## RESEARCH ARTICLE

# Traumatic Stress Response in North Carolina K-12 Educators During the COVID-19 Pandemic

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As K-12 educators were called to transition schools online amidst the onset of the COVID-19 global pandemic, they were expected not only to support students in significantly different contexts, but also to manage their own personal reactions in an environment of fear and potential threat to health and safety. While emerging research has sought to understand the impact of COVID-19 on the K-12 landscape, most studies focus on issues impacting academic performance and well-being of students. In this paper, the author sought to explore the extent to which educators in North Carolina self-reported trauma exposure responses as well as the impact their professional roles had on the degree to which they experienced these responses. Results indicated concerning levels of trauma responses among educators, as well as a significantly higher rate of trauma response for teachers and staff as compared to administrators. Implications for further research, policy, and practice are discussed.

Keywords: trauma, well-being, COVID-19, educators, quantitative research

### INTRODUCTION

As the COVID-19 pandemic brought an abrupt halt to everyday life around the globe, in the U.S. one of the most significant impacts was within the education system. U.S. schools provide a vital role in educational preparation of future generations, but also serve other important roles including providing access to basic needs resources (Cohen et al., 2021), as well as childcare for parents to be able to work away from the home (Modestino et al., 2021). As stay-at-home orders forced schools online, educators and educational leaders found themselves transitioning this system to a completely virtual environment in a matter of days (Herold, 2020). In the aftermath of the initial nationwide lockdown, emerging research has primarily focused on the impact of the pandemic on student learning (Archambault & Borup, 2020; Clausen et al., 2020), the long-term impacts on student learning (Middleton, 2020), and student well-being (Dunn et al., 2020; Martin & Sorenson, 2020; Salerno, Devadas, & Pease, 2020). However, little consideration has been given to the impact of the pandemic on educator well-being, with the few existing investigations centering

issues of teacher burnout (Sokal, Eblie Trudel, & Babb, 2020a; Sokal, Eblie Trudel, & Babb, 2020b). Although burnout is certainly an issue that is to be expected given the amount of work and lack of resources that were afforded to educators as they made the online transition, these professionals were also doing this work while managing their own families and personal responses to a global health threat.

One way to reframe the impact of COVID-19 on educators is through the lens of traumatic stress, or the response to an event or circumstance that overwhelms one's capacity to cope (Brencio & Novak, 2019). The American Psychiatric Association (2013) also defines a trauma experience as one that poses an actual, or perceived, threat to life or sanity. Through these definitions, the COVID-19 pandemic may certainly be considered a potentially traumatizing event. The experience of traumatic stress has been linked to a number of negative outcomes including, but not limited to, poor physical health (McFarlane, 2010), emotional numbing (van Dernoot Lipsky, 2009), and diminished capacity for complex thinking and creativity (van Dernoot Lipsky, 2009), all of which have a direct impact on educators' ability to maintain their well-being while also serving their students.

This study sought to address this emerging gap in understanding regarding the holistic impact of the COVID-19 pandemic within the U.S. education system by exploring how educators in North Carolina experienced traumatic stress as a result of their professional and personal experiences during the COVID-19 pandemic. Specifically, this study addresses two questions: To what degree did North Carolina K-12 educators report experiencing trauma exposure responses due to their jobs during the COVID-19 pandemic at the beginning of the fall 2020 semester? To what degree did self-reported trauma exposure responses differ based on professional roles during the COVID-19 pandemic at the beginning of the fall 2020 semester?

#### COVID-19 & TRAUMA EXPOSURE

As the world experienced the worst global pandemic in a century, many faced their own risk to their health, the health of their loved ones, and economic precarity as quarantine orders impacted global markets (Brodeur et al., 2020). From the first U.S. death due to COVID-19 in February 2020 to February 2021, nearly 500,000 people died in the U.S. from the virus (U.S. Cases & Deaths, 2021). By the fall of 2020, despite the growing death toll of the virus, no vaccine, and continued politicization of the virus (Gollwitzer et al., 2020), educators in some districts were forced back into their buildings either full or part-time. For many, this was a choice between their health and safety or their economic livelihood. Being put in such a position, on top of the transitioning to online teaching, provided the context to experience a level of traumatic stress.

Trauma may be thought of as an event or circumstance that overwhelms a person's ability to cope (Brencio & Novak, 2019). It is a highly individualized experience, and can occur from a one-time event, or acute trauma, or on-going circumstances, or chronic trauma (Substance Abuse and Mental Health Services Administration, 2014). While individuals may experience and respond to trauma in different ways, scholars in the biological sciences have demonstrated the physiological processes that trigger the natural stress responses (Solomon & Heide, 2005), sending and individual into an altered state of functioning (van Dernoot Lipsky, 2009). In many cases the trauma response system may be moderated after a period of recovery, but researchers have demonstrated how high levels of traumatic stress can permanently alter brain functioning

(Bremner, 2006), among other long-term negative outcomes to physical health (McFarlane, 2010), mental health (McFarlane, 2010), and other quality of life factors (Giovanelli et al., 2016).

Although the circumstances in which educators have found themselves could certainly be trauma inducing, emerging research has centered the concept of burnout or other stressors for educators including teachers, student and academic support staff, and administrators (Allen, Jerrim, & Sims, 2020; Baker et al, 2020; & Ozamiz-Etxebarria et al. 2020). However, solely focusing on burnout may lead to ineffective efforts or understandings for educator recovery post-pandemic. Through reframing the exploration of educator stressors during COVID-19 through the lens of traumatic stress, education scholars, educational leaders, and policy makers may be better served in identifying more meaningful ways to support building-level educators during and after the pandemic and future crises.

## THEORETICAL FRAMEWORK

The present study is grounded in the concept of trauma exposure response (van Dernoot Lipsky, 2009), or the potential negative changes in thoughts, dispositions, and behaviors of individuals who have experienced a traumatic event. Behavioral patterns of trauma, summarized in Table 1, encompass a wide range of responses that may impact physical, cognitive, and emotional functioning (American Psychiatric Association, 2013; van Dernoot Lipsky, 2009). While individuals may express one or more of these reactions when exposed to a traumatic event, this study assumes an increased impact on an individual expressing the more behaviors they report.

#### Table 1

## 16 WARNING SIGNS OF A TRAUMA EXPOSURE RESPONSE (van Dernoot Lipsky, 2009)

Feeling hopeless/helpless
A sense that one can never do enough
Hypervigilance

Dissociative moments
Sense of persecution
Guilt

Diminished creativity Fear

Inability to embrace complexity

Anger & cynicism

Minimizing Inability to empathize/numbing Chronic exhaustion/Physical ailments Addictions

Deliberate avoidance Grandiosity or Inflated sense of importance

related to one's work

### **METHODOLOGY**

This study was conducted using data derived from the fall 2020 administration of a quantitative cross-sectional (American Psychological Association, 2020) survey administered to educators. The survey instrument consisted of several sections measuring constructs such self-reported trauma-exposure responses and mental health, perceived social and occupational supports, and

help-seeking behaviors. Additional items captured personal demographic (race, gender, etc.) and workplace contextual data (ex: school type, professional role, etc.). Participants were recruited via social media and direct email based on publicly available educator listservs. The study was deemed exempt from oversight by the university's Institutional Review Board. A total of 265 North Carolina educators completed the survey instrument.

## Independent Variables

To address the research questions in this study, one independent variable was used. This variable captured the professional role of the respondent within their school. The original question contained options to select Principal, Assistant Principal, Teacher, School Counselor, Social Worker, Psychologist, Instructional Support Staff, and Other. Due to varying responses for each option, these options were recoded into three categories: Administrators (Principals and Assistant Principals), Teachers, and Support Staff (School Counselors, Social Workers, Psychologists, and Instructional Support Staff). Respondents selecting "Other" were recoded as missing data.

## **Dependent Variables**

Dependent variables in this study included 19 items measuring self-reported trauma-exposure responses at the beginning of the 2020-2021 academic year using a 4-point forced response Likert scale (1= Strongly Disagree, 4= Strongly Agree). These items were scaled to create an overall trauma-exposure response score (Trauma Response Average). In testing the reliability of the scale using Chronbach's Alpha, results indicated high reliability ( $\alpha$ =.91)

Additionally, two items asked respondents to self-report the degree to which the pandemic negatively impacted their mental health, as well as the degree to which the way their school handled the pandemic negatively impacted their mental health. Both items were also measured using a 4-point forced response Likert scale (1= Strongly Disagree, 4= Strongly Agree).

## Data Analysis

The first research question was explored using descriptive statistics including measures of frequency and central tendency. To explore the second research question, a one-way analysis of variance was performed. The Games-Howell post-hoc test was performed as the assumption of homogeneity of variance was not met. Additionally, a Bonferroni adjustment (p=.002) was applied to decrease the risk of Type I error due to the number of comparisons that were made.

### **FINDINGS**

A breakdown of contextual demographic and work-environment data for North Carolina (NC) respondents has been provided in Table 2. In addition, the average age of respondents was 45, with an average of 16 years of full-time professional experience in education.

Upon completing a descriptive analysis of the data, findings indicated a moderate degree of trauma exposure response as self-reported by North Carolina K-12 educators (M=2.74). The most common trauma exposure responses across sampled participants included exhaustion (M=3.36), anger (M=3.30), fear (M=3.22), "waiting for the other shoe to drop" [hypervigilance] (M=3.19), and guilt (M=3.06). These patterns held true across professional roles, including

administrators, teachers, and support staff. Additionally, participants indicated a moderate amount of agreement that the COVID-19 pandemic (M=3.03), and their school's response to the pandemic (M=2.76), has negatively impacted their mental health. Table 3 provides a comprehensive summary of average scores for each trauma exposure response item, as well as data disaggregated by professional role.

When comparing trauma exposure responses across professional roles, several moderate to large statistically significant differences were found. Compared to administrators, staff and teachers were much more likely to self-report hopelessness, and avoidance. When comparing roles by overall trauma response, there was a moderate difference between teachers (M=2.92) and staff (2.66) when compared to administrators (2.38). Table 3 provides indications for significant differences across groups as well as effect sizes.

## **LIMITATIONS**

Results should be interpreted considering the limitations of this study. To ensure anonymity of respondents, information regarding county and district association were not collected; therefore, the data represented in this study has the possibility of over or underrepresenting different community-level responses to the pandemic, which could have impacted results. Additionally, this study did not explore co-occurring traumas that may have contributed to the self-reported data, including possible economy impacts (ex: spouse job loss), the 2020 racial violence flashpoints, on-going responses to the national political administration, etc. Furthermore, the sample in this study was not selected at random, therefore there may have been other outside factors contributing to the results, such as a participant's predisposition for completing a survey on this topic. Finally, while administrators were found to be experiencing trauma exposure responses to a lesser degree, it is possible they were reluctant to acknowledge or their own trauma response experiences.

### DISCUSSION

Given the potential for the experience of trauma in educators during the COVID-19 pandemic, this study sought to better understand the degree to which North Carolina educators self-reported trauma-exposure responses as well as the impact of their professional role on their report of these responses. Results of descriptive and inferential analyses indicated a significant number of respondents' who self-reported trauma-exposure response behaviors including chronic exhaustion, anger, fear, hypervigilance, minimization, guilt, and sleep disturbance. More specifically, teachers and staff reported higher rates of trauma-exposure responses as compared to their administrator colleagues. This finding is significant as such patterns of trauma-exposure response can have significant impacts on decision-making, prioritization, advocacy, and overall leadership within schools (Regehr, 2018; Regehr & LeBlanc, 2017). Taken as a whole, these findings are concerning not only for the personal impact on educators, but also on students and families. If educators are pushing through their experience of traumatic stress while working, there will undoubtably be consequences for their students, whether that is less empathy for student experiences or concerns or diminished ability to think creatively to meet student needs.

## IMPLICATIONS FOR POLICY & PRACTICE

The findings of this study have immediate implications for both policy and practice in education. Both local and statewide education policy makers should take heed to the impact of working throughout the COVID-19 pandemic has had on those in building-level positions. It is understandable that individuals in policy making positions should be focused on the best interest of the youth for which they seek to support, yet the implications of polices (such as plans to return to school buildings) should be considered for educators as well. To that end, policymakers are encouraged to consider the six philosophies of trauma-informed practice (Bowen & Murshid, 2016) as they make decisions: safety (physical and psychological); choice, voice, and empowerment; collaboration and mutuality; peer support; sociocultural considerations; and trustworthiness and transparency. Additionally, as policy makers consider budget allocations, more funding should be provided to expand existing Employee Assistance Programs and Worker's Compensation Programs to address the on-going mental health needs to be expected as educators navigate the aftermath of the pandemic and the role their occupations played a role in decreasing mental health.

From the perspective of district and building-level implications, findings suggest the need for ongoing monitoring of staff and teacher mental health. This may take the form of regular periodic surveys, or informal check-ins from administrators, but should be done so in a manner that promotes transparency, choice, and collaboration with educators. Finally, educators in all roles should be trained in trauma-informed practices in order to recognize the signs and impacts of trauma exposure response in themselves, as well as students, so that they may be better equipped to seek help, offer resources, and support a trauma-informed school environment.

## Implications for Future Research

In addition to recommendations for policy and practice, the findings of this study may be used to inform future scholarship. First, existing literature underscores a consistent difference in the rate and extent to which individuals from marginalized social identities experience traumatic stress (Roberts et al., 2010; Roberts et al., 2011; Tolin, 2008). Future studies should consider exploring the impact of race, gender, and sexual orientation of educators on their experience of traumatic stress during the pandemic. Additionally, future studies may also seek to understand the degree to which other traumatic circumstances, including the economic downturn and/or racial violence flashpoints, may have played a role in educators experiences, as well as the long-term impacts of the complex traumas (Cenat & Dalexis, 2020) of 2020.

Furthermore, this study describes a snapshot in time and is limited in its description of the context in which respondents reported their experiences. To better understand the results of this study, further qualitative inquiry would be useful in capturing the how and why of self- reported trauma exposure responses in educators.

Finally, the experiences of trauma during the global COVID-19 pandemic are not likely to resolve themselves quickly, therefore it is imperative to begin exploring data-driven interventions for recovering from trauma to assist district and building-level leaders in constructing meaningful professional development on this topic. Through the use of experimental or quasi-experimental techniques, scholars can equip practitioners with interventions that are evidence-based in addressing the mental health needs of educators.

### CONCLUSION

While much of the focus on the impact of COVID-19 in U.S. education has been through the lens of the transition to online learning, student achievement, and student well-being, results of this study clearly indicate the need for greater attention to the pandemic's impact on educators. In this paper, findings from a cross-sectional survey administered in the fall of 2020 provided evidence of the pervasiveness of trauma exposure responses amongst educators in North Carolina, with specific concern for the higher rates of trauma in teachers and staff. As policy makers, educational leaders, and education scholars address the impact of COVID-19 on students and families, it is imperative that resources and attention be given to the individuals who have dedicated their careers to supporting these youth. Without healthy educators, it will be that much harder to address the long-term negative impacts of the global pandemic on students.

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## APPENDIX A

TABLE A2

## SELF-REPORTED DEMOGRAPHICS AND WORK CONTEXT OF NORTH CAROLINA SAMPLE

		AIVIPLE		
<u>N</u>	<u>%</u>		<u>N</u>	<u>%</u>
		Racial Identity		
149	56%	White	202	83%
60	22%	African American or Black	23	9%
40	20%	No Response	9	4%
		Multiracial	4	2%
		Native American	4	2%
40	15%	Hispanic or Latinx	5	2%
117	44%	Asian or Asian American	2	1%
91	34%	Native Hawaiian or PI	0	0%
108	41%	North African or Middle	0	0%
		Eastern		
245	92%	Gender Identity		
19	7%	Woman	193	79%
7	3%	Man	40	16%
6	2%	No response	5	2%
		-	4	2%
		Trans*	1	0.4%
115	43%			
106	40%	Sexual Orientation		
44	17%	Straight/Heterosexual	220	91%
		•	7	3%
		Bisexual	7	3%
		Gay or Lesbian	5	2%
		Queer	3	1%
		Asexual	1	0.4%
	149 60 40 40 117 91 108 245 19 7 6	N         %           149         56%           60         22%           40         20%           40         15%           117         44%           91         34%           108         41%           245         92%           19         7%           7         3%           6         2%           115         43%           106         40%	N         %           149         56%         White           60         22%         African American or Black           40         20%         No Response           Multiracial         Native American           40         15%         Hispanic or Latinx           117         44%         Asian or Asian American           91         34%         Native Hawaiian or PI           108         41%         North African or Middle           Eastern         Eastern           245         92%         Gender Identity           19         7%         Woman           7         3%         Man           6         2%         No response           Non-Binary         Trans*           115         43%           106         40%         Sexual Orientation           44         17%         Straight/Heterosexual           No response         Bisexual           Gay or Lesbian         Queer	N         %         Racial Identity           149         56%         White         202           60         22%         African American or Black         23           40         20%         No Response         9           Multiracial         4           Native American         4           40         15%         Hispanic or Latinx         5           117         44%         Asian or Asian American         2           91         34%         Native Hawaiian or PI         0           108         41%         North African or Middle         0           Eastern         Eastern           245         92%         Gender Identity           19         7%         Woman         193           7         3%         Man         40           6         2%         No response         5           Non-Binary         4         1           115         43%         1           106         40%         Sexual Orientation           44         17%         Straight/Heterosexual         220           No response         7           Bisexual         7

TABLE A3
Means and Standard Deviations for Trauma Response and Mental Health Items by Professional Role

Item	Item Administrators		Teachers		Support Staff		All		<u>η²</u>
	<u>M</u>	SD	<u>M</u>	SD	<u>M</u>	SD	<u>M</u>	SD	
I have experienced fear with regard to some aspect of my job. **	2.80	0.97	3.43	0.77	3.09	1.00	3.22	0.06	.09**
I have experienced guilt with regard to some aspect of my job.	2.87	1.10	3.22	1.00	2.86	1.02	3.06	1.04	
I have experienced anger with some aspect of my job.	3.08	0.92	3.46	0.81	3.11	0.91	3.30	0.87	
I find myself feeling hopeless. *^+	2.02	1.03	2.94	0.92	2.55	0.97	2.65	1.02	.14***
I find myself waiting for the other shoe to drop. **	2.79	1.02	3.41	0.72	3.04	0.99	3.19	0.90	.09**
I find myself being snippy or short tempered with others. *	2.44	0.92	2.80	0.96	2.80	1.00	2.72	0.97	.02*
I find that I am easily startled. *^+	1.67	0.73	2.41	1.04	2.14	0.98	2.18	1.00	.09**
I find myself over-analyzing situations and believe them to be worse than	2.25	0.00	2.00	0.00	2.70	0.07	2.72	1.01	.07*
they are. *^	2.25	0.98	2.89	0.98	2.79	0.97	2.72	1.01	.07**
I have had trouble falling or staying asleep.	2.97	1.03	3.20	1.03	2.82	1.09	3.07	1.05	
I am less interested in doing things that once brought me joy. *	2.18	1.03	2.82	1.08	2.55	1.05	2.62	1.09	.06*
I am constantly exhausted.	3.21	0.82	3.46	0.79	3.25	0.87	3.36	0.82	
I find myself trying to avoid thinking about the upcoming school year. *^+	1.98	1.00	3.12	1.04	2.71	1.13	2.78	1.15	.16***
I have been feeling emotionally numb or difficulty feeling empathy for others. $*^{\wedge}$	1.75	0.93	2.30	1.07	2.25	1.00	2.17	1.05	.05*
I have been using alcohol or other drugs more than I usually do.	1.72	1.04	1.88	1.11	1.62	0.93	1.79	1.06	
Sometimes it feels like I am watching myself go through the motions of daily life, almost like an out of body experience. *^	1.79	0.86	2.50	1.02	2.31	0.94	2.30	1.01	.08**
At work, if I don't do it, it either won't get done or won't be done right. *	2.54	0.99	2.92	0.93	2.91	0.91	2.83	0.95	.03*

Items	Administrators		Teachers		Support Staff		All		<u>n²</u>
	<u>M</u>	SD	<u>M</u>	SD	<u>M</u>	SD	<u>M</u>	SD	
I find it hard to think creatively or engage in new projects or tasks. **	2.34	1.12	2.91	0.88	2.44	0.96	2.68	0.99	.07**
I find myself quickly jumping to conclusions. *^	2.08	0.88	2.74	0.92	2.64	0.99	2.56	0.96	.08**
I am constantly telling myself, "It could be worse.	3.02	0.81	3.06	0.89	2.85	0.97	3.00	0.89	
Overall Trauma Response Exposure Average *^+	2.38	.59	2.92	.59	2.66	.64	2.74	.64	.12**
My mental health has been negatively impacted by the COVID-19 pandemic. *	2.67	0.93	3.23	0.89	2.93	0.98	3.03	0.94	.06*
My mental health has been negatively impacted by my school's response to COVID-19. $^{\ast}$	2.30	1.16	2.96	1.00	2.75	1.02	2.76	1.08	.06*

Note: The following indicate areas of significant differences\*(Admin and Teacher), ^ (Admin and Staff), +(Teacher and Staff)

Bonferroni adjustment (p<.002, df=22); Effect Size ( $\eta^2$ ): Small (\*), Medium (\*\*), Large (\*\*\*)