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## Rural Teachers' Burnout, Well-Being, and COVID-19 Related Stress During the Pandemic

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*Research Article*

## **Rural Teachers' Burnout, Well-Being, and COVID-19 Related Stress During the Pandemic**

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*To date, researchers have not explored the impact of the COVID-19 pandemic on the well-being of rural teachers specifically. Rural schools already faced long-standing issues of lower salaries, professional isolation, teacher shortages, and technology challenges, suggesting rural teachers may have experienced even higher levels of distress due to the pandemic. Overall, however, teachers from one rural county school system in the southeastern United States reported moderate COVID-19 concerns, low distress, and moderate well-being. Results could reflect responses characteristic of rural resilience. Further study is needed to explore teachers' unique coping strategies.*

Teaching has long been recognized as a high-stress occupation that negatively impacts teacher well-being (Johnson et al., 2005; Luthar & Mendes, 2020; Madigan & Kim, 2021). Indeed, almost 50% of teachers report they experience high stress every day (Luthar & Mendes, 2020). Teachers point to their high workloads, multiple responsibilities, classroom management, lack of administrative and/or parental support as sources of stress. Children experiencing challenging social and mental health issues also contribute to teachers' classroom demands, as most have limited training for supporting students' mental health (Fleckman et al., 2022; Reinke et al., 2011). Low pay also is a factor, as up to one-third of teachers work a second job (Diliberti et al., 2021). Prolonged exposure to these stressors impacts teachers' physical (e.g., high blood pressure) and mental health (e.g., anxiety, depression) and can result in low job satisfaction, less classroom engagement, and a decision to leave the profession (Iancu et al., 2018; Madigan & Kim, 2021). These stress-related consequences in turn negatively impact student achievement (Madigan & Kim, 2021).

The COVID-19 pandemic only exacerbated teachers' stress (Ormiston et al., 2022), with increased workload; new demands of remote and/or hybrid instruction, complicated by disparities in their students' access to the internet; and pandemic-related safety regulations (Diliberti et al., 2021). Almost half the teachers who left the teaching profession after March 2020 cited COVID-19 concerns (e.g.,

compensation, childcare, health risks; Diliberti et al., 2021). In an October 2020 national survey by the Rand Corporation, 57% of teachers reported working more hours, and 80% indicated burnout was a moderate to major concern (Diliberti & Kaufman, 2020). Other scholars have echoed high burnout scores and increased anxiety for teachers across urban, suburban, and rural schools (Pressley, 2021; Pressley et al., 2021). Baker et al. (2021) conducted a comprehensive survey of teachers in New Orleans public charter schools during the early months of the pandemic. Teachers reported the "most difficult" aspects of teaching during COVID-19 were lack of connection and online teaching challenges; their most supportive aspects of teaching were support from coworkers and administrators. Those citing higher numbers of stressors (school- and home-related) reported it was "harder to cope" and "harder to teach." Overall, teachers appreciated the technology supports that allowed them access to people and resources (e.g., connecting with students via a YouTube channel or Zoom). New Orleans teachers' access to such technology resources might not be possible in high-need and low-resource schools, such as those in rural areas. In fact, compared to teachers in urban schools nationally, teachers who left rural schools during the pandemic more often cited technology challenges as impacting their ability to deliver remote instruction (Diliberti et al., 2021).

The widespread, deleterious mental health effects of the pandemic also increased teacher stress.

Reports of anxiety, fear, and depression increased markedly (Cipriano et al., 2020), with adolescents reporting more severe symptoms and greater suicidal ideation and behavior than adults (Nickerson & Sulkowski, 2021). These reports added to existing concerns informed by estimates that 60% of children are exposed to at least one traumatic event before age 18 (Centers for Disease Control and Prevention [CDC], 2022). In Baker et al.'s (2021) COVID-19 study in New Orleans, one of the teachers' highest stressors was increased awareness of the challenges their students faced at home, with some fearing for their students' safety, compounded by limits on their ability to help. Even prior to COVID-19, there was increased attention to mental health needs underlying students' academic challenges and emotional and behavioral issues in the classroom. Daily interactions with these stressors can lead not only to teacher burnout (BO), but also symptoms of secondary traumatic stress (STS), including disrupted sleep, hyperarousal, irritability, and worry about students' safety (Fleckman et al., 2022; Lander, 2018; Lawson et al., 2019). Trauma-related BO and STS also can negatively impact teachers' presence and responsiveness in the classroom (Fleckman et al., 2022; Ormiston et al., 2022).

Although teachers clearly are at risk for STS (Ormiston et al., 2022), limited research to date has been mixed. A recent systematic review (Ormiston et al., 2022) revealed reports of very high, above average, and average teacher STS scores. In addition, some teachers' high STS quantitative scores were coupled with descriptions of strong job satisfaction and compassion satisfaction (CS)—positive feelings about the impact of their work on students—particularly from teachers in high-need and low resource schools. For example, in a pre-COVID-19 study of staff in urban, rural, and Native American community schools in the West, Borntrager et al. (2012) reported STS levels higher than those of mental health professionals, yet average BO and CS scores. Similarly, early in the pandemic, New Orleans teachers in Baker et al.'s (2021) study reported considerable stress as well as positive changes (“protective factors”), such as increased appreciation of things they previously had taken for granted and greater meaning in their work. Of note, Black teachers reported better mental health and higher protective factors than did White teachers. Baker et al. speculated these findings reflected the resilience Black individuals develop in response to racism. Resilience also has been cited as a characteristic of rural populations, based in a culture

of independence and self-reliance (Garbacz et al., 2022) and an attitude that challenges are inevitable (Fleming et al., 2018).

Rural schools account for more than 25% of schools in the United States, with 7.5 million students enrolled in rural school districts (Showalter et al., 2019). Even before COVID-19, rural educators faced long-standing issues specific to their rural settings, such as lower salaries, inadequate facilities, teaching multiple subjects, social and professional isolation, and fewer professional development opportunities (Oyen & Schweinle, 2021; Tran et al., 2020). As a result, teacher shortages are more severe in rural areas (Oyen & Schweinle, 2021), particularly in the South (Diliberti et al., 2021), contributing to the “rural school problem” (Tran et al., 2020). These data, as well as the scarcity of broadband in rural communities (Summers-Gabr, 2020), particularly in high-need rural schools, suggest COVID-19 may have impacted teacher workloads in rural schools more severely, with deleterious effects on their ability to teach and their psychological well-being. To date, though, few researchers have explored the pandemic's impact on teachers in rural schools specifically. When included in studies, within-group comparisons of rural and urban teachers have not been explored (e.g., Pressley, 2021; Pressley et al., 2021). Berry (2020) focused on the “heroic efforts” (p. 16) of educators in a South Carolina rural district to reach the 50% of students without internet at home by parking Wi-Fi-equipped school buses across the county and delivering meals and instructional packets to students' homes, but Berry did not explore the impact these efforts on teachers themselves.

Rural areas also have challenges in meeting the mental health needs of students. Data suggest mental and behavioral health needs of youth in rural communities are prevalent (Hirsch & Cukrowicz, 2014), including higher rates of exposure to traumatic experiences than youth in urban settings (Crouch et al., 2020). The number of mental health service providers in rural areas often is quite limited, however, due to a range of factors (e.g., geographic isolation, funding, and other resources). Given the limited access to mental health services in these communities, schools often are the “de facto provider” (Garbacz et al., 2022, p. 863) of mental health services, yet schools vary in their ability to hire enough mental health personnel to meet demands (Garbacz et al., 2022). This combination of factors suggests many teachers in rural schools may have high exposure to student distress, with limited supports in the school, making them vulnerable to

BO and STS. Unfortunately, to date few researchers have investigated teacher BO, STS, and CS in rural schools or, when rural teachers are included in the sample, no within-group comparisons are reported (e.g., Borntrager et al., 2012). In Caringi et al.'s (2015) qualitative follow up to Borntrager et al. (2012), one educator in a rural school noted, "We know the community and their background and their family members and everything so we're probably more impacted than if we were in a large city area" (p. 249), yet participants valued feeling successful with their students and viewed their rural setting as both a challenge and a strength.

These limited, yet stark, somewhat contradictory, results highlight the need to ascertain the impact of the COVID-19 pandemic, and a concomitant rise in students' mental health needs, on rural teachers specifically. Given national reports of elevated teacher stress due to COVID-19 (Baker et al., 2021; Diliberti & Kaufmann, 2020; Diliberti et al., 2021; Pressley, 2021), the purpose of this study was to evaluate the well-being of teachers employed in a high-need rural school system in the South during the COVID-19 pandemic via four research questions.

1. What is the extent of COVID-related stress as it pertains to danger, contamination, and traumatic stress among rural teachers during the COVID-19 pandemic?
2. What is the extent of psychological well-being among rural teachers during the COVID-19 pandemic?
3. What is the extent of STS, BO, and CS of rural K–12 teachers during the COVID-19 pandemic?
4. Are there group differences among teachers' general well-being, STS, BO, CS, and COVID-related stress, based on school level, racial identity, relationship status, and household income?

We employed several quantitative measures of teachers' psychological well-being, BO, STS, CS, as well as self-reports of the most rewarding and most stressful aspects of their work and their sources of support during the pandemic.

## Method

### Procedures

Upon IRB approval (IRB-FY21-0245), we distributed an electronic needs assessment via Qualtrics to K–12 teachers ( $n = 738$ ) in a partnering rural school district in northcentral North Carolina

during the winter of 2020–2021 (December to January). The needs assessment sought to evaluate participating teachers' psychological well-being, professional quality of life, and COVID-related stress. School district leaders sent teachers an initial email in which they introduced the research team and provided a link to the informed consent and survey materials. Teachers received two follow-up email reminders, rendering a 33% response rate. To ensure anonymity, assenting teachers were asked to create their own identification code and could omit demographics questions which could be identifying.

### Participants

Participating teachers ( $n = 243$ ) included K–12 teachers and specialty education teachers in a rural school system in northcentral North Carolina. For context, the participating rural school district is comprised of 12 elementary schools, four middle schools, four traditional high schools, one alternative school, and one early college high school.

Approximately 59% of the students are enrolled in free and reduced-price lunch programs, and several schools offer no-cost meals school-wide. This school district is prioritized as high need due to the shortage of mental health services and the 427:1 student-to-school counselor ratio (as of 2021; MyFutureNC, 2023), which exceeds the American School Counseling Association's recommended ratio (U.S. Department of Education, 2021).

Teachers were allowed to omit questions to ensure anonymity, so sample sizes vary across the dataset. Of those reporting demographics ( $n = 216$ ), most teachers identified as White ( $n = 191$ , 88.8%) and female ( $n = 183$ , 84.7%), with only 5.6% ( $n = 12$ ) identifying as African American and 4.2% ( $n = 9$ ) Hispanic. According to the Southern Coalition for Social Justice Racial Equity Report Card (2020), this distribution is representative of teachers within the district. Teachers represented all school levels: elementary ( $n = 94$ , 43.5%), middle ( $n = 27$ , 12.5%), high ( $n = 55$ , 25.5%), and alternative school placements ( $n = 8$ , 3.7%), with 31 (14.4%) teachers choosing not to identify a school. Years of experience ranged from 1–41 ( $M = 15.4$ ,  $SD = 8.8$ ), and ages ranged from 22–66 ( $M = 43.5$ ,  $SD = 10.6$ ) years. Participating teachers were asked to report their household income in increments of \$10,000, ranging from \$0–9,999 to \$200,000 and up. A majority of participating teachers indicated their household income was between \$25,000–49,999 ( $n = 44$ ), \$50,000–74,999 ( $n = 51$ ), \$75,000–99,999 ( $n = 38$ ),

and \$100,000–124,999 ( $n = 33$ ); 20 indicated they preferred not to answer questions regarding income. At the time of the study, the school system offered primarily in-person instruction, with online instruction provided during COVID-related closures.

## Measures

The electronic needs assessment included the COVID Stress Scale (CSS; Taylor et al., 2020), the Psychological General Well-Being Index–Revised (PGWB-R; Revicki et al., 1996), the Professional Quality of Life Scale (ProQOL; Stamm, 2010), demographics, and a series of open-ended questions.

### *COVID Stress Scale*

The COVID Stress Scale (CSS; Taylor et al., 2020) is a 36-item measure. Respondents indicate the extent they have experienced virus-related worries over the past seven days using a 5-point Likert scale ( $1 = \textit{not at all}$ ,  $5 = \textit{extremely}$ ). The CSS includes six subscales, but for this study we administered three subscales: danger ( $\alpha = .96$ ), contamination ( $\alpha = .95$ ), and traumatic stress ( $\alpha = .92$ ). The danger subscale asks respondents to indicate their fears around catching the virus (e.g., “I am worried about catching the virus”) and safety concerns (e.g., “I am worried that I can’t keep my family safe from the virus”). The contamination subscale assesses fears of catching the virus in public (e.g., “I am worried that people around me will infect me with the virus”) or surfaces (e.g., “I am worried that if I touched something in a public space, I would catch the virus”). The traumatic stress subscale asks if respondents have experienced trauma symptoms such as difficulty sleeping, concentrating, or intrusive thoughts of the virus (e.g., “I had trouble concentrating because I kept thinking about the virus”).

### *Psychological General Well-Being Index-Revised*

The PGWB-R (Revicki et al., 1996) is a 22-item measure of an individual’s subjective well-being and distress. The PGWB-R ( $\alpha = .95$ ) includes items regarding frequency of anxiety ( $\alpha = .88$ ), depressed mood ( $\alpha = .87$ ), positive well-being ( $\alpha = .86$ ), self-control ( $\alpha = .68$ ), general health ( $\alpha = .70$ ), and vitality ( $\alpha = .87$ ) within the last week. Teachers indicated their responses on a 6-point Likert scale ( $1 = \textit{none of the time}$ ,  $6 = \textit{all of the time}$ ). The PGWB-R has been widely used to measure subjective well-being, with the six subscales collapsing into a two-factor model of “negative affect” and “positive affect” (Cooke et

al., 2016). PGWB-R scores have been validated for both the total summation score and the six subscale scores. Higher total scores indicate higher levels of psychological well-being (Lundgren-Nilsson et al., 2013). Example items include “Did you feel in good spirits?”; “Have you felt depressed?”; or “Have you been anxious, worried, or upset?” For this study, total scores and subscale scores were evaluated.

### *Professional Quality of Life Scale*

The Professional Quality of Life Scale (ProQOL; Stamm, 2010) is a 30-item measure of 5-point Likert scale items of frequency which aims to evaluate helping professionals’ quality of life in relation to their work within the last 30 days. The ProQOL ( $\alpha = .91$ ) is comprised of three subscales: CS ( $\alpha = .89$ ), BO ( $\alpha = .83$ ), and STS ( $\alpha = .77$ ). As recommended (Stamm, 2010), the ProQOL was modified to directly address teachers by replacing “helper” with “teacher” and “help” with “teach.” Teachers indicated the frequency of satisfaction within their work and their abilities, measuring CS (e.g., “I am proud of what I can do to teach”), experienced BO (e.g., “I feel worn out because of my work as a teacher”), and how often they experienced trauma symptoms from teaching students with a trauma history to measure STS. While not a diagnostic tool, CS scores below 23 indicate areas of the job in which individuals do not derive CS, and BO scores above 41 indicate individuals may be experiencing BO or feel as though they are not effective in their work. STS scores above 43 indicate individuals are likely experiencing symptoms of secondary trauma and should seek support from a supervisor, colleague, or healthcare professional.

### *Demographics and Open-Ended Questions*

Demographics included age, gender identity, racial identity, sexual orientation, education, years of experience, grade level, primary role, and school. Additionally, teachers were asked to respond to six researcher-created open-ended questions. Teachers narrated the most rewarding and most stressful parts of their work as teachers and described their support systems external and internal to the school system.

## Data Analysis

### *Quantitative Data*

Using RStudio (R Core Team, 2022), data analysis began with evaluating the dataset for outliers and missing data. Of the participating teachers ( $n =$

243), 28 teachers (11.5%) did not complete the demographics or open-ended questions. Because of the sensitive nature of the needs assessment and ability to omit items, missing data were considered explicitly missing, indicating teachers chose not to answer the question. We used an analysis of variance to evaluate the differences between those who completed the demographics and those who omitted the demographics. Therefore, to reduce bias in the dataset, we used available case analysis of the full sample (Dong & Peng, 2013). Descriptive statistics and bivariate correlations were calculated across study variables to address the research questions. We explored differences by school level, racial identity, relationship status, and household income using an analysis of variance (ANOVA) to account for group size differences. The relationship between years of experience and study variables was explored using Pearson's product moment bivariate correlations.

### **Qualitative Data**

Teachers' responses to the open-ended questions were analyzed using Consensual Qualitative Research-Modified (CQR-M; Spangler et al., 2012). CQR-M is appropriate for large datasets of brief qualitative responses, as often found in mixed-methods studies (Spangler et al., 2012). The first three authors, all experienced with CQR-M, analyzed responses to each open-ended question separately. In line with CQR-M guidelines, two authors first grouped responses (per question) into broad domains, identified categories within each domain, and then met to achieve consensus on the lists for each question. One of these authors then coded all the responses within each domain into the categories to determine response frequencies per category. Given the brevity of the responses, CQR-M does not require auditing of coding (Spangler et al., 2012). Because teachers' responses sometimes included wording reflecting multiple categories within a domain, *n*'s refer to the frequency of response coded into a category rather than the number of teachers.

## **Results**

### **COVID-Related Stress**

Teachers were asked questions pertaining to COVID-related danger, contamination, and traumatic stress over the last seven days using a 5-point Likert scale (*1 = not at all, 5 = extremely*). Teachers reported mild COVID-related stress surrounding danger ( $M = 16.87, SD = 8.79$ ). They described

moderate experiences of being *worried about catching the virus* ( $M = 3.15, SD = 1.34$ ) or *worried that [they] can't keep their family safe from the virus* ( $M = 3.20, SD = 1.37$ ). Teachers endorsed even less COVID-related stress pertaining to contamination ( $M = 13.14, SD = 7.58$ ) and traumatic stress ( $M = 8.88, SD = 5.57$ ). However, by the time this needs assessment was administered, it is likely that worries of contamination such as catching the virus by *handling money* ( $M = 2.19, SD = 1.26$ ), *checking the mail* ( $M = 1.81, SD = 1.12$ ), or *utilizing cash transactions* ( $M = 2.2, SD = 1.25$ ) had been mitigated by the CDC (2022). Finally, teachers endorsed minimal experiences of traumatic stress such as *trouble sleeping* ( $M = 1.61, SD = 1.01$ ), *trouble concentrating* ( $M = 1.78, SD = 1.04$ ), or *intrusive thoughts about the virus* ( $M = 1.89, SD = 1.13$ ).

### **Psychological Well-Being**

The PGWB-R index (Revicki et al., 1996) asked teachers how often they had experienced symptoms pertaining to well-being and distress over the last week (*1 = none of the time, 6 = all of the time*). Overall, teachers reported modest levels of psychological well-being ( $M = 64.4, SD = 21.4$ ). Teachers reported moderate experiences of anxiety ( $M = 14.08, SD = 5.77$ ), positive well-being ( $M = 13.88, SD = 5.86$ ), self-control ( $M = 9.24, SD = 3.55$ ), general health ( $M = 8.93, SD = 3.46$ ), and vitality ( $M = 11.63, SD = 4.17$ ), while simultaneously indicating fewer experiences of depressed mood ( $M = 6.65, SD = 3.83$ ). Individual item analysis echoed little endorsement of either positive or negative well-being. Teachers reported *feeling in good spirits* ( $M = 4.10, SD = 1.05$ ), *feeling healthy enough to carry out the things [they] like to do or had to do* ( $M = 4.49, SD = 1.26$ ), and *feeling emotionally stable* ( $M = 4.03, SD = 1.42$ ). Similarly, teachers also endorsed fewer experiences of *losing control over the way [they] act, talk, think, feel* ( $M = 1.70, SD = 1.14$ ), *feeling depressed* ( $M = 2.51, SD = 1.30$ ), and *nervousness* ( $M = 2.61, SD = 1.38$ ).

### **Professional Quality of Life**

Teachers indicated their professional quality of life surrounding their experiences of CS, BO, and STS over the last 30 days. Teachers' average scores of CS ( $M = 35.72, SD = 7.92$ ) were above the cutoff score of 23, indicating participating teachers derived moderate CS. Teachers reported getting satisfaction *from being able to teach people* ( $M = 4.38, SD = .73$ ), *being proud of what [they] can do to teach* ( $M =$

4.05,  $SD = .91$ ), and *happy that [they] chose to do this work* ( $M = 3.9$ ,  $SD = .99$ ). However, teachers also reported mild BO ( $M = 27.65$ ,  $SD = 7.23$ ). Teachers reported feeling *worn out because of [their] work as a teacher* ( $M = 3.65$ ,  $SD = 1.15$ ), feeling *overwhelmed because [their] teaching load seems endless* ( $M = 3.35$ ,  $SD = 1.33$ ), and *bogged down by the system* ( $M = 3.24$ ,  $SD = 1.28$ ). Moreover, teachers reported low frequency of being *connected to others* ( $M = 2.77$ ,  $SD = 1.08$ ) or having *beliefs that sustain [them]* ( $M = 1.81$ ,  $SD = 1.0$ ). Teachers reported low experiences of STS from students' traumatic experiences ( $M = 20.56$ ,  $SD = 5.41$ ) and reported low frequency of avoiding *certain activities or situations because they remind [them] of frightening experiences of the people [they] teach* ( $M = 1.24$ ,  $SD = .60$ ) or having *intrusive frightening thoughts* ( $M = 1.32$ ,  $SD = .59$ ) because of their teaching.

### Differences Among Variables

Due to the varying nature of course instruction, classroom management, and classroom strategies, differences across school levels were evaluated. Participants' primary places of employment were divided by elementary ( $n = 94$ ), middle ( $n = 27$ ), and high school ( $n = 55$ ) levels and alternative placements ( $n = 8$ ). No significant ( $p > .05$ ) differences emerged across all variables by school levels among elementary, middle, high school and alternative placement teachers. However, significant differences were noted among individuals who chose not to identify their primary school of employment ( $n = 28$ ). For example, a significant difference of CS was found among individuals who omitted the item and those teaching in elementary ( $p < .01$ ), middle ( $p < .01$ ), and high school ( $p < .01$ ), but no difference between teachers in alternative school placements. Moreover, there was a significant difference ( $p < .01$ ) of BO, CS, psychological well-being, and COVID-related stress between those who identified their primary school of employment and those who omitted the items. Individual omission of items regarding primary school of employment indicated fewer experiences of CS while also reporting fewer experiences of BO and COVID-related stress. These differences further point to explicitly missing data among teachers who perhaps did not want to be identified based on their experiences.

Overall scores of psychological well-being indicated no differences among income categories. Further, no significant differences emerged around teachers' CS, BO, or STS across income categories.

There were, however, differences in COVID-related danger ( $p < .01$ ); those within higher income brackets reported less experience of COVID-related danger.

Finally, there were no differences of overall psychological well-being based on relationship status or racial identity except for a significant difference between racial identity and vitality ( $p < .01$ ) as reported on the PGWB-R. Hispanic and African American teachers reported fewer experiences of vitality than their White counterparts. We further investigated the relationship between teachers' years of experience across the study variables using Pearson's product-moment bivariate correlations. Overall, the correlations ranged from  $-.002 < r < .13$ , indicating no relationship between years of experience and teachers' professional quality of life, COVID-related stress, or psychological well-being.

As demonstrated in Table 1, teachers reporting higher levels of vitality also reported higher levels of anxiety ( $r = .77$ ,  $p < .01$ ), positive well-being ( $r = .72$ ,  $p < .01$ ), and general health ( $r = .73$ ,  $p < .01$ ). Moreover, teachers' overall psychological well-being was positively correlated with anxiety ( $r = .87$ ,  $p < .01$ ), positive well-being ( $r = .73$ ,  $p < .01$ ), general health ( $r = .87$ ,  $p < .01$ ), and vitality ( $r = .93$ ,  $p < .01$ ). Teachers reporting greater experiences of COVID-related danger ( $r = .71$ ,  $p < .01$ ) and contamination ( $r = .72$ ,  $p < .01$ ) further indicated greater experiences of COVID-related trauma.

### Qualitative Responses

#### Most Rewarding

Teachers' statements of most rewarding aspects of their work during the pandemic ( $n = 189$ ; see Table 2) were grouped into five categories. The most frequent category was relationships ( $n = 79$ ), with subcategories reflecting value of relationships with their students ( $n = 34$ ), their coworkers ( $n = 13$ ), students' families ( $n = 7$ ), and others ( $n = 15$ ). One teacher stated, "Working with students is the main thing that helped me get through the hard times within teaching." Another teacher stated,

It has been absolutely heartwarming to watch the parents working with and doing what they can to help their child to complete the assignments, participate in lessons and do it as independently as they can! This is different because we never or very rarely [are] given the opportunity to see parent/child interaction before this.

Second, respondents noted aspects of their



Table 1  
*Descriptive Statistics and Correlations for Study Measures*

Variable	N	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. CS	243	35.72	7.92	-												
2. BO	243	27.65	7.23	-.29*	-											
3. STS	243	20.56	5.41	-.09	.64*	-										
4. PGWB-R – A	243	14.07	5.77	.13*	.58*	.35*	-									
5. PGWB-R – D	243	6.65	3.83	-.05	.63*	.45*	.77*	-								
6. PGWB-R – PWB	243	13.88	5.86	.57*	-.13*	.20	.38*	-.02	-							
7. PGWB-R – SC	243	9.24	3.55	.34*	.14*	-.07	.55*	.26*	.77*	-						
8. PGWB-R – GH	243	8.93	3.46	.33*	.32*	.17*	.77*	.56*	.55*	.64*	-					
9. PGWB-R – V	243	11.63	4.17	.31*	.32*	.07	.77*	.46*	.72*	.78*	.73*	-				
10. PGWB-R – Overall	243	64.40	21.40	.35*	.37*	.15	.87*	.60*	.73*	.82*	.87*	.93*	-			
11. COVID – T	243	8.88	5.57	.18*	.37*	.37*	.61*	.59*	.14*	.24*	.61*	.36*	.52*	-		
12. COVID – D	243	16.87	8.79	.20*	.38*	.32*	.62*	.52*	.22*	.33*	.61*	.41*	.55*	.71*	-	
13. COVID - C	243	13.14	7.58	.19*	.33*	.32*	.57*	.48*	.21*	.25*	.55*	.36*	.50*	.72*	.86*	-

\*  $p < .01$ .

Note. Total sample ( $n = 243$ ). Maximum possible scores for the PGWB-R varied across subscales: anxiety (30), depressed mood (18), positive well-being (24), self-control (18), general health, (18), and vitality (18).

students' learning and academic development ( $n = 49$ ) as rewarding. One teacher commented, "I have loved seeing the academic growth in my students... I am currently excited that many of my current students are still growing in their reading abilities, even during virtual learning." The third most frequent comments referred to technology ( $n = 31$ ), noting opportunities for teachers to learn via virtual teaching. School atmosphere ( $n = 18$ ) also was named. Fewer teachers identified specific types of support ( $n = 15$ ), citing (subcategories) general support from school staff and administrators ( $n = 8$ ), job security ( $n = 3$ ), and support for specific issues ( $n = 2$ ). The final category was "nothing" ( $n = 7$ ).

### Most Stressful

Within the most stressful aspects of teachers' work during the pandemic ( $n = 204$ ; see Table 2), instructional issues ( $n = 73$ ) was the most frequent category. Specifically, within this category teachers referred to the lack of physical books, learning loss of students, and disruptive students. One teacher wrote, "I am so concerned as to these students never being able to catch up in reading. First grade is the grade that teaches reading and students are still learning letter sounds and how to write letters." The next most frequent category was teachers' workload ( $n = 36$ ), including paperwork, the learning curve of virtual teaching, and work overload being "more than work than ever." Third, responses were categorized as lack of support ( $n = 27$ ); parents, administrators, and the school board were named, along with comments

about lack of respect for teachers and/or their content area. One teacher stated,

Speaking of hybrid learning, I felt absolutely overwhelmed. It was almost impossible to keep up with which students had done what lesson when we are teaching the lesson to 3 different classes essentially. I had to keep up with AA, BB, and virtual students. I was overwhelmed by the workload. Additionally, the lack of support by parents and the society as a whole has been very difficult to cope with this year.

Additional concerns were categorized as situational ( $n = 23$ ), referring to COVID-related health concerns, leaves of absence, loneliness, and feeling trapped in one's classroom (teachers were instructing remotely from their classrooms). Other remarks described stress related to constant change and the unknown ( $n = 17$ ), with seven of those responses specific to district-level policies and decisions. In addition, responses pointed to lack of connection with students and their families ( $n = 14$ ), "everything" ( $n = 5$ ), and "nothing" ( $n = 2$ ).

### School Support System

In the within school support domain ( $n = 338$ ; see Table 2), teachers' responses indicated they felt strong ( $n = 139$ ) support in their school during the pandemic; they wrote "Absolutely!" and other enthusiastic, positive comments. Fewer comments were categorized as moderate ( $n = 22$ ; e.g., "could be better," "sometimes") or negative ( $n = 25$ ; e.g., "nope," "trying to keep us all isolated," COVID

distancing”). Responses pointed to coworkers as sources of support within their school ( $n = 85$ ), using words such as “team members,” “colleagues,” and “mentor.” One teacher stated,

My teaching team, administration, and support staff are very supportive. They give encouraging words, offer fun activities to participate in as a school. My team and I get along well as we are

able to vent and share frustration as well as celebrations in and outside of school time.

In the second category, teachers named administrators ( $n = 53$ ) as either supportive (“have my back”) or not supportive. Finally, some teachers indicated non-teaching staff (e.g., school counselor, instructional coaches, assistant principals, curriculum facilitator) were sources of support.

Table 2  
*Teachers’ Rewarding, Stressful, and Supportive Aspects of Their Work*

Domains and categories	Frequency	
What is the most rewarding part of your work? ( $n = 189$ )	<b>Relationships with others</b>	15
	<i>Students</i>	34
	<i>Families</i>	7
	<i>Teachers/Staff</i>	13
	<b>Academic development of children</b>	49
	<b>School Atmosphere</b>	18
	<i>Support</i>	2
	Issue-related Support	2
	General support from staff/administration	8
	Job security	3
	<b>Technology</b>	31
<b>Nothing</b>	7	
What is the most stressful aspect of your work? ( $n = 204$ )	<b>Constant change and the unknown</b>	17
	<i>District-level policies and school board decisions</i>	7
	<b>Lack of support</b>	27
	<b>Amount of work/workload</b>	36
	<b>Instructional issues</b>	73
	<b>Situational concerns</b>	23
	<b>Lack of connection</b>	14
	<b>Everything</b>	5
	<b>Nothing</b>	2
Do you feel you have a support system within your school? ( $n = 338$ )	<b>Degree of support</b>	
	<i>Somewhat/moderate/sometimes</i>	22
	<i>Absolutely! (Enthusiastically positive comments)</i>	139
	<i>None</i>	25
	<b>Sources of support</b>	
	<i>Teachers, colleagues, team members</i>	85
	<i>Administration</i>	53
<i>Non-teaching support staff</i>	14	
<b>Outside school support</b>	1	
How would you describe your support system outside of the school? ( $n = 266$ )	<b>Degree of support felt</b>	
	<i>Good/supportive</i>	145
	<i>“Okay”</i>	15
	<i>Supportive... but not helpful</i>	9
	<i>Non-existent/negative</i>	10
	<b>Sources of support</b>	
	<i>Family/friends/individual Community</i>	74
<i>Spiritual/church/religious community</i>	10	
<i>Mental health provider</i>	3	

## ***Outside Support System***

Teachers' comments also pointed to sources of support outside the school during the pandemic (n = 266; see Table 2). The most frequent category identified these individuals as positive (n = 145). One teacher stated, "My husband and other family members are very supportive and helpful while I'm not working. My husband goes above and beyond to make things easier for me at home... I can't imagine a world without him." Other comments described moderate (n = 15), equivocal (n = 9; e.g., "supportive, but not helpful/understanding – suggested quitting"), or negative (n = 10; "non-existent," "horrible," "hostile/toxic") support outside the school. One teacher stated, "I have a very loving family and a few close friends, but their solution to my work problems is that I should quit, which isn't really what I want to do right now." Another teacher noted, "I have family members and a significant other that support me, but none truly understand what I'm going through." Categories of sources of support included family members (e.g., spouse, partner) and friends (n = 74), a spiritual/church/religious community (n = 10), and a mental health provider (n = 3; e.g., counselor, therapist).

## ***Teachers' Emotional Wellbeing***

Across open-ended items, teachers' comments, though limited, pointed to concerns related to their mental health and emotional well-being. Embedded within the most stressful aspects of their role, one teacher stated, "I feel imprisoned in my classroom. I spend all day on zoom and don't leave my room but to go to the bathroom and heat my lunch." Another teacher noted, "I am constantly in fear of other staff members infecting me... these have never been worries before." Others noted feelings of "isolation" and "loneliness combined with constant change in expectations," while another teacher stated, "being at work is depressing." These comments underscore that teachers' emotional well-being has been impacted by their additional responsibilities and unique guidelines for teaching during the pandemic. One teacher simply stated, "we are struggling." When asked about rewarding experiences, one teacher explained, "In previous years, I have not had to rely so much on my colleagues for my SEL well-being." As previously noted, only three teachers noted a mental health provider as an external source of support.

## **Discussion**

In this study, we sought to evaluate teachers' needs pertaining to psychological well-being, STS, BO, CS, and COVID-related stress, specifically for teachers employed in a high-need rural school system, a gap in the current literature. First, teachers in a rural county in northcentral North Carolina during the COVID-19 pandemic indicated moderate worries about contamination through contact with others (e.g., cough, sneeze, cash) and their ability to keep themselves and their families safe from the virus. They endorsed few trauma-like symptoms (e.g., trouble concentrating or sleeping) in response to the virus. Teachers with 20 or more years of experience did report higher fears of contamination, perhaps due to more severe COVID-19 health consequences for older adults. Overall, teachers were concerned about the virus but were not distressed and did not view it as traumatic.

Second, on well-being and professional quality of life measures, teachers overall reported low levels of anxiety, depression, and low STS (i.e., being impacted by others' traumatic experiences), as well as moderate BO. At the same time, however, they also reported only moderate levels ("a little" or "some of the time") feelings of positive well-being, good health, vitality, and self-control, as well as CS (i.e., pleasure in doing their work well, making contributions through their work).

These quantitative results suggested an overall profile of low distress and moderate well-being. These results were somewhat unexpected, given pervasive reports of high COVID-induced teacher stress, BO, and plans to leave the profession (e.g., Baker et al., 2021; Diliberti & Kaufman 2020; Diliberti et al., 2021; Pressley et al., 2021), although these studies used different measures and were not specific to rural teachers. Also, in contrast to Baker et al.'s (2021) findings that Black teachers in New Orleans reported higher mental health overall than did White teachers, rural Hispanic and African American teachers in this study reported fewer experiences of vitality than did their White counterparts. The Hispanic and African American teachers, however, comprised only 10% of our sample while White teachers (31%) were in the minority in the New Orleans sample. Though an analysis of variance could depict group differences despite the small number of teachers of color, further analysis is needed to amplify the unique needs of teachers of color within rural communities.

Complementing the quantitative findings, teachers' brief qualitative responses resembled those reported by Baker et al. (2021) for teachers in New Orleans, who cited both stressor and protective factors. In general, the rural teachers' responses were positive, although they also named several sources of stress. Despite COVID-19, they still found aspects of their work rewarding, especially their relationships with students, students' families, and their coworkers. They continued to appreciate witnessing their students' learning. They described their school atmosphere as supportive and appreciated the familiarity and contact with their hard-working colleagues while shifting between in-person and virtual learning. They also had strong positive support outside school from family, friends, and their church/spiritual or religious community, factors often cited as rural values and beliefs (Crumb et al., 2019; Fleming et al., 2018; Garbacz et al., 2022). Only three comments included mental health providers as important sources of support, which could be related to access issues and rural attitudes of independence and/or stigma around seeking mental health services (Crumb et al., 2019; Garbaca et al., 2022).

At the same time, teachers' comments made clear the switch to virtual learning was quite stressful. They found the added workload (e.g., paperwork, technology learning curve) particularly taxing. Teachers expressed concerns about their students falling behind in their learning but made few comments specific to their students' mental health. They missed their connections with students and families; a few comments pointed to loneliness, even feeling "trapped" in their classroom. Some also seemed distracted or concerned about cooccurring school district-level issues. Although a minority of comments pointed to extreme distress, these comments were stark, suggesting some teachers were deeply struggling with their mental health.

Potential explanations for the contrasting results for this group of teachers range from denial or avoidance to restraint or resilience. Reports of low STS and COVID-related stress could indicate teachers did not frame the pandemic as a traumatic experience for themselves or their students. Rather, they might have viewed the pandemic as an (other) adversity requiring adaptability and coping. Such an explanation would be in line with Fleming et al.'s (2018) description of rural resilience in communities that have built up the "psychological strength to understand that challenges are inevitable and that it is necessary to work through them" (p. 117).

Such descriptions might reflect similar sentiments expressed by Baker et al. (2021) their review of survey results New Orleans teachers. For example, although Black and White teachers reported similar frequencies of stressors, Black teachers reported more protective factors and better mental health than their White counterparts. Baker et al. surmised the differences might reflect the resilience developed by the Black community as a result of dealing with pervasive racism-related stress. Though the issues faced by urban Black teachers and our rural community are not comparable, perhaps rural communities, somewhat similarly "by necessity" (Louison & Fleming, 2017, p. 8), also have developed a resilience response or attitude to stressors in their lives and work. Of note, however, African American teachers, as well as Hispanic teachers, in our rural sample reported moderate well-being, similar to their White counterparts, with the exception that the Hispanic and African American teachers reported fewer experiences of vitality.

In addition, rural teachers' comments strongly endorsed several factors known to promote resilience (PeConga et al., 2020), particularly their connections with students, students' families, and coworkers; the supportive atmosphere many felt in their schools; and their appreciation of the meaningful outcomes of their work (as reflected in both their comments as well as their CS scores). Across contexts, social support and meaning making are strong predictors of resilience (PeConga et al., 2020).

Rather than resilience, the rural teachers' BO, STS, and CS scores may reflect recent concerns about the viability of the ProQOL (Stamm, 2010) for measuring these factors in educators (Fleckman et al., 2022; Ormiston et al., 2022). For example, Fleckman et al. (2022) questioned whether the clinical language in the items is appropriate for teachers. They argued teachers' exposure to student trauma is more indirect than mental health clinicians' exposure to clients, which could account for teacher reports of moderate STS symptoms. Similarly, the New Orleans teachers in Fleckman et al. (2022) reported CS specific to accomplishments within their roles (e.g., working with their students). Although agreeing that teachers are at risk for STS, Fleckman et al. (2022) encouraged researchers to investigate ways teachers are exposed to their students' trauma histories and determine what conditions of trauma exposure impact teachers' well-being and classroom functioning. Our rural teachers' results seem in line with Fleckman et al.'s findings and recommendations.

## Limitations

Several limitations of our study should be kept in mind. We collected data at only one timepoint, in one high-need rural school district. In addition, results only reflect self-reports of the teachers who chose to respond. Importantly, we asked questions about COVID-related stress, but did not include questions related to other global events (e.g., social and racial unrest) that were ongoing at the same time; the historical context of these events certainly could have impacted teachers' responses. Finally, the survey materials were created by the research team but delivered by school leadership personnel. These procedures may have influenced teachers' willingness to participate and their trust in anonymity. Nevertheless, the unexpected results underscore the need to explore rural teachers' unique coping strategies, resources, and supports, as well as mental health service needs of those experiencing high levels of distress. While our sample represented the participating district, teachers of color only represented 10% of our sample, so this study is limited in how it may relate to the needs of communities of color within rural school districts.

## Implications and Future Research

Even at moderate levels of BO and STS, attention to teachers' emotional well-being is critical, for themselves and their students. Several, somewhat overlapping, avenues for intervention have been proposed in the literature. School districts could support intentional efforts to promote two consistent resilience factors highlighted in our results as well as others' (e.g., Baker et al., 2021). First, *social support and connection*—between teachers, between teachers and administrators, between teachers and students and their families—are strong buffers against negative experiences and crises (PeConga et al., 2020). They also seem to be effective for teacher retention in rural schools, as rural teachers in two recent studies highlighted a strong professional family that offered a sense of belonging and support (Gallo, 2020), a family-oriented culture, and deep camaraderie (Tran, 2020) as reasons they stayed in their rural schools. Second, *purpose and meaning making*, such as finding satisfaction and rewards in one's work, serve as protective factors for teachers' mental health (Baker et al., 2021; Sutjiono et al., 2019). In the current study, teachers wrote comments

specific to helping foster students' learning-focused growth. They also found meaning in supportive relationships with family and friends as well as their religious or spiritual communities. These and other protective factors were evident in Kangas-Dick and O'Shaughnessy's (2020) review of empirical support for several resilience programs for teachers. The authors also emphasized the important influence of attending to contextual factors within schools and school systems as well to foster teacher resilience, important considerations for future research.

Existing efforts in schools to promote students' social-emotional learning (SEL) also seem relevant. For example, Zieher et al. (2021) surveyed a national sample of teachers committed to SEL about their experiences during the pandemic. Those who perceived greater school/district support for SEL reported greater SEL implementation with their students, higher use of social-emotional strategies with themselves (e.g., conflict resolution, kindness toward self), and lower emotional exhaustion. In addition, there is increased attention to training teachers in trauma-informed practices and creating trauma-informed schools (Frankland, 2021; Luthar & Mendes, 2020; Ormiston et al., 2022) as well as the need to increase educators' mental health literacy (Garbacz et al., 2022). Future researchers are encouraged to apply interventions described by these authors within the rural school context. In addition, further investigations of STS and CS (Caringi et al., 2015; Fleckman et al., 2022; Ormiston et al., 2022), as specifically manifested by rural teachers, also could inform intervention choices.

While efforts to promote teachers' knowledge, skills, and resilience are critical, they may not be adequate for all teachers. Some teachers in our study reported levels of psychological distress that should not be ignored, for their own well-being as well as their critical role in educating and building resilience in rural youth (Fleming et al., 2018). Of concern, very few teachers reported seeking the support of mental health providers to help them manage their distress, which could reflect lack of access, mental health stigma, or other factors (Crumb et al., 2019; Garbacz et al., 2022). In line with Baker et al. (2021), we urge attention to those teachers most deeply challenged by ongoing COVID-related stressors and challenges, within and outside the school. Rural teachers face unique challenges which require unique coping strategies and supports to foster and sustain their resilience, both as individuals and educators.

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