of trauma distress on depression and quality of life, specifically implicating the recovery subfactor of hope. **Conclusions and Implications for Practice:** Results suggested that cognitive reframing focused on positive appraisals of overall recovery, and the hope subfactor can have a positive influence on trauma outcomes. The study supported the role of recovery in posttraumatic growth and suggests that hope can be used to help patients process trauma healthily.

## Impact and Implications

This study identified a cluster of traumas commonly experienced by urban African Americans with serious mental illness. Distress ratings—but not categorical presence of trauma history—predicted outcomes of depression and reduced quality of life, mediated by cognitive appraisal of recovery and specifically the hope subfactor of hope. Practitioners might use cognitive reframing toward schemas of recovery and hope to facilitate posttraumatic growth and improve patient outcomes. Research should further examine trauma clusters and their impact on outcomes.

**Keywords:** trauma, recovery, serious mental illness, posttraumatic growth, distress

Trauma is widely experienced by people with serious mental illness (SMI), further exacerbating their negative outcomes. In this article, we examined the effects of traumatic experiences and subsequent distress on common outcomes such as depression and quality of life. Recovery, a proxy for cognitive appraisal of the traumatic event, was hypothesized to be a protective factor. Recovery here referred to self-reported goal aspiration despite

recurring symptoms or disabilities. Schemas that developed through perceptions of recovery, such as those related to hope, could reduce trauma's impact on negative outcomes. In this article, we specifically examined the mediating effect of recovery on trauma's relationship with depression and diminished quality of life. This study was being done on an urban sample of African Americans with SMI.

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Miranda Twiss  <https://orcid.org/0009-0007-8657-3385>

The Behaviors for Healthy Lifestyle Community-Based Participatory Research team comprised six people with lived experience of recovery who partnered with study researchers over the 5-year course of the study.

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Correspondence concerning this article should be addressed to Miranda Twiss, Department of Psychology, Illinois Institute of Technology, 10 West 35th Street, Chicago, IL 60616, United States. Email: [mtwiss@iit.edu](mailto:mtwiss@iit.edu)

Epidemiological research suggested about 16% of the population experience potentially traumatic events in their lifetime (Mills et al., 2011). Trauma was defined as significant distress resulting from a discrete event or set of events that yielded enduring emotional and cognitive problems. The prevalence of trauma exposure among people with SMI was much higher, ranging from 49% to 100% (Grubaugh et al., 2011). More specifically, lifetime exposure to traumatic events ranged from 89% in one study on people with severe mood disorders (Lu et al., 2008) to 96% in a group of women with schizophrenia spectrum disorders (Garon et al., 2003). The frequency of traumatic events was similarly prominent among subgroups of persons with SMI: of people with SMI on probation, over 85% reported past traumatic events (Givens & Cuddeback, 2021).

Trauma has a significant impact on the experiences and course of SMI. Discrete trauma experiences among people with SMI led to even higher rates of symptoms, especially depression, as well as diminished well-being as assessed by quality of life (Ford et al., 2015, 2017). Posttraumatic stress disorder (PTSD) in people with SMI was associated with more recent psychiatric hospitalizations, more health problems, more visits to doctors for health problems, and more nonpsychiatric hospitalizations over the past year (Mueser et al., 2004). PTSD may also contribute to substance abuse (Mueser et al., 2004). Rates of PTSD varied by poverty, homelessness, and current employment (Mueser et al., 2004).

The effects of a traumatic event depend on whether the person experienced the event directly or vicariously, such as witnessing or hearing about the event. The range of possible traumatizing events was broad, including combat, natural disasters, and a slew of experiences related to crime victimization. Research shows that trauma's impact varied by type of experience, with differences observed for man-made versus natural disasters (Reifels et al., 2019) as well as violent versus nonviolent events. Violence was associated with a higher likelihood in the general population that the event was considered traumatic leading to an increase in subsequent trauma-related symptoms (Kimerling et al., 2007; Rasmussen et al., 2007). Of note, certain types of violent traumas—such as combat, gun violence, interpersonal violence, and witnessed violence—were reported at higher rates in African Americans compared to White Americans (Alegría et al., 2013; Roberts et al., 2011). Lower socioeconomic status was similarly associated with a greater number of traumatic experiences involving violence, as well as a higher lifetime prevalence of trauma exposure overall (Hatch & Dohrenwend, 2007). In this light, we proposed an urban cluster with a focus on types of traumas experienced by people of color in poverty. This cluster included the two sides of urban crime—victimization and the incarceration experienced by arrestees—plus indicators of neighborhood poverty. One goal of this article was to determine the impact of urban trauma on a group of African Americans with SMI.

Despite high odds ratios (Reifels et al., 2019), experience of trauma did not necessarily lead to PTSD. PTSD was defined by *Diagnostic and Statistical Manual of Mental Disorders* as a syndrome that can result from traumatic experiences wherein uncontrollable stress reactions continue long after the event is over. Results from a large-scale epidemiologic survey indicated that African Americans are at higher risk of developing PTSD following exposure to trauma compared to other demographics (Roberts et al., 2011). Some research suggests PTSD occurred at a higher rate among people with SMI (see Mueser et al., 2004), while other studies found that PTSD was often underdiagnosed in this group (Alexander et al., 2016; Cusack et al., 2006). Because traumatizing events did not

always convert to PTSD, research had also examined the direct effect of trauma experiences, separate from subsequent PTSD, on symptom and well-being correlates. Trauma experiences in the general population have been associated with lifetime risk of obsessive-compulsive disorder ( $OR = 1.95$ ), depression ( $OR = 1.69$ ), and alcohol use disorder ( $OR = 2.29$ ; Reifels et al., 2019). Trauma history was found to be significantly associated with depression and suicide among veterans (Fijtman et al., 2023). Moreover, a history of child physical or sexual abuse was associated with significant depressive symptoms and worse health and well-being (Subica, 2013).

Research suggests the individual's *interpretation* of the traumatic event, in addition to the traumatic event per se, explained enduring disruptions reflected in symptoms and diminished quality of life (Sherrer, 2011). Cognitive appraisal influenced one's long-term response; these appraisals were framed by individual schemas that may reflect resilient responses to life's challenges (Sanchez-Gomez et al., 2021). Perceptions of and experiences with recovery seemed to influence resilience schemas. Van Weeghel et al. (2019) organized the elements of recovery into five subsets: connectedness, hope, identity, meaning, and empowerment (CHIME); their model was supported by a systematic review of 25 journal articles. Among recovery subfactors, hope may be especially important for mediating the effects of trauma (Jittayuthd & Karl, 2022; Sympson, 2000).

The goal of this study was to examine the pattern of traumatic events and corresponding distress among African Americans with SMI living in a large urban area. We expected to find an urban trauma cluster. We believed self-report of current distress due to trauma would be better associated with outcomes and recovery as a mediator than a categorical yes/no report of experience. We also expected mediational analyses to support an indirect effect for recovery, and more specifically hope, on depression and quality of life.

## Method

Data for this article came from baseline findings of the Behaviors for Healthy Lifestyles project, a study funded by the National Institute on Minority Health and Health Disparities (MD010541-01) examining health concerns of African Americans with SMI living in Chicago. The project was conducted by a community-based participatory research team of African Americans with SMI and physical health concerns (Corrigan et al., 2015). All human subject protections were approved by the Institutional Review Board at the Illinois Institute of Technology including assurances about informed consent, confidentiality, and anonymity of participants.

Selection criteria for research participants included people who identify as African American with SMI and physical health concerns; they were recruited from three psychiatric rehabilitation programs in Chicago. In a face-to-face interview (which transitioned online in March 2020 due to COVID-19 health protocol), participants answered items reflecting demographics including age, gender identity, race/ethnic identity (if any, in addition to African American), marital status, employment, and education. Research participants then completed four standardized assessments corresponding with the central constructs of this article.

## Trauma History Questionnaire

The Trauma History Questionnaire (THQ; Green, 1996) measures types of traumas (Grubaugh et al., 2011; Maniglio, 2011) with

excellent interrater reliability and moderate to high test–retest reliability (Hooper et al., 2011). It was selected for this study because it has been the standard bearer in previous research on trauma and mental illness (Mueser et al., 2001, 2004). The THQ consisted of 19 yes/no questions addressing varied areas of traumatic events occurring across the lifetime, including disasters and general trauma (e.g., injury, natural or man-made disaster), victimization, poverty (homelessness), and disease/accident (Hooper et al., 2011). In response to “yes” answers, respondents were asked whether the event happened to them, was witnessed, was learned third hand, and/or was part of one’s job. Participants then rated the degree to which “thinking about the event now” caused them distress on a 7-point Likert scale (7 = *worst possible distress*).

### Recovery Assessment Scale–Revised

The Recovery Assessment Scale–Revised (RAS-R) was a 24-item measure with individual items representing aspects of recovery that parallel CHIME (Corrigan et al., 2004; Salzer & Brusilovskiy, 2014). Participants responded to items on a 5-point agreement scale (5 = *strongly agree*), for example, “I have my own plan for how to stay or become well.” The scale had five factors: hope, willingness to ask for help, goal and success orientation, reliance on others, and not being dominated by symptoms. Individual items were summed into the five factor scores. Higher scores indicated greater endorsement of each recovery factor.

### Center for Epidemiological Studies Depression Scale–Revised

The Center for Epidemiological Studies Depression scale comprised items reflecting the experience of depressive symptoms (e.g., restless sleep, poor appetite, and feeling lonely) over the past week on a 3-point Likert scale (Radloff, 1977). It was revised to a 20-item version (Eaton et al., 2004) with psychometrics supported in a large-scale community sample ( $N = 7,389$ ; Van Dam & Earleywine, 2011). Items are summed to yield a single overall score for depression.

### Quality of Life Scale

The Quality of Life Scale (QLS) was a six-item questionnaire assessing general and domain-specific life experiences (Corrigan & Buican, 1995; Lehman, 1988), for example, “Please tell me how your life is as a whole.” Items are answered on a 7-point scale (7 = *delighted*) with a total score representing the sum of scale items. The QLS had demonstrated construct validity for people with SMI through positive relationships with recovery and empowerment (Corrigan & Buican, 1995).

### Data Analyses

Missing data were assessed, and mean of nearby points were determined for research participants who failed to answer individual items within a measure. The normality of items after imputation was assessed for skew and kurtosis. Analyses of THQ data were limited to responses in which participants said they directly experienced the traumatic event. In addition to examining correlates to this yes/no answer, we examined the impact of distress as rated on a 7-point scale.

The frequency of overall trauma experiences, in addition to the frequency of each kind of traumatic event, was determined as a ratio of individual positive responses to the total number of research participants. Means and standard deviations of distress were limited to trauma categories to which more than 25% of research participants responded affirmatively; events with less than 25% affirmative responses are underpowered for additional analyses. Effects of the categorical yes/no responses were assessed in between-group analyses of variance for depression, quality of life, and overall recovery. Effects due to trauma distress were examined in Pearson product-moment correlations for the same three outcomes, plus for each of the five RAS-R subfactors. The mediating effects of recovery were examined using Hayes’s (2022) PROCESS macro for mediation, moderation, and conditional process analysis.

## Results

A total of 234 participants were recruited and screened; 21 of these were excluded because they did not meet the criteria for existing health or mental health challenges. Further examination of the data determined only 22.5% ( $n = 48$ ) of cases were missing. Distribution normality was examined in terms of skew and kurtosis. Skewness for variables ranged from  $-0.94$  to  $+0.54$ , and kurtosis ranged from  $-1.05$  to  $+1.26$ , which are within the criteria for normal distribution (Tabachnick & Fidell, 2013). Thus, data transformations were not needed. Prior to running any analyses, the reliability of key outcomes was examined across baseline and 8-month time points. All measures demonstrated a moderate to strong level of reliability: quality of life ( $\alpha = .837, .831$ ) and recovery ( $\alpha = .894, .914$ ).

### Sample Characteristics

Table 1 summarizes the means and standard deviations or frequencies of demographic variables. The mean age was 51.4 years ( $SD = 9.3$ ), and the sample was 58.0% female. Research participants identified multiple psychiatric diagnoses; the most frequent were major depressive disorder, bipolar disorder, and anxiety disorder. Co-occurring substance use was reported by 13.7% of the sample. In addition to being African American, some participants also identified themselves as mostly White Americans (7.1%) or American Indian/Alaskan Native (5.7%). Only 4.7% of participants identified as Hispanic/Latinx. About two thirds of the sample reported they were single, 70.8% were unemployed, and 70.3% had a high school diploma or higher.

### Trauma Experience Versus Trauma Distress

Table 2 summarizes frequencies in which research participants reported they had directly experienced each of the 19 events in the THQ. The six events that were the most affirmed, in this case, by 25% or more of the sample, represented what we have labeled the urban cluster: physical assault, assault with a weapon, sexual assault, incarceration, homelessness, and neighborhood violence. Means and standard deviations of distress were then determined for this smaller set; we excluded the statistics for other traumatic events because of the small  $n$ . Note that sexual assault was rated as the most distressing; we were unable to test this difference statistically because almost no one responded affirmatively to all six events. Overall, 56.6% of participants reported that they had experienced at

**Table 1**  
*Sociodemographic Characteristics of Sample*

Characteristic	<i>n</i> (%)
Age— <i>M</i> ( <i>SD</i> )	51.4 (9.3)
Gender	
Male	88 (41.5)
Female	123 (58.0)
Transgender female	1 (0.5)
Current mental illness <sup>a</sup>	
Adult attention deficit disorder	5 (2.4)
Anxiety disorder	87 (41.0)
Bipolar disorder	94 (44.3)
Major depressive disorder	136 (64.2)
Obsessive-compulsive disorder	9 (4.2)
Panic disorder	29 (13.7)
Personality disorder	10 (4.7)
Posttraumatic stress disorder	43 (20.3)
Schizophrenia	62 (29.2)
Schizoaffective disorder	22 (10.4)
Phobia	13 (6.1)
Other	12 (5.7)
Substance use disorder	
No	183 (86.3)
Yes	29 (13.7)
Race/ethnicity (in addition to African American) <sup>b</sup>	
American Indian/Alaskan Native	12 (5.7)
Asian	2 (0.9)
White American	15 (7.1)
Native Hawaiian/Pacific Islander	3 (1.4)
Other	8 (3.8)
Hispanic/Latino	
No	202 (95.3)
Yes	10 (4.7)
Sexual orientation	
Heterosexual	177 (83.5)
Bisexual	16 (7.5)
Gay	12 (5.7)
Lesbian	4 (1.9)
Other	2 (0.9)
Prefer not to answer	1 (0.5)
Marital status	
Single/never married	140 (66.7)
Married	9 (4.3)
Unmarried partners	4 (1.9)
Widowed	18 (8.6)
Separated	7 (3.3)
Divorced	32 (15.2)
Prefer not to answer	2 (0.9)
Employment status <sup>a</sup>	
Full-time	9 (4.2)
Part-time	27 (12.7)
Retired	16 (7.5)
Attending school	9 (4.2)
Unemployed	150 (70.8)
Volunteer	26 (12.3)
“Under the table” work	6 (2.8)
Other	8 (3.8)
Education	
Less than high school	11 (5.2)
Some high school	51 (24.2)
High school diploma/GED	44 (20.9)
Some college	71 (33.6)
Associate’s degree	19 (9.0)

(table continues)

**Table 1** (continued)

Characteristic	<i>n</i> (%)
Bachelor’s degree	8 (3.8)
Some graduate school	1 (0.5)
Graduate/professional degree	6 (2.8)
Prefer not to answer	1 (0.5)

*Note.* *N* = 212. Number of research participants is provided next to each categorical demographic followed by the percent of the total sample in parentheses. GED = general equivalency diploma.

<sup>a</sup>Participants could select more than one option, so total percentage may exceed 100. <sup>b</sup>Participants only answered if they identified as a race other than African American, so total percentage is less than 100.

least one traumatic event, which corresponded with a mean distress score of 4.47.

Table 3 lists means and standard deviations of depression, quality of life, and overall recovery across yes/no responses for overall lifetime experiences of trauma as well as for the six most frequent events. Note that previous experience with *any* traumatic event per se was not associated with depression, quality of life, or recovery. Physical assault was shown to be associated with greater depression, lower quality of life, and lower overall recovery. Neighborhood violence showed similar patterns in two of the three outcomes: greater depression and lower recovery.

Table 4 summarizes Pearson product-moment correlations between distress about traumatic events and the three outcomes. Total distress due to trauma was found to be associated with greater depression as well as lower quality of life and less recovery. Of the specific traumatic events, only two showed clear correlations with outcomes: distress from physical assault was associated with lesser overall recovery and distress from sexual assault was associated with greater depression. Table 5 shows correlation coefficients between distress and the five subscales of the RAS-R. As expected, total distress from all traumas was significant and inversely associated with the hope factor of the RAS-R, as was distress due to past physical assault—though of note, these did not meet the Bonferroni criterion for significance. Only one of the remaining correlations was significant: Trauma due to incarceration was associated with lower ratings of not being dominated by symptoms. In addition, the bottom two rows of Table 5 show correlation coefficients between the outcome indicators of depression and quality of life with recovery and its subfactors. As expected, correlations between depression and the five RAS factors were robust and negative, while those with quality of life were significant and positive. The correlation of overall recovery with the two outcomes was equally significant: depression ( $r = -.511, p < .001$ ) and quality of life ( $r = -.575, p < .001$ ).

## Mediation Effects

Findings from the regression equations testing recovery as a mediator between trauma distress and outcome (depression or quality of life) were summarized in Figures 1 and 2. Note that path



**Table 2**

*Frequency and Subsequent Distress of Direct Trauma in African Americans With Serious Mental Illness*

Type of trauma	Percent reported "yes" (n)	Distress <i>M</i> ( <i>SD</i> )
Overall (any trauma)	56.6% (120)	4.47 (1.74)
Natural disaster	6.6% (14)	
Fire or explosion	15.6% (33)	
Transport accident	24.5% (52)	
Serious accident	10.8% (23)	
Exposure to toxins	5.7% (12)	
Physical assault	36.8% (78)	4.62 (2.31)
Assault with weapon	26.4% (56)	4.59 (2.32)
Sexual assault	30.2% (64)	5.38 (2.11)
Other sexual experience	19.3% (41)	
Combat/war zone	0.9% (2)	
Captivity, for example, abduction	9.0% (20)	
Life threat illness/injury	17.0% (36)	
Severe human suffering	11.3% (24)	
Serious harm caused to other	9.4% (20)	
Incarceration	29.2% (62)	3.98 (2.49)
Homelessness	41.0% (87)	4.78 (2.36)
Involuntary hospital	21.2% (45)	
Neighborhood violence	28.8% (61)	4.61 (2.32)
Other stressful events	8.0% (17)	

models were limited to overall recovery and the hope subfactor because they were the only variables that correlated significantly with outcomes. The first two paths in Figure 1 examine the mediating effects of (a) overall recovery and (b) the hope subscale of recovery on the relationship between trauma and *depression*, while the latter two paths in Figure 2 examine the mediating effects of recovery and recovery-hope on trauma and *quality of life*. In all cases, indirect paths through recovery (total score or the subfactor of hope) were significant. Specifically, the top path in Figure 1 shows significant inverse relationships for trauma and total recovery, as well as total recovery and depression. The direct effect between trauma distress and depression was significant. The index for total indirect effect was .05 with confidence intervals supporting the hypothesis of significant indirect effect. Similar findings emerged for the second path in

Figure 1, with the expected significant relationships between trauma, recovery-hope, and depression. Once again, the direct effect between trauma distress and depression was significant. The index for total indirect effect was .04, with confidence intervals again supporting the hypothesis.

Similar support was found for the two recovery indices as mediators between trauma distress and quality of life in Figure 2. The first path showed a significant inverse correlation between trauma and total recovery and a significant positive relationship between total recovery and quality of life. The total indirect effect was  $-.05$  with confidence intervals supporting the hypothesis. Finally, the paths between trauma distress and recovery-hope and between recovery-hope and quality of life were both significant and in the expected direction. Confidence intervals supported a hypothesis of significant indirect effect.

## Discussion

This study examined overall recovery and the subfactor of hope as mediators of trauma's impact on depression and quality of life among African Americans with SMI. Almost 60% of participants reported at least one traumatic experience, a frequency higher than the general population (Mills et al., 2011) but within the range for people with SMI (Grubaugh et al., 2011). Using affirmations from 25% of the sample as the cut point, six events were endorsed that represent a cluster of experiences common in large metropolitan areas that struggle with poverty: physical assault, assault with a weapon, sexual assault, incarceration, homelessness, and neighborhood violence. Sexual assault was reported as most distressing, though sample size and distribution prevented an inferential test of this finding.

One goal of this study was to determine how categorical yes/no reports of trauma, compared to continuous ratings of trauma distress, were associated with depression, quality of life, and recovery. Findings showed that categorical lifetime experience of any trauma was not associated with greater depression or lower quality of life and recovery. Specific violent events were related in two cases: Physical assault and neighborhood violence were associated with worse symptoms and diminished well-being. Surprisingly, no such

**Table 3**

*The Impact of Trauma on Depression, Quality of Life, and Recovery*

Direct trauma		Depression			Quality of life			Recovery		
Type	Reported	<i>M</i> ( <i>SD</i> )	<i>F</i> (1, 210)	<i>p</i>	<i>M</i> ( <i>SD</i> )	<i>F</i> (1, 210)	<i>p</i>	<i>M</i> ( <i>SD</i> )	<i>F</i> (1, 210)	<i>p</i>
Overall (any trauma)	Yes	23.69 (11.49)	0.637	.426	27.07 (8.05)	0.096	.757	96.15 (13.96)	0.017	.897
	No	22.45 (10.93)			27.38 (6.37)			96.37 (10.67)		
Physical assault	Yes	26.11 (12.04)	8.893	.003	25.40 (8.00)	7.695	.006	93.69 (14.26)	5.180	.024
	No	21.43 (10.41)			28.26 (6.76)			97.73 (11.33)		
Assault with weapon	Yes	24.14 (12.25)	0.593	.442	26.93 (7.80)	0.106	.745	97.01 (13.94)	0.279	.598
	No	22.79 (10.87)			27.30 (7.20)			95.97 (12.13)		
Sexual assault	Yes	23.89 (11.33)	0.393	.531	26.71 (7.70)	0.405	.525	97.10 (12.35)	0.423	.516
	No	22.83 (11.23)			27.42 (7.21)			95.87 (12.75)		
Incarceration	Yes	24.23 (11.58)	0.802	.371	26.58 (7.88)	0.621	.431	94.81 (15.34)	1.140	.287
	No	22.71 (11.11)			27.46 (7.13)			96.84 (11.29)		
Homelessness	Yes	24.66 (11.90)	2.668	.104	26.39 (8.09)	1.814	.179	96.45 (14.10)	0.039	.845
	No	22.10 (10.68)			27.77 (6.76)			96.10 (11.51)		
Neighborhood violence	Yes	26.28 (11.54)	6.820	.010	25.91 (7.67)	2.695	.102	93.25 (14.03)	4.919	.028
	No	21.89 (10.90)			27.73 (7.18)			97.45 (11.83)		

**Table 4***Correlations Between Trauma Distress and Depression, Quality of Life, and Recovery*

Distress from direct trauma	Depression	Quality of life	Recovery
Total distress	.285**	-.248**	-.221*
Distress due to physical assault	.201	-.103	-.246*
Distress due to assault with weapon	.115	-.060	-.182
Distress due to sexual assault	.379**	-.138	-.194
Distress due to incarceration	.111	-.175	-.223
Distress due to homelessness	.197	-.113	-.126
Distress due to neighborhood violence	.102	-.056	-.154

\*  $p < .05$ . \*\*  $p < .01$ .

relationship was found for assault with a weapon or sexual assault. Future research should examine this pattern; for example, based on other research, gender, age during the event, or frequency of specific events might moderate the impact of trauma (Hildebrand et al., 2016; Segalo, 2015). Separately, we examined the relationship of distress ratings with the three outcomes. Total distress, the sum of self-reported distress from each trauma event, was associated in expected directions with depression, quality of life, and recovery. Report of current distress due to previous traumatic events was associated with worse symptoms and well-being. Like the categorical difference analyses, distress from individual traumatic events was mostly not found to be associated with these outcomes. Later, we consider research strategies for subsequent studies to address this finding in the Limitations section.

Mediational analyses supported our hypotheses about recovery as a mediator. Overall recovery significantly mediated the effects of trauma on both depression and quality of life; the hope subfactor showed similar effects. Of note, this research was especially important because it focuses on trauma in an African American sample. In this article, we framed recovery and hope as schemas that may influence the cognitive appraisal of traumatizing events (Sherrer, 2011). Emotional processing theory was one model of cognitive appraisal related to trauma and PTSD where cognitive, behavioral, and physiological reactions interacted to form fear networks as a result of the trauma exposure (Foa et al., 2006; Foa & Kozak, 1986). Aspects of these fear networks were subsequently triggered, creating the symptoms that constitute PTSD. Posttraumatic growth (PTG) has emerged as an additional outcome of traumatizing

events, reflecting positive elements of recovery. PTG has been defined as positive psychological changes that may arise after trauma (Tedeschi & Calhoun, 2004); it was mediated by coping self-efficacy, core beliefs, and self-reported recovery (Ng et al., 2021).

### Limitations

Several limitations influenced the interpretation of the findings. Because of COVID-19, we moved from a face-to-face to virtual approach to collecting data. Research had begun to look at this impact on assessment with exemplary studies done in the education setting. Research showed the quality of testing on virtual platforms, compared to face-to-face, is hampered by unstable internet connections, lack of experience with e-testing, and open-ended questions (Plavsic et al., 2021; Saleem et al., 2021; Souleles et al., 2020). Future research needs to account for these differences in design and analyses. Research should continue studying mediators of trauma distress, including demographics relevant to events themselves, such as gender, age (during the event and at the time of response), and ethnicity (especially as social determinants of health and social disadvantage). Results showed preliminary support for an urban cluster of traumatic events reflecting common themes of violence and poverty; however, further analyses of both the urban cluster and distress mediators require larger subject samples, which are better powered for analyses and stratified to test for specific demographics. Existing nationwide epidemiological surveys, such as the National Comorbidity Survey: Baseline (Kessler, 2008) and its subsequent reinterview and replication (Alegria et al., 2016; Kessler, 2015), may provide data for these analyses. Finally,

**Table 5***Correlations of the Five Subscales of Recovery With Trauma Distress and Outcome Variables*

Measure	Hope	Willing to ask for help	Goal/success orientation	Reliance on others	Not dominated by symptoms
Distress from direct trauma					
Total	-.217*	-.077	-.159	-.151	-.124
Due to physical assault	-.246*	-.183	-.205	-.105	-.168
Due to assault with weapon	-.139	-.165	-.250	-.226	-.024
Due to sexual assault	-.118	-.059	-.116	-.232	-.149
Due to incarceration	-.153	-.221	-.208	-.036	-.341**
Due to homelessness	-.087	-.018	-.150	-.046	-.181
Due to neighborhood violence	-.179	-.118	.004	-.063	-.223
Outcome					
Depression (CESD)	-.477***	-.299***	-.303***	-.406***	-.336***
Quality of life	.503***	.310***	.365***	.537***	.345***

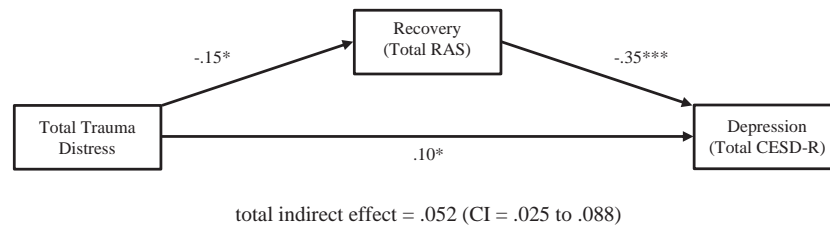
Note. CESD = Center for Epidemiological Studies Depression scale.

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

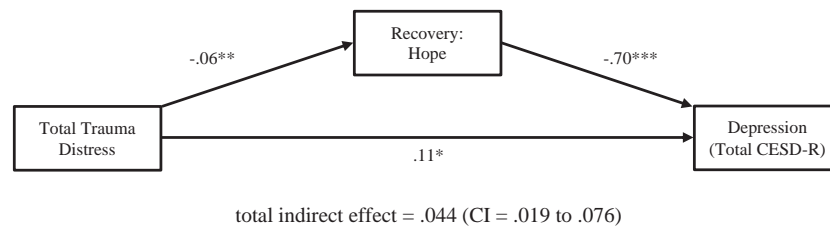
**Figure 1**

*Mediation Effects of Recovery on Trauma Distress and Depression Outcomes*

(a)



(b)



*Note.* (a) Overall recovery. (b) Hope subscale of recovery. RAS = Recovery Assessment Scale; CESD-R = Center for Epidemiological Studies Depression scale-Revised; CI = confidence interval. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

additional assertions about mediation are possible with a longitudinal design.

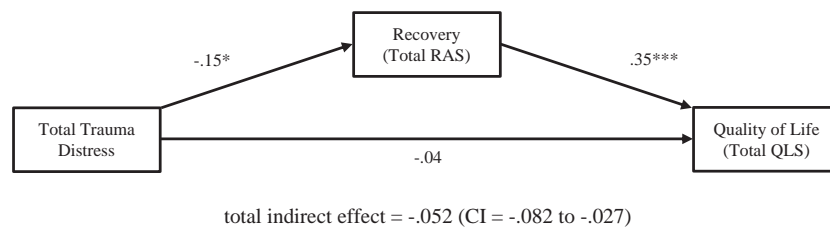
This study focused on trauma and recovery specifically among urban African Americans. Unfortunately, we were unable to stratify

on any demographics and hence are unable to determine the representativeness of the sample to Chicago specifically or the United States more generally. Future research should attempt strategic stratification to not only address representativeness of

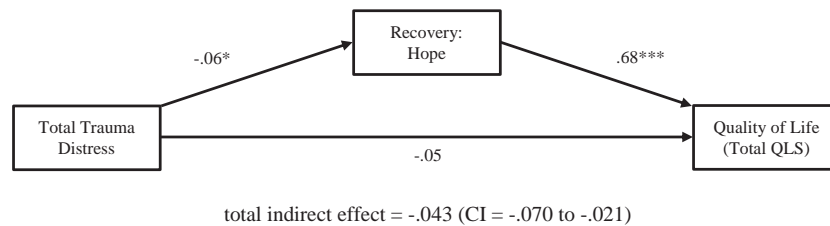
**Figure 2**

*Mediation Effects of Recovery on Trauma Distress and Quality of Life Outcomes*

(a)



(b)



*Note.* (a) Overall recovery. (b) Hope subscale of recovery. RAS = Recovery Assessment Scale; QLS = Quality of Life Scale; CI = confidence interval. \*  $p < .05$ . \*\*\*  $p < .001$ .

African Americans but even broader agenda across other ethnic groups, rural settings, or other important diversity factors.

## Implications

Recovery is an important target for interventions aiming to diminish the impact of traumatic events and PTSD, especially in ethnically diverse groups like African Americans. One study showed Wellness, Management, and Recovery may have a positive impact on trauma-related symptoms (Lee et al., 2016). The Trauma Recovery and Empowerment Model was an intervention tailored specifically for women who have experienced trauma and grounded in feminist and relational theory (Fallot & Harris, 2002; Harris & Anglin, 1998). The three phases focused on empowerment, trauma recovery, and advanced trauma recovery; key ingredients include psychoeducation, cognitive restructuring, skill building, and peer support. A systematic review of 12 outcome studies found that Trauma Recovery and Empowerment Model led to beneficial effects on anxiety, posttraumatic distress, psychological distress, and substance use. The Trauma Recovery Group was largely based on cognitive behavioral therapy and includes breathing retraining, education about PTSD, cognitive restructuring, coping skills training, and personal recovery planning (Mueser et al., 2007). Separate randomized trials showed that Trauma Recovery Group yielded significant benefits on PTSD symptoms for people with SMI (Mueser et al., 2008) and veterans (Sacks et al., 2017). Although recovery was a noted construct in both these studies, future research should seek to unpack recovery as described herein and in terms of CHIME.

Consideration of intersectionality further enhances the significance of these findings (Oexle & Corrigan, 2018). How does being a person with SMI and being African American impact both the interpretation of traumatic events as well as interventions meant to diminish their harmful effects? Answers to this require a balance between understanding the phenomenon at the *social* level—both the qualitative and quantitative nature of the cultural group of African Americans with mental illness who experience trauma—and at the *individual* level: What does it mean to individuals as they come to understand trauma's impact in their lives and ways to remedy it (Pickett, 2020)? Social-level analysis needs to focus on social determinants and social disadvantage including poverty and involvement in the criminal justice system. Individual-level variables need to unpack how psychological constructs related to trauma, like PTG, for example, impact the journey of an African American with SMI experiencing trauma (White et al., 2021). Competent service here eschews essentialism and promotes cultural humility (Zhu et al., 2023).

## References

- Alegría, M., Fortuna, L. R., Lin, J. Y., Norris, F. H., Gao, S., Takeuchi, D. T., Jackson, J. S., Shrout, P. E., & Valentine, A. (2013). Prevalence, risk, and correlates of posttraumatic stress disorder across ethnic and racial minority groups in the United States. *Medical Care*, 51(12), 1114–1123. <https://doi.org/10.1097/MLR.0000000000000007>
- Alegría, M., Jackson, J. S., Kessler, R. C., & Takeuchi, D. (2016). *Collaborative Psychiatric Epidemiology Surveys (CPES) 2001–2003 [United States]* (ICPSR 20240; Version V8) [Data set]. Inter-university Consortium for Political and Social Research. <https://doi.org/10.3886/ICPSR20240.v8>
- Alexander, A. A., Welsh, E., & Glassmire, D. M. (2016). Underdiagnosing posttraumatic stress disorder in a state hospital. *Journal of Forensic Psychology Practice*, 16(5), 448–459. <https://doi.org/10.1080/15228932.2016.1234142>
- Corrigan, P. W., & Buican, B. (1995). The construct validity of subjective quality of life for the severely mentally ill. *Journal of Nervous and Mental Disease*, 183(5), 281–285. <https://doi.org/10.1097/00005053-199505000-00001>
- Corrigan, P. W., Pickett, S., Kraus, D., Burks, R., & Schmidt, A. (2015). Community-based participatory research examining the health care needs of African Americans who are homeless with mental illness. *Journal of Health Care for the Poor and Underserved*, 26(1), 119–133. <https://doi.org/10.1353/hpu.2015.0018>
- Corrigan, P. W., Salzer, M., Ralph, R. O., Sangster, Y., & Keck, L. (2004). Examining the factor structure of the recovery assessment scale. *Schizophrenia Bulletin*, 30(4), 1035–1041. <https://doi.org/10.1093/oxfordjournals.schbul.a007118>
- Cusack, K. J., Grubaugh, A. L., Knapp, R. G., & Frueh, B. C. (2006). Unrecognized trauma and PTSD among public mental health consumers with chronic and severe mental illness. *Community Mental Health Journal*, 42(5), 487–500. <https://doi.org/10.1007/s10597-006-9049-4>
- Eaton, W. W., Smith, C., Ybarra, M., Muntaner, C., & Tien, A. (2004). Center for Epidemiologic Studies Depression scale: Review and revision (CESD and CESD-R). In M. E. Maruish (Ed.), *The use of psychological testing for treatment planning and outcomes assessment: Instruments for adults* (pp. 363–377). Lawrence Erlbaum.
- Fallot, R. D., & Harris, M. (2002). The trauma recovery and empowerment model (TREM): Conceptual and practical issues in a group intervention for women. *Community Mental Health Journal*, 38(6), 475–485. <https://doi.org/10.1023/A:1020880101769>
- Fijtman, A., Clausen, A., Kauer-Sant'Anna, M., Morey, R., & the VA Mid-Atlantic MIRECC Workgroup. (2023). Trauma history in veterans with bipolar disorder and its impact on suicidality. *Journal of Psychiatric Research*, 157, 119–126. <https://doi.org/10.1016/j.jpsychires.2022.10.063>
- Foa, E. B., Huppert, J. D., & Cahill, S. P. (2006). Emotional processing theory: An update. In B. O. Rothbaum (Ed.), *Pathological anxiety: Emotional processing in etiology and treatment* (pp. 3–24). Guilford Press.
- Foa, E. B., & Kozak, M. J. (1986). Emotional processing of fear: Exposure to corrective information. *Psychological Bulletin*, 99(1), 20–35. <https://doi.org/10.1037/0033-2909.99.1.20>
- Ford, J. D., Mendelsohn, M., Opler, L. A., Opler, M. G., Kallivayalil, D., Levitan, J., Pratts, M., Muenzenmaier, K., Shelley, A.-M., Grennan, M. S., & Lewis Herman, J. (2015). The Symptoms of Trauma Scale (SOTS): An initial psychometric study. *Journal of Psychiatric Practice*, 21(6), 474–483. <https://doi.org/10.1097/PRA.0000000000000107>
- Ford, J. D., Schneeberger, A. R., Komarovskaya, I., Muenzenmaier, K., Castille, D., Opler, L. A., & Link, B. (2017). The Symptoms of Trauma Scale (SOTS): Psychometric evaluation and gender differences with adults diagnosed with serious mental illness. *Journal of Trauma & Dissociation*, 18(4), 559–574. <https://doi.org/10.1080/15299732.2016.1241850>
- Gearon, J. S., Kaltman, S. I., Brown, C., & Bellack, A. S. (2003). Traumatic life events and PTSD among women with substance use disorders and schizophrenia. *Psychiatric Services*, 54(4), 523–528. <https://doi.org/10.1176/appi.ps.54.4.523>
- Givens, A., & Cuddeback, G. S. (2021). Traumatic experiences among individuals with severe mental illnesses on probation. *Criminal Behaviour and Mental Health*, 31(5), 310–320. <https://doi.org/10.1002/cbm.2212>
- Green, B. L. (1996). Trauma History Questionnaire (self-report). In B. H. Stamm (Ed.), *Measurement of stress, trauma, and adaptation* (pp. 366–368). Sidran.
- Grubaugh, A. L., Zinzow, H. M., Paul, L., Egede, L. E., & Frueh, B. C. (2011). Trauma exposure and posttraumatic stress disorder in adults with



- severe mental illness: A critical review. *Clinical Psychology Review*, 31(6), 883–899. <https://doi.org/10.1016/j.cpr.2011.04.003>
- Harris, M., & Anglin, J. (1998). *Trauma recovery and empowerment: A clinician's guide for working with women in groups*. Simon & Schuster.
- Hatch, S. L., & Dohrenwend, B. P. (2007). Distribution of traumatic and other stressful life events by race/ethnicity, gender, SES and age: A review of the research. *American Journal of Community Psychology*, 40(3–4), 313–332. <https://doi.org/10.1007/s10464-007-9134-z>
- Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (3rd ed.). Guilford Press.
- Hildebrand, F., Pape, H. C., Horst, K., Andruszkow, H., Kobbe, P., Simon, T. P., Marx, G., & Schürholz, T. (2016). Impact of age on the clinical outcomes of major trauma. *European Journal of Trauma and Emergency Surgery*, 42(3), 317–332. <https://doi.org/10.1007/s00068-015-0557-1>
- Hooper, L. M., Stockton, P., Krupnick, J. L., & Green, B. L. (2011). Development, use, and psychometric properties of the Trauma History Questionnaire. *Journal of Loss and Trauma*, 16(3), 258–283. <https://doi.org/10.1080/15325024.2011.572035>
- Jittayuthd, S., & Karl, A. (2022). Rejection sensitivity and vulnerable attachment: Associations with social support and PTSD symptoms in trauma survivors. *European Journal of Psychotraumatology*, 13(1), Article 2027676. <https://doi.org/10.1080/20008198.2022.2027676>
- Kessler, R. C. (2008). *National Comorbidity Survey: Baseline (NCS-1), 1990–1992* (ICPSR 06693; Version V6) [Data set]. Inter-university Consortium for Political and Social Research. <https://doi.org/10.3886/ICPSR06693.v6>
- Kessler, R. C. (2015). *National Comorbidity Survey: Reinterview (NCS-2), 2001–2002* (ICPSR 35067; Version V2) [Data set]. Inter-university Consortium for Political and Social Research. <https://doi.org/10.3886/ICPSR35067.v2>
- Kimerling, R., Alvarez, J., Pavao, J., Kaminski, A., & Baumrind, N. (2007). Epidemiology and consequences of women's revictimization. *Women's Health Issues*, 17(2), 101–106. <https://doi.org/10.1016/j.whi.2006.12.002>
- Lee, A., Bullock, W. A., & Hoy, J. (2016). Trauma symptoms, recovery, and participation in the Wellness Management and Recovery (WMR) program. *American Journal of Psychiatric Rehabilitation*, 19(2), 75–96. <https://doi.org/10.1080/15487768.2016.1162755>
- Lehman, A. F. (1988). A Quality of Life Interview for the chronically mentally ill. *Evaluation and Program Planning*, 11(1), 51–62. [https://doi.org/10.1016/0149-7189\(88\)90033-X](https://doi.org/10.1016/0149-7189(88)90033-X)
- Lu, W., Mueser, K. T., Rosenberg, S. D., & Jankowski, M. K. (2008). Correlates of adverse childhood experiences among adults with severe mood disorders. *Psychiatric Services*, 59(9), 1018–1026. <https://doi.org/10.1176/ps.2008.59.9.1018>
- Maniglio, R. (2011). The role of childhood trauma, psychological problems, and coping in the development of deviant sexual fantasies in sexual offenders. *Clinical Psychology Review*, 31(5), 748–756. <https://doi.org/10.1016/j.cpr.2011.03.003>
- Mills, K. L., McFarlane, A. C., Slade, T., Creamer, M., Silove, D., Teesson, M., & Bryant, R. (2011). Assessing the prevalence of trauma exposure in epidemiological surveys. *The Australian and New Zealand Journal of Psychiatry*, 45(5), 407–415. <https://doi.org/10.3109/00048674.2010.543654>
- Mueser, K. T., Bolton, E., Carty, P. C., Bradley, M. J., Ahlgren, K. F., Distaso, D. R., Gilbride, A., & Liddell, C. (2007). The Trauma Recovery Group: A cognitive-behavioral program for post-traumatic stress disorder in persons with severe mental illness. *Community Mental Health Journal*, 43(3), 281–304. <https://doi.org/10.1007/s10597-006-9075-2>
- Mueser, K. T., Rosenberg, S. D., Xie, H., Jankowski, M. K., Bolton, E. E., Lu, W., Hamblen, J. L., Rosenberg, H. J., McHugo, G. J., & Wolfe, R. (2008). A randomized controlled trial of cognitive-behavioral treatment for posttraumatic stress disorder in severe mental illness. *Journal of Consulting and Clinical Psychology*, 76(2), 259–271. <https://doi.org/10.1037/0022-006X.76.2.259>
- Mueser, K. T., Rosenberg, S. D., Fox, L., Salyers, M. P., Ford, J. D., & Carty, P. (2001). Psychometric evaluation of trauma and posttraumatic stress disorder assessments in persons with severe mental illness. *Psychological Assessment*, 13(1), 110–117. <https://doi.org/10.1037/1040-3590.13.1.110>
- Mueser, K. T., Salyers, M. P., Rosenberg, S. D., Goodman, L. A., Essock, S. M., Osher, F. C., Swartz, M. S., Butterfield, M. I., & the 5 Site Health and Risk Study Research Committee. (2004). Interpersonal trauma and posttraumatic stress disorder in patients with severe mental illness: Demographic, clinical, and health correlates. *Schizophrenia Bulletin*, 30(1), 45–57. <https://doi.org/10.1093/oxfordjournals.schbul.a007067>
- Ng, F., Ibrahim, N., Franklin, D., Jordan, G., Lewandowski, F., Fang, F., Roe, D., Rennick-Egglestone, S., Newby, C., Hare-Duke, L., Llewellyn-Beardsley, J., Yeo, C., & Slade, M. (2021). Post-traumatic growth in psychosis: A systematic review and narrative synthesis. *BMC Psychiatry*, 21(1), Article 607. <https://doi.org/10.1186/s12888-021-03614-3>
- Oexle, N., & Corrigan, P. W. (2018). Understanding mental illness stigma toward persons with multiple stigmatized conditions: Implications of intersectionality theory. *Psychiatric Services*, 69(5), 587–589. <https://doi.org/10.1176/appi.ps.201700312>
- Pickett, L. A. (2020). Three trains running: The intersectionality of race-based trauma, African American youth, and race-based interventions. *The Urban Review*, 52(3), 562–602. <https://doi.org/10.1007/s11256-020-00575-x>
- Plavsic, M., Dikovic, M., & Matkovic, R. (2021). Students' experience of assessment in online higher education during COVID-19. In L. Gómez Chova, A. López Martínez, & I. Candel Torres (Eds.), *INTED2021 proceedings* (pp. 4135–4143). IATED Academy. <https://doi.org/10.21125/inted.2021.0843>
- Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1(3), 385–401. <https://doi.org/10.1177/014662167700100306>
- Rasmussen, A., Rosenfeld, B., Reeves, K., & Keller, A. S. (2007). The subjective experience of trauma and subsequent PTSD in a sample of undocumented immigrants. *Journal of Nervous and Mental Disease*, 195(2), 137–143. <https://doi.org/10.1097/01.nmd.0000254748.38784.2f>
- Reifels, L., Mills, K., Dücker, M. L. A., & O'Donnell, M. L. (2019). Psychiatric epidemiology and disaster exposure in Australia. *Epidemiology and Psychiatric Sciences*, 28(3), 310–320. <https://doi.org/10.1017/S2045796017000531>
- Roberts, A. L., Gilman, S. E., Breslau, J., Breslau, N., & Koenen, K. C. (2011). Race/ethnic differences in exposure to traumatic events, development of post-traumatic stress disorder, and treatment-seeking for post-traumatic stress disorder in the United States. *Psychological Medicine*, 41(1), 71–83. <https://doi.org/10.1017/S0033291710000401>
- Sacks, S. A., Schwartz, B., & Mueser, K. T. (2017). A pilot study of the trauma recovery group for veterans with post traumatic stress disorder and co-occurring serious mental illness. *Journal of Mental Health*, 26(3), 237–241. <https://doi.org/10.1080/09638237.2016.1222057>
- Saleem, T., Saleem, A., & Batool, R. (2021). Moving from face to face to virtual assessment: Pakistani university students' perceptions regarding assessment in a time of COVID-19. *Multicultural Education*, 7, 252–264. <https://doi.org/10.5281/zenodo.4460326>
- Salzer, M. S., & Brusilovskiy, E. (2014). Advancing recovery science: Reliability and validity properties of the Recovery Assessment Scale. *Psychiatric Services*, 65(4), 442–453. <https://doi.org/10.1176/appi.ps.201300089>
- Sanchez-Gomez, M., Giorgi, G., Finstad, G. L., Urbini, F., Foti, G., Mucci, N., Zaffina, S., & León-Pérez, J. M. (2021). COVID-19 pandemic as a traumatic event and its associations with fear and mental health: A cognitive-activation approach. *International Journal of Environmental Research and Public Health*, 18(14), Article 7422. <https://doi.org/10.3390/ijerph18147422>

- Segalo, P. (2015). Trauma and gender. *Social and Personality Psychology Compass*, 9(9), 447–454. <https://doi.org/10.1111/spc3.12192>
- Sherrer, M. V. (2011). The role of cognitive appraisal in adaptation to traumatic stress in adults with serious mental illness: A critical review. *Trauma, Violence & Abuse*, 12(3), 151–167. <https://doi.org/10.1177/1524838011404254>
- Souleles, N., Laghos, A., & Sayya, S. (2020). From face-to-face to online: Assessing the effectiveness of the rapid transition of higher education due to the coronavirus outbreak. In L. Gómez Chova, A. López Martínez, & I. Candel Torres (Eds.), *ICERI2020 proceedings* (pp. 927–934). IATED Academy. <https://doi.org/10.21125/iceri.2020.0274>
- Subica, A. M. (2013). Psychiatric and physical sequelae of childhood physical and sexual abuse and forced sexual trauma among individuals with serious mental illness. *Journal of Traumatic Stress*, 26(5), 588–596. <https://doi.org/10.1002/jts.21845>
- Sympson, S. (2000). Rediscovering hope: Understanding and working with survivors of trauma. In C. R. Snyder (Ed.), *Handbook of hope: Theory, measures, and applications* (pp. 285–300). Academic Press. <https://doi.org/10.1016/B978-012654050-5/50017-8>
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Pearson.
- Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry*, 15(1), 1–18. [https://doi.org/10.1207/s15327965pli1501\\_01](https://doi.org/10.1207/s15327965pli1501_01)
- Van Dam, N. T., & Earleywine, M. (2011). Validation of the Center for Epidemiologic Studies Depression Scale–Revised (CESD-R): Pragmatic depression assessment in the general population. *Psychiatry Research*, 186(1), 128–132. <https://doi.org/10.1016/j.psychres.2010.08.018>
- van Weeghel, J., van Zelst, C., Boertien, D., & Hasson-Ohayon, I. (2019). Conceptualizations, assessments, and implications of personal recovery in mental illness: A scoping review of systematic reviews and meta-analyses. *Psychiatric Rehabilitation Journal*, 42(2), 169–181. <https://doi.org/10.1037/prj0000356>
- White, R. M. B., Carlo, G., Knight, G. P., Yun-Tein, J., Gonzales, N. A., & Curlee, A. (2021). Using culturally and contextually informing theorizing in research on post traumatic growth. In F. J. Infurna & E. Jayawickreme (Eds.), *Redesigning research on post-traumatic growth: Challenges, pitfalls, and new directions* (pp. 147–166). Oxford University Press.
- Zhu, P., Luke, M. M., Liu, Y., & Wang, Q. (2023). Cultural humility and cultural competence in counseling: An exploratory mixed methods investigation. *Journal of Counseling and Development*, 101(3), 264–276. <https://doi.org/10.1002/jcad.12469>

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