The Perceived Effects of the Onset of the COVID-19 Pandemic: A Focus on Educators' Perceptions of the Negative Effects on Educator Stress and Student Wellbeing

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Abstract

The COVID-19 pandemic resulted in an urgent pivot to remote learning, causing many challenges for teachers and school administrators. The current study sought to better understand the extent to which the perceived negative impacts of COVID-19 on U.S. educators and their students varied as a function of staff role (teacher vs. administrator), school level (elementary vs. secondary school), and type of school setting (public vs. private), as reported through a national survey of educators conducted in June through July of 2020. Using data from 608 educators (*n* = 481 teachers and *n* = 127 administrators; 48% elementary; 85% public school), we examined educators' perceptions of negative impacts on their personal lives, professional lives, and students' lives; major challenges; and stress in various domains. Findings suggested an overall high level of concern across domains. Investigation of educator subgroup effects suggested elementary educators and administrators were the most and were most concerned about the negative impacts on students.

Key words:
COVID-19, public schools, private schools, administrators, educator stress

Impact Statement:
Educators, including teachers and administrators alike, experienced significant negative impacts of the COVID-19 pandemic on their work-related stress, concern about students, and their own well-being. Some subgroups, like elementary educators, those working in public schools, and teachers (compared to administrators), may require additional assistance in managing stress, and supporting students, both academically and with regard to their social-emotional needs.

The sudden onset of COVID-19 pandemic created an unprecedented burden on educators. With most U.S. schools fully dependent on in-person instruction until the start of the pandemic (Molnar et al., 2019), few educators were prepared to make this rapid transition to remote instruction (Irwin et al., 2021; Kohler, Molloy Elreda, Rimm-Kaufman, 2022), adding to stress caused by personal health and safety concerns related to the pandemic. Even without a pandemic, stress is a major concern among educators, with many reporting high rates of burnout and work-related stress (Herman, Hickmon-Rosa, & Reinke, 2017). When coupled with new personal and professional demands associated with navigating the pandemic, it is reasonable that educators would report high levels of concern and uncertainty about their capacity to support their students' social-emotional and academic needs.

To address these gaps and this timely issue, the current study sought to document some of the perceived social-emotional impacts and challenges associated with the pandemic for educators following the initial onset of the pandemic. We were particularly interested in contrasting differences in perceptions among elementary vs. secondary educators and public vs. private school educators to better understand how COVID-19 may have disproportionality impacted some educators. In addition, we explored potential differences between teachers and administrators in their perceptions of the potential impact of the pandemic on themselves and their students. Having additional information about educators' own well-being and the perceived needs of their students can inform the development of resources, tools, and training to support educators should the pandemic persist or in the eventuality of other national or local emergencies.

The Impact of the Pandemic on Educators

In spring 2020, all Americans, regardless of profession, faced significant and persistent disruptions caused by the COVID-19 pandemic. Uncertainty regarding exposure to COVID-19, sickness and death of friends and family members, job loss, professional responsibilities that required close human contact, lack of health insurance and childcare, and limited basic resources including money for rent, food, and other necessities were causes for serious concern (Browning et al., 2021; Kujawa et al., 2020; Park et al., 2020). Moreover, many working parents struggled to manage home-based care and remote schooling for their own children while working remotely during the pandemic (Lee & Parolin, 2021). Thus, the pandemic had widespread effects on various aspects of everyday life, which were particular profound for essential workers, such as teachers. In fact, the pandemic resulted in unique professional demands for educators as they were tasked with quickly pivoting to remote learning and performing their job in this new format (Kraft & Simon, 2020). For example, teachers who are parents/caregivers also had to provide childcare and support online learning for their own children, while also leading online classes for their profession (Lee & Parolin, 2021).

In the current study, we were interested in assessing general levels of occupational stress associated with the pandemic, as well as the perceived impact of the pandemic on educators' relationships at school because of the highly relational nature of education (Nganga et al., 2019). Positive relationships at school are known to contribute to teachers' sense of satisfaction (Veldman et al., 2013, 2016). Many impromptu interactions between educators, students, and colleagues occur in the school building, but every social interaction had to be planned and intentional during remote schooling in the spring of 2020. We anticipated that this shift would negatively impact educators' relationships with their colleagues, students, and the overall school climate. Given the critical nature of interaction quality in online learning environments (Borup et

al., 2013; Hawkins et al., 2013), educators were expected to continue to provide instructional and emotional support to their students in this new format.

Also of interest were educators' assessment of the negative impact of the pandemic on the lives and needs of their students. With students participating remotely and less opportunity for individual teacher-student interactions, teachers have expressed concern about the pandemic's impact on students' academic, behavioral, and social-emotional development (Hamilton & Gross, 2020). There was - and still is - good reason for educators to be concerned about students. School closures and the transition to remote learning called into question whether students would experience significant learning loss or other social-emotional challenges (Hamilton & Gross, 2020). In addition, a series of recent reports have documented significant negative impacts for elementary and secondary school students across a range of domains, including social-emotional and mental health problems (Hamilton & Gross, 2021; Hopeful Futures Campaign, 2022). For example, data from the Centers for Disease Control and Prevention documented a significant increase in serious mental health concerns resulting in visits to the emergency department (Leeb et al., 2020). There are also increased safety concerns, for the rates of child abuse appear to have increased during COVID-19 (Sidpra et al., 2020; Thomas et al., 2020) as children spent more time at home and less time in safe supervised spaces like schools. These pandemic-related changes suggested that educators might report negative impacts of the pandemic on students' academic learning, social and emotional development, and their family lives.

Differential Impacts by Educators' Role and Context

Several recent studies have concluded that educators struggled personally and professionally following this crisis (e.g., Baker et al., 2021; Chan et al., 2021; Pressley et al.,

2021; Steiner & Woo, 2021; Yang, 2021). However, this research has largely focused on educators as a homogenous group, whereas experiences may have differed according to educators' role (teacher vs. administrator) and context (elementary vs. secondary; public vs. private school). There is reason to believe that the level of stress and associated impacts of the pandemic may vary as a function of role, due to the unique demands and resources afforded by educators' specific role and context. Indeed, the Job Demands-Resources model posits that job demands and job resources constitute job-specific risk factors associated with job stress (Bakker & Demerouti, 2007; Bakker & Schaufeli, 2000). Job demands are aspects of the job that are associated with physiological and psychological costs whereas job resources are aspects which are functional in achieving work goals and/or reduce job demands. The differing demands and resources afforded by educators' role and context are likely related to their assessment of the impact of the pandemic on their personal, professional, and students' lives, as well as their own experience of stress in response to the pandemic (Bauer et al., 2006).

Teachers vs. Administrators. For example, exceptionally high levels of stress have long been documented in teachers (Herman et al., 2017), Although less studied, school administrators are also a group of concern because of the unique demands and responsibilities of their role. They encounter additional strain due to the managerial and financial components of their work, along with the responsibility of ensuring the school complies with state and federal mandates (Mahfouz, 2020; DeMatthews et al., 2021). In the context of the COVID-19 pandemic, teachers were on the front lines making programmatic and curricular changes in real time to accommodate the quick shift to online learning. In contrast, administrators were responsible for making school and district-wide decisions, and marshalling resources to facilitate the online learning process. The distinct primary foci of these positions reflect differential demands and

likely resulted in different areas of concern and stress for teachers and administrators. Specifically, we anticipated that teachers would perceive a more negative impact of the pandemic on their relationships with students, whereas administrators may be more concerned with the larger school climate.

Elementary vs. Secondary Educators. With regards to school level, teachers employ teaching practices and modalities according to the developmental capacities of their students, with more complex, technology-based practices reserved for older students (Liao et al., 2021). Indeed, a higher percentage of secondary schools offered online programing prior to the pandemic; this prior knowledge may have served as a helpful resource in navigating the transition to remote learning. Thus, secondary educators may have been more prepared to pivot to online learning compared to elementary teachers (Irwin et al., 2021), which makes sense why elementary educators may have been more concerned about their students' learning than secondary teachers.

Public vs. Private School Educators. Finally, students attending private schools are more likely to come from two-parent, and more affluent households than students attending public schools (U.S. Department of Education; National Center for Education Statistics, 2016, Table 206.30). At a time when parents suddenly assumed the responsibility for overseeing their children's learning at home, households with more resources (e.g., computing, supervision, quiet places for online learning) to support students as they engaged with remote instruction may have been able to provide more positive remote learning experiences for those students. Indeed, private schools saw increased enrollment in fall 2020, with evidence suggesting this was due to private schools' flexibility in meeting local parents' desire for in-person or virtual schooling (Musaddiq, Stange, Bacher-Hicks, & Goodman, 2021; Scafidi, Tutterow, & Kavanagh, 2021).

Thus, the resources afforded in these contexts may have resulted in private schools' ability to meet parents' needs, resulting in fewer perceived negative impacts. Understanding how the pandemic impacts these subgroups is essential so that targeted efforts to support educators may be appropriately administered.

Overview of the Current Study

To address these gaps, our team fielded an online survey which included 788 teachers and administrators from across the U.S. between June and July of 2020 to assess the near-term perceived impacts of the pandemic and pivot to online learning on educators' personal lives, professional lives, and students' lives. The current study reports findings from this group of educators to better understand their perceptions of COVID in relation to the perceived a) negative impacts, b) major challenges, and c) stress across domains (personal lives, professional lives, and students' lives), and to explore whether these perceptions varied as a function of their role and context.

Specifically, we compared the perceptions of stress and concern of teachers vs. administrators, elementary vs. secondary educators, and educators working in public vs. private school settings. Teachers and administrators were both faced with making major shifts to their practice, yet differences in their roles, demands, and resources, may have resulted in teachers reporting more concern with their students' lives, whereas administrators may have been more concerned with the larger school climate. With regards to school level, we anticipated that secondary educators and students may have more competency with online learning tools and the use of technology, as compared to educators of elementary school students and thus may have experienced less stress associated with the shift to remote learning compared to their elementary colleagues. Finally, we anticipated that educators in private schools may have experienced fewer

impacts than public school educators because these schools have more resources to provide a smooth transition to remote learning and may have been able to draw upon family resources to facilitate the home-based learning process. This line of research has the potential to influence future planning and professional development efforts related to the pivot to remote learning, with a particular focus on educators' own experiences of concern and perceived stress in relation to meeting their students' social-emotional and academic needs.

Method

Study Design and Procedure

Data were collected through the Qualtrics panel aggregation service, which was contracted to survey an anonymous, national sample of educators from opt-in standing research panels. Qualtrics recruits and maintains research panels with a wide variety of characteristics, and participants are randomly selected and invited to participate if they meet the identified characteristics (e.g., PreK-12 educator). We used this panel service to rapidly collect time-sensitive data because access to teachers was incredibly limited at the start of the pandemic through traditional district- or school-based recruitment channels. In addition, it was not possible to field this type of study using traditional school-based recruitment during the pandemic or obtain the necessary district approvals to recruit participants through schools during the rapid shift to remote leaning. A clear benefit of using the Qualtrics panel is the national reach and the ability to purposefully sample registered participants with certain characteristic (e.g., teachers, administrators). Although this approach to data collection is a bit novel in education, there is a growing body of educational studies leveraging online panel data collected by Qualtrics (e.g., Schatz et al., 2021; Troia & Graham, 2016; Walden et al., 2021). Moreover, analyses comparing online panel data and conventional data samples support the credibility of online panel data

(Walter et al., 2019), highlighting their potential utility for exploratory research when conventional samples are not available.

Sampling. Participants in the standing Qualtrics research panels who self-identified as educators received an email inviting them to participate in the project and provided a link to the Institutional Review Board-approved consent form and anonymous self-report survey. We contracted with Qualtrics to fill a subquota, which in turn stratified the sample by educators' region, position, and school level. Specifically, we based the educators' regions on the U.S. Census designations of West (23%), Midwest (22%), South (37%), and Northeast (18%), matching respondent percentages to each region's respective educator populations. Educators self-reported their position as either teacher or administrator. We specifically stratified the sample to include 60% teachers and 40% administrators. Administrators included leaders at both the school (e.g., instructional coach; principal) and the district level (e.g., superintendent). Finally, educators reported the school level where they worked as primarily elementary (Pre-K to 5^{th} grade, 54.4%) or secondary (6^{th}-12^{th} grade, 45.6%). The first four survey questions collected stratification demographic data. As per the Qualtrics panel aggregation service sampling strategy, once a specific subgroup's quota was reached (e.g., Midwestern elementary teachers), data from that subgroup was no longer collected. To count towards the quota, respondents needed to complete at least 60% of the questions, although missing data was rare (see details on missingness below).

Procedures to Ensure Data Integrity. Qualtrics uses a number of procedures to ensure high quality data (see Waters et al., 2019). For example, in addition to inviting only educators (i.e., teachers and administrators) into the survey, an additional question asking about their occupation, with "PK-12 educational services" embedded in a long list industries, was used to

further screen out ineligible participants. As noted above, participants completed the screening questions for the sampling (e.g., school type, role) before being told what would qualify them for participation; as such, they did not know that a particular quota was filled when they identified as a teacher instead of a leader, for example. During data collection, Qualtrics tracked IP addresses to ensure that each participant only completed the survey one time. Qualtrics continuously monitored the quality of data (i.e., insufficient effort responding), including protocols for deleting any participants who provided nonsense or clearly not legitimate responses for open-ended questions and straight-line responses. We therefore conducted analyses to identify poor quality survey responses and removed 36 cases with suspicious open-ended responses (e.g., nonsensical text), 7 cases with straight-line responses, 25 cases with contradictory demographic data (e.g., number of years in district greater than year in education), and 1 case located outside of the U.S. The final sample included responses from 788 educators.

Timeline. The survey was open from mid-June to mid-July 2020, with 82% of responses being collected in June 2020. We selected this window for the data collection because it was shortly after the conclusion of the 2019-2020 school year, but well before schools announced their fall plans for school reopening. Participants received a nominal financial incentive for completing the online survey.

Participants

To address our comparisons of interest, we restricted our analysis sample to teachers and principals/assistant principals only. Positions such as district employees were excluded because we were most interested in school-based educators who were most proximal to the student experience; also excluded were instructional coaches and technology specialist, given their role differed from typical teachers and administrators, and the relatively small number of participants

in these roles. This resulted in an analytic sample of N = 608 (n = 481 teachers and n = 127 administrators). Approximately 48% of respondents (n = 292) worked in elementary schools and 52% (n = 315) worked in secondary schools. With regard to the administrators, 66 participants reported being principals and 61 assistant or vice principals at their school; however, they were analyzed jointly as a single grouping, in contrast to teachers. As would be expected, regarding years of experience in education, administrators had more experience (M = 18.6, SD = 9.4) on average than teachers (M = 15.7, SD = 10.2). Finally, approximately 85% of respondents (n = 506) reported working at a public school, whereas 15% (n = 92) worked at a private school (see Table 1).

Measures

The COVID-19 Educator Survey (EdTech Evidence Exchange, 2020) was developed to rapidly investigate educators' perceptions of and experiences with the COVID-19-related pivot to remote instruction; the full survey included a series of questions regarding instructional formats, new material covered, professional learning, technological challenges, and behavioral and mental health issues (e.g., stress). In the current study, we focused exclusively on a subset of items that focused on the negative impacts of COVID-19, challenges faced as a result of COVID-19, and stress due to COVID-19. This set of items was based on theories of stress and work demands (e.g., Van Horn et al., 2004) and extant COVID specific measures (i.e., Grasso et al., 2020; Herman et al., 2021). Given that there was not an existing measure to assess these constructs of interest, we adapted items from two existing measures (i.e., Grasso et al., 2020; Herman et al., 2021), and created a few novel items. We describe each domain in more detail below, which were largely conceptualized as single item indicators on an index, rather than scales reflecting a single latent construct. For additional information on other findings from the

full survey, see Kohler, Molloy Elreda, and Rimm-Kaufman (2022) and Technology as a Pandemic Recovery Resource for Educators (EdTech Evidence Exchange, 2020).

Negative Impacts of COVID-19. Educators responded to 12 questions adapted from or inspired by prior measures including Grasso et al. (2020) and Herman et al. (2021) regarding the negative impacts of COVID-19 across the following three general areas: 1) personal life (e.g., social relationships, physical health; 4 items $\alpha = 0.78$), 2) professional life (e.g., job/work related stress; 3 items $\alpha = 0.77$), and 3) students' lives (e.g., students' academic learning; 5 items $\alpha = 0.86$; see Table 2). All items shared the same stem: *To what extent has COVID-19 had negative impacts in the following areas?* Educators responded to each question on a 6-point Likert scale, in which 1 = *Not at all,* 2 = *A little,* 3 =S*omewhat,* 4 = *A fair amount,* 5 = *A lot,* and 6 = *Extremely*. For each general area (i.e., personal life, professional life, and students' lives), sum scores were created using all available items.

Challenges Faced. Next, teachers and administrators ranked their "top three challenges to date" from the same 12 questions regarding negative impacts listed above (see Table 3). For each of the three general areas (i.e., personal life, professional life, and students' lives), a binary variable indicating whether or not a respondent ranked their most difficult challenge in that particular area was created. Thus, a score of 1 indicated a given area was their top challenge, whereas a score of 0 indicated the area was *not* their top challenge.

Stress, Coping, and Worry. Six items were adapted from Herman et al. (2021) and focused on educators' perceptions of stress, coping, and worry (Table 4), and were rated on a 6-point Likert scale. Specifically, three items asked educators to compare their perceptions of stress since the beginning of the COVID-19 pandemic in March 2020 to their stress in prior years (1 = *Disagree Strongly* to 6 = *Strongly Agree;* $\alpha = 0.69$). Two items asked respondents to rate

how well they were coping with professional and personal challenges related to COVID-19 (1 = *Not at all* to 6 = *Extremely;* $\alpha = 0.79$). A final question asked, "*How worried are you about your students right now related to the COVID-19 pandemic*?" (1 = *Not at all* to 6 = *Extremely*). Again, for each general area, sum scores were created using all available items.

Demographics. The survey also captured select educator and school demographic information regarding the type of school where they were employed and their role (see Table 1).

Analyses

To estimate the relationship between our three focal predictors of interest (teacher vs. administrator, elementary vs. secondary school, and public vs. private school) and each outcome domain, we conducted a series of regression analyses. Regarding the negative impacts of COVID-19 domain, three linear regression models were fit separately for the three sum scores; each sum score was standardized such that estimates were interpreted as Cohen's *d* values. Regarding the challenges faced domain, three logistic regression models were fit separately for the three binary items; log-coefficients were then exponentiated so they could be interpreted as odds ratios (ORs), where ORs greater than 1.00 indicate increased odds for a particular group in comparison to another, while ORs less than 1.00 indicate decreased odds (Hosmer & Lameshow, 2000). Regarding the stress, coping, and worry domain, three linear regression models were fit separately for the three sum scores; each sum score was standardized such that estimates were interpreted as Cohen's *d* values. For each model, we included a set of five covariates. Specifically, two categorical geographic variables were included as covariates: locale (i.e., rural, small town, urban, suburban), as evidence suggested that responses to the pandemic varied by this indicator (Hamilton et al., 2020), and region (i.e., Northeast, Midwest, South, West), as the pandemic differently impacted regions of the country, particularly at its onset in spring 2020

(Udalova, 2021). We also controlled for gender (0 = female, 1 = male) race (0 = non-White, 1 = White).

Missing data was extremely minimal, with only three (0.5%) respondents missing on any item. Little's (1988) multivariate test of missing completely at random (MCAR; Rubin, 1976) indicated that the data did meet the assumptions of MCAR ($\chi^2_{(45)} = 53.2$, $p = 0.188$). As a result, listwise deletion was used to remove these three cases from the analyses. All analyses were conducted using Stata software (14.2; StataCorp, 2015).

Results

Descriptive data in the form of percent of respondents indicating the negative effects of COVID-19 for each domain are reported in Tables 2, 3, and 4. Each table contrasts educators' responses by position (teacher vs. administrator), school level (elementary vs. secondary), and school setting (public vs. private). Table 2 reports educators' perceptions of the *negative impacts* of the COVID-19 pandemic on their personal life, professional life, and students' lives. For example, data in Table 2 indicate that 62.7% of teachers in public elementary schools reported that COVID-19 had a negative impact on students' academic learning, whereas only 10% of administrators in private secondary schools reported such negative impacts. Similarly, Table 3 reports educators' perceptions of their top three *challenges faced* across those same impact areas. Finally, Table 4 reports educators' perceptions of *stress* due to COVID-19. As anticipated, inspection of the overall trends across the responses in Tables 2-4 suggested a relatively high level of concern about the perceived negative impacts of the pandemic on multiple aspects of their personal and professionally lives. Similarly, they also displayed a relatively high level of concern regarding the social and behavioral wellbeing and academic performance of their

students. However, the regression analyses provided evidence that some of those perceptions varied as a function of the key covariates of role, school type, and school level.

Overall Pattern of Responses

Taken together, the findings suggested a relatively high level of stress and concern about the pandemic's impacts on educators and students among respondents, regardless of the role. For example, when compared to prior years, 50.0% to 71.4% of respondents indicated that they were more stressed by teaching since the beginning of the COVID-19 pandemic in March 2020 (see Table 4). Similarly, 55.6% to 80.0% of respondents indicated that their students were also more stressed that school year due to COVID, compared to the prior year. There also seemed to be a recognition (57.9% to 90.0%) that students' well-being during COVID varied as a function of their home environment. The most frequently identified top challenges (i.e., top three) were in relation to their students' academic learning, their own job/work related stress, their students' social-emotional well-being and development, as well as their own mental health; in fact, the respondents were generally more concerned about their own mental health than their physical health (details in Table 3). The vast majority of respondents reported that they were struggling professionally (60.3% to 100.0%) as well as personally (67.2% to 90.0%) due to the pandemic (Table 4). Furthermore, relatively few respondents (4.5% to 21.4%) thought that things had improved since the onset of the pandemic (see Table 2). Despite a relatively high level of concern expressed by all respondents, there were some significant differences by role and school context. In the sections that follow, we summarize the regression results regarding our primary study questions related to variations by educator roles.

Perceived Negative Impacts of the COVID-19 Pandemic

Table 5 reports results for the regression models predicting items in the negative impacts domain. The analyses indicated that teachers and administrators did not differ in their ratings of the negative impacts of COVID-19 with regard to their personal life, professional life, or students' lives. However, educators in elementary schools had significantly larger negative effects on their professional life than those in secondary schools (d = 0.17, p = .048). Additionally, those in public schools perceived significantly larger negative effects in their students' lives than those in private schools (d = 0.27, p = .026).

Challenges Faced

Results regarding educators' top challenges are presented in Table 5. Results demonstrated that teachers were significantly less likely to perceive their students' lives as being the top challenge than administrators (OR = 0.63, p = .038). Regarding personal life and professional life as being rated the greatest challenge due to the pandemic, there were no differences among teachers and administrators, elementary and secondary schools, and public and private schools.

Stress, Coping, and Worry

Results regarding teachers' stress, coping, and worry are presented in Table 5. Results indicated there were no differences among the three focal predictors of interest in relation to stress in personal and professional life. However, there were significant differences in worries regarding students' lives: teachers were significantly less worried about students' lives than administrators (d = -0.24, p = .023). Additionally, educators in elementary schools were significantly more worried about students' lives than those in secondary schools (d = 0.24, p = .005).

Discussion

The current study sought to address many gaps in our understanding of the impact of the pandemic on educators and students with regard to their work/school related performance, as well as their personal adjustment. These issues were of particular concern following the rapid shift to remote learning as a consequence of the COVID-19 pandemic, which is why we focused on this particular window of time. In the sections that follow, we first consider general patterns of response across all participant types, then consider in greater detail variation in perceptions by participant roles.

Differences by Educators' Role and Context

The regression analyses did identify several significant differences in experiences by school level, teacher vs. administrator, and by public vs. private. As posited by the Job-Demands Resources model (Bakker & Demerouti, 2007), we posit that such effects likely reflect the differential demands and resources provided by these different roles and contexts.

Elementary vs. Secondary Educators. Elementary educators generally tended to experience more negative impacts as a result of COVID-19 than secondary educators with regard to their professional lives (i.e., relationships with students and students' academic learning). Elementary educators also reported greater teaching-related stress and worry about students' lives than secondary educators. These results are consistent with previous research demonstrating that elementary educators experience greater levels of stress than secondary educators (Antoniou et al., 2013) due to the unique demands and resources experienced in this role (Bakker & Demerouti, 2007), demands which may have been exacerbated by the pandemic. For example, prior research has documented that teacher-student relationships are strongest in elementary school, but decline as students matriculate into secondary school (Hajovsky et al., 2017). Thus, it is likely that elementary teachers generally feel more connection with and responsibility for their

students' learning than secondary school teachers. Due to this developmentally-specific relational demand of teaching young students, the pandemic and rapid transition to online learning may have caused greater strain on their relationships and worry about students' learning than secondary school teachers, where such demands and felt responsibilities are less salient.

Further, elementary teachers may have also been concerned that their teaching skills and curriculum were more dependent upon in-person experiences, which did not translate as well to an online learning environment, as compared secondary educators. Indeed, recent research on contemporary responses to emergency situations in education has demonstrated a significant increase in the use of technology. Many of these technologies are complex, novel to the educational sphere (i.e., irrelevant to in-person instruction), and the uptake of which can require a steep learning curve for students and teachers (Crompton et al., 2021). It is possible that elementary educators were more concerned about their students' developmental capacity to engage through an online platform, as compared to secondary students, who may have greater fluency and experience with online platforms and could work better independently. In addition, secondary teachers may have had greater existing resources related to the use of technology than elementary teachers, as these methods of teaching are more developmentally-relevant to teaching older students. Elementary educators in the present study indicated more perceived negative impact on their professional life and worried more about students than secondary educators, likely the result of the unique combination of job demands specific to teaching elementary students, and resources provided by previous experience teaching secondary students (Bakker & Demerouti, 2007).

Public vs. Private School Educators. Another finding in this study was that educators in public schools reported more perceived negative effects in their students' lives than those in

private schools. These effects may stem from differential resources afforded in these populations: public school families are less likely to have financial and personal resources or time available to support remote learning (National Center for Education Statistics, 2016, Table 206.30). These results suggest that, relative to private school educators, those in public school may have had more trouble connecting with students virtually and more concern about their students' academic learning, social-emotional well-being, and family life while attempting to learn from home. In addition, private institutions themselves have more financial resources to invest in student learning and development than public schools. The fall 2020 increase in private school enrollment (Musaddiq et al., 2021; Scafidi et al., 2021) may reflect the parents' recognition that private schools have more resources than public schools to invest in the development of their students.

Teachers vs. Administrators. Finally, although there were relatively few differences in the negative impacts reported by teachers and administrators, they did differ on their perceptions of the biggest challenges. For example, teachers were more likely than administrators to report that concerns about their students' lives was a top challenge. Perhaps the limited contact with students during this time amplified administrators' concerns, whereas teachers' connections, albeit in a more limited fashion, reduced their worry. In addition, administrators may be more worried about student-level outcomes because initiatives to address these broader systemic issues generally fall under their jurisdiction and authority (Mahfouz, 2020). In this way, administrators' concern about students may stem from demands from upper administration to be accountable for student performance.

Limitations

The data were collected using the Qualtrics panel service; although this approach has been shown to generate valid and reliable data (Walter et al., 2019), it is a relatively novel methodology which is being used with increasing frequency in education research (for other recent education examples, see Schatz et al., 2021; Troia & Gram, 2016; Walden et al., 2021). It was uniquely suited for this type of time-sensitive study, which required a quick window for data collection and a large national reach. Due to other pandemic related constraints on recruitment, we could not identify another methodology that would allow for such a large, robust, and diverse sample of educators to address these timely research questions.

We relied on self-report data from a single time point at the end of the first spring semester, following the initial onset of the pandemic. Because the data are cross-sectional, no inferences of causality can be made. In addition, the acute stress at this point in the pandemic may have biased some responding. Further, although this study provides a snapshot of educators' experience at this point, perceptions may change over time. We are uncertain whether these findings generalize to later phases of the pandemic, such as in fall 2020 when teachers returned to school and had more time to prepare for remote learning or in spring 2021 as restrictions may have laxed with the release of vaccines. Longitudinal research will help to understand educators' experiences across the pandemic. The generalizability of these findings to other stressful experiences or natural disasters (e.g., hurricanes, floods, etc.) is unknown. Although these findings provide insight on educators' concerns, we have no data on how these concerns may translate to behaviors or actions in response to these challenges. It will be important to investigate how teachers and administrators coped with these concerns, what supports were most helpful to them, and whether their efforts were successful in meeting students' needs upon return

to in-person instruction. Data from students would further inform our understanding of the impacts of the pandemic on educational experiences.

This study focused primarily on the perceived impacts of COVID-19 on educators' personal and professional lives. Data regarding the direct impact of COVID-19 on educators (e.g., whether they contracted the virus, lost family members due to the pandemic) were not collected and thus could not be controlled for in analyses; however, these unmeasured factors likely impacted their level of stress or pattern of responding. Several geographic characteristics were included as control variables, and results were robust over and above any geographic effects, which were generally not significant. We did not sample teachers and administrators from the same schools; as such, within school comparisons are not possible and should not be inferred. We also analyzed data on all administrator roles jointly, as we lacked a sufficient sample of individual roles to analyze them separately with confidence; however, there may be some differences based on these roles.

Finally, at the time when we fielded the survey in 2020, we were unable to locate any published studies or measures of the impact of pandemics on educators' perceptions of negative impacts in their personal lives, professional lives, and students' lives, major challenges, and stress across various domains. As such, we were limited to the available measures of other types of stressors educators face, and thus drew upon literature of occupational health and stress (e.g., Bakker & Demerouti, 2007; Van Horn et al., 2005) and the expertise of our team in adapting measures for use in this study. Moreover, we were particularly interested in educators' responses to the pandemic specifically, rather than a focus more generally on stress and coping. We recognize the limitations of developing new measures, however, given the unprecedented

circumstances of the pandemic, we had a limited range of options and limited timeframe to develop and validate the measure.

Implications for School Psychologists

When the pandemic began in spring of 2020, educators operated with limited guidance given the unprecedented situation, as approximately one quarter of educators reported no training in online instruction (Kohler et al., 2022; Hamilton et al., 2020). In the summer of 2020, largely following the end of the spring 2020 semester, professional organizations and federal agencies released multiple reports, many of which aimed to provide guidance to educators for the reopening of school in the fall of 2020. While some of these reports focused on recommended safety practices for in-person learning (National Academies of Sciences, Engineering, and Medicine, 2020; CDC, 2020), others provided guidance for online learning (e.g., Ferdig et al., 2020; USC Rossier School of Education, 2020) and meeting students' social-emotional needs (CASEL, 2020). Many of these reports are potentially useful for practitioners and educators and highlighted the stress and burden on educators as a factor to consider (e.g., CASEL, 2020), but there was limited empirical data upon which to base recommendations and guide practice. Thus, many were based on best practice recommendations and expert advice rather than informed by empirical data of teachers' challenges during this period. Moreover, many educators were focused on managing the logistics of deploying technology (Baker et al., 2021), so the emotional stress on teachers and administrators was often overlooked or considered secondary. Few supports were available to address these and other workforce-related concerns experienced by educators.

Although schools have reopened, there continue to be persistent fears of additional mutations and related upsurges in the number of cases locally, nationally, and globally. As these

concerns loom heavy for many educators and school leaders, there is a need to better support educators and address their personal well-being and occupational health. To help prepare educators to manage the negative impact, challenges, and stress of pandemic-related remote learning shifts, this paper aimed to understand the areas in which educators are struggling most. Taken together, the current findings suggested a somewhat universal experience of stress, worry, and concern across all educator groups. The findings of the current study provide strong and compelling evidence of personal and professional distress educators were experiencing, likely stemming from the additional job demands and limited resources available to educators during the pandemic. Promoting personal well-being and occupational health are topics should not go unaddressed in future professional development efforts, and promising evidence shows that intervention programs for teachers can have positive effects (e.g., Braun et al., 2019; Jennings, 2015; Jennings & Greenberg, 2009). Aligned with the Job-Demands Resources model, interventions may aim to bolster educators' resources or reduce demands (Bakker & Demerouti, 2007). On the former, there is growing evidence of the positive effects of mindfulness-based interventions for educators (Lomas et al., 2017; Jennings, 2015), which aim to bolster teachers' personal resources by teaching them skills to help cope with the stressors of profession. Schools may want to consider employing such evidence-based wellness programs or providing other school-level resources (e.g., in-service technology workshops, etc.) as they recover from the pandemic. Alternatively, schools may also consider structural changes by reflecting on the systems that exist that place demands on educators, and whether these systems could be shifted to lessen such demands (e.g., removing teachers from superfluous roles or activities, relaxing lesson plan requirements, etc.). This study is particularly timely given recent reports highlighting the increasing rates of mental, behavioral, and academic/work-related concerns and problems

both educators and students have been experiencing since the start of the pandemic (Hamilton & Gross, 2021; Hopeful Futures Campaign, February, 2022; Leeb et al., 2020).

More specifically, there did appear to be some subgroups of educators who experienced more distress and concern than others which may help school psychologists and others plan supports for these more vulnerable groups. For example, with regard to elementary and secondary school educators, our results indicate that elementary educators experienced greater concerns about their professional life than secondary educators. In the event of another pandemic or shift to remote learning, elementary educators may specifically benefit from opportunities to bolster their skills in the use of technology, as we expect that a lack of familiarity with technology was likely at the root of some of these findings. In this way, technology fluency may act as a resource that teachers could draw upon to meet the demands caused by the pandemic. Further, as elementary educators were more worried about students than secondary educators, school psychologists could also provide training in how teachers of young children can continue to support students in virtual format and/or times of crisis, whereas such training may not be as necessary for secondary educators. Finally, with regard to public and private school educators, results showed that educators in private schools reported fewer negative effects of the pandemic on their students' lives than public school educators, likely due to the differences in resources available to the students, teachers, and parents across the two school types. These findings highlight the structural inequality and resource gaps that persist in education and suggest that income-related education gaps could persist after the pandemic ends. With reference to interventions, these findings are particularly relevant to school psychologists situated in public school settings, as they indicate that students in these schools may be struggling, and that teachers in these settings may benefit from training in creative ways to support their students.

From a workforce perspective, these results highlight potential points of intervention to support teachers and administrators, elementary and secondary educators, and educators in public schools in times of crisis.

Conclusion

The findings of this study add to a growing body of research detailing the negative impacts of the pandemic in education (e.g., Baker et al., 2021; Chan et al., 2021; Herman et al., 2021; Yang, 2021). Yet, it is among the first to investigate educators' perceptions of the pandemic's impact for a wide range of student and educator outcomes across their personal and school lives and whether educators' perceptions of these outcomes differed by role or setting. The results provide important insights which may inform future responses to such events and shed light on the types of supports specific educators may need as they transition back to in-person learning. The large-scale national reach of the survey and the nimbleness of the Qualtrics panel approach helped us to field a survey with considerable utility, provided a unique opportunity to gain these insights, and also enabled us to examine areas of divergence and convergence in perspectives among teachers vs. administrators in elementary vs. secondary, as well as public vs. private schools.

References

Antoniou, A.-S., Ploumpi, A., & Ntalla, M. (2013). Occupational stress and professional burnout in teachers of primary and secondary education: The role of coping strategies. *Psychology*, *4*(3), 349–355. https://doi.org/10.4236/psych.2013.43A051

Baker, C. N., Peele, H., Daniels, M., Saybe, M., Overstreet, S., & Learning, T. S. (2021). The experience of COVID-19 and its impact on teachers' mental health, coping, and teaching. *School Psychology Review*, *50*(4), 491–504. https://doi.org/10.1080/2372966X.2020.1855473

Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology*, *22*(3), 309–328. https://doi.org/10.1108/02683940710733115

Bakker, A. B., & Schaufeli, W. B. (2000). Burnout contagion processes among teachers. *Journal of Applied Social Psychology*, *30*(11), 2289–2308

Bauer, J., Stamm, A., Virnich, K., Wissing, K., Müller, U., Wirsching, M., & Schaarschmidt, U. (2006). Correlation between burnout syndrome and psychological and psychosomatic symptoms among teachers. *International Archives of Occupational and Environmental Health*, *79*(3), 199–204. https://doi.org/10.1007/s00420-005-0050-y

Borup, J., Graham, C. R., & Davies, R. S. (2013). The nature of parental interactions in an online charter school. *American Journal of Distance Education*, *27*(1), 40–55. https://doi.org/10.1080/08923647.2013.754271

Braun, S. S., Roeser, R. W., Mashburn, A. J., & Skinner, E. (2019). Middle school teachers' mindfulness, occupational health and well-being, and the quality of teacher-student interactions. *Mindfulness*, *10*(2), 245–255. https://doi.org/10.1007/s12671-018-0968-2

Braun, S. S., Schonert-Reichl, K. A., & Roeser, R. W. (2020). Effects of teachers' emotion regulation, burnout, and life satisfaction on student well-being. *Journal of Applied Developmental Psychology, 69*, 1–13. https://doi.org/10.1016/j.appdev.2020.101151

Browning, M. H. E. M., Larson, L. R., Sharaievska, I., Rigolon, A., McAnirlin, O., Mullenbach, L., Cloutier, S., Vu, T. M., Thomsen, J., Reigner, N., Metcalf, E. C., Antonio, A. D., Helbich, M., Bratman, G. N., & Alvarez, H. O. (2021). Psychological impacts from COVID-19 among university students: Risk factors across seven states in the United States. *PLoS ONE, 16*(1), 1–27. https://doi.org/10.1371/journal.pone.0245327

CASEL (2020). *COVID 19 and remote learning: SEL and responding to the COVID-19 pandemic*. https://casel.org/fundamentals-of-sel/how-does-sel-support-your-priorities/covid-19-and-remote-learning/

Chan, M.K., Sharkey, J.D., Lawrie, S.I., Arch, D.A.N., & Nylund-Gibson, K. (2021). Elementary school teacher well-being and supportive measures amid COVID-19: An exploratory study. *School Psychology, 36*(6), 533-545. doi: 10.1037/spq0000441.

Centers for Disease Control and Prevention. (2020). *Guidance for COVID-19 Prevention in K-12 Schools*. https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/k-12-guidance.html#anchor_1625661937509

Crompton, H., Burke, D., Jordan, K., & Wilson, S. W. G. (2021). Learning with technology during emergencies: A systematic review of K-12 education. *British Journal of Educational Technology*, *52*, 1554–1575. https://doi.org/10.1111/bjet.13114

DeMatthews, D., Carrola, P., Reyes, P., & Knight, D. (2021). School leadership burnout and job-related stress: Recommendations for district administrators and principals. *The Clearing*

House: A Journal of Educational Strategies, Issues and Ideas, *94*(4), 159–167. https://doi.org/10.1080/00098655.2021.1894083

EdTech Evidence Exchange. (2020). *Technology as a pandemic recovery resource for educators*. Retrieved from https://drive.google.com/file/d/102ycze3nExdNMZPUfyK2Qh-h2Uvp9bUh/view

Ferdig, R. E., Baumgartner, E., Hartshorne, R., Kaplan-Rakowski, R., & Mouza, C. (Eds.). (2020). *Teaching, technology, and teacher education during the COVID-19 pandemic: Stories from the field*. Association for the Advancement of Computing in Education.

Grasso, D.J., Briggs-Gowan, M.J., Ford, J.D., & Carter, A.S. (2020). The Epidemic – Pandemic Impacts Inventory (EPII). University of Connecticut School of Medicine.

Hajovsky, D. B., Mason, B. A., & McCune, L. A. (2017). Teacher-student relationship quality and academic achievement in elementary school: A longitudinal examination of gender. *Journal of School Psychology*, *63*, 119–133. https://doi.org/10.1016/j.jsp.2017.04.001

Hamilton, L. S., & Gross, B. (2021). How Has the Pandemic Affected Students' Social-Emotional Well-Being? A Review of the Evidence to Date. *Center on Reinventing Public Education. https://eric.ed.gov/?id=ED614131*

Hamilton, L. S., Grant, D., Kaufman, J. H., Diliberti, M., Schwartz, H. L., Hunter, G. P., Messan Setodji, C., & Young, C. J. (2020). *COVID-19 and the state of K-12 schools: Results and technical documentation from the spring 2020 American Educator Panels COVID-19 surveys.* https://doi.org/10.7249/rra168-5

Hawkins, A., Graham, C. R., Sudweeks, R. R., & Barbour, M. K. (2013). Academic performance, course completion rates, and student perception of the quality and

frequency of interaction in a virtual high school. *Distance Education*, *34*(1), 64–83. https://doi.org/10.1080/01587919.2013.770430

Herman, K., Hickmon-Rosa, J., & Reinke, W. (2017). Empirically derived profiles of teacher stress, burnout, self-efficacy, and coping and associated student outcomes. *Journal of Positive Behavior Interventions*, *20*(2), 90-100. https://doi.org/10.1177/1098300717732066

Herman, K. C., Sebastian, J., Reinke, W. M., & Huang, F. L. (2021). Individual and school predictors of teacher stress, coping, and wellness during the COVID-19 pandemic. *School Psychology*, *36*(6), 483–493.

Hopeful Futures Campaign. (February, 2022). *America's School Mental Health Report Card.* https://hopefulfutures.us/wp-content/uploads/2022/02/Final_Master_021522.pdf

Hosmer, D. W., & Lemeshow, S., (2000). *Applied logistic regression*. New York: Wiley

Irwin, V., Zhang, J., Wang, X., Hein, S., Wang, K., Roberts, A., York, C., Barmer, A., Bullock Mann, F., Dilig, R., and Parker, S. (2021). *Report on the Condition of Education 2021* (NCES 2021-144). U.S. Department of Education. Washington, DC: National Center for Education Statistics. https://nces.ed.gov/pubs2021/2021144.pdf

Jennings, P. A. (2015). Early childhood teachers' well-being, mindfulness, and self-compassion in relation to classroom quality and attitudes towards challenging students. *Mindfulness*, *6*(4), 732–743. https://doi.org/10.1007/s12671-014-0312-4

Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, *79*(1), 491–525. https://doi.org/10.3102/0034654308325693

Karasmanaki, E., & Tsantopoulos, G. (2021). Impacts of social distancing during COVID-19 pandemic on the daily life of forestry students. *Children and Youth Services Review, 120*(November 2020), 105781. https://doi.org/10.1016/j.childyouth.2020.105781

Kohler, E.A., Molloy Elreda, L., & Rimm-Kaufman, S. (2022). *Inequitable COVID-19 conditions for teachers: Associations with perceptions of remote instruction and student outcomes* [Manuscript submitted for publication].

Kraft, M. A., & Simon, N. S. (2020). *Teachers' experiences working from home during the COVID-19 pandemic*. Retrieved from https://f.hubspotusercontent20.net/hubfs/2914128/Upbeat Memo_Teaching_From_Home_Survey_June_24_2020.pdf

Kujawa, A., Green, H., Compas, B. E., Dickey, L., & Pegg, S. (2020). Exposure to COVID-19 pandemic stress: Associations with depression and anxiety in emerging adults in the United. *Depression and Anxiety*, *37*, 1280–1288. https://doi.org/10.1002/da.23109

Leeb, R.T., Bitsko, R.H., Radhakrishnan, L., Martinez, P., Njai, R., & Holland, K.M. (2020). Mental health-related emergency department visits among children aged <18 years during the COVID-19 Pandemic - United States, January 1-October 17, 2020. *MMWR Morbidity and Mortality Weekly Report, 13*;69(45), 1675-1680. doi: 10.15585/mmwr.mm6945a3. PMID: 33180751; PMCID: PMC7660659.

Liao, Y. C., Ottenbreit-Leftwich, A., Zhu, M., Jantaraweragul, K., Christie, L., Krothe, K., & Sparks, K. (2021). How can we support online learning for elementary students? Perceptions and experiences of award-winning K-6 teachers. *TechTrends, 65*(6), 939–951. https://doi.org/10.1007/s11528-021-00663-z

Lee, E.K., & Parolin, Z. (2021). The care burden during COVID-19: A national database of child care closures in the United States. *Socius: Sociological Research for a Dynamic World, 7*, 1–10. DOI: 10.1177/23780231211032028 srd.sagepub.com

Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association, 83*(404), 1198-1202. DOI: 10.1080/01621459.1988.10478722

Lomas, T., Medina, J. C., Ivtzan, I., Rupprecht, S., & Eiroa-Orosa, F. J. (2017). The impact of mindfulness on the wellbeing and performance of educators: A systematic review of the empirical literature. *Teaching and Teacher Education*, *61*, 132–141. https://doi.org/10.1016/j.tate.2016.10.008

Mahfouz, J. (2020). Principals and stress: Few coping strategies for abundant stressors. *Educational Management Administration and Leadership*, *48*(3), 440–458. https://doi.org/10.1177/1741143218817562

Molnar, A., Miron, G., Elgeberi, N., Barbour, M. K., Huerta, L., Shafer, S. R., & Rice, J. (2019). *Virtual schools in the U.S. 2019*. Retrieved from http://nepc.colorado.edu/publication/virtual-schools-annual-2019-exec-summary

Musaddiq, T., Stange, K. M., Bacher-Hicks, A., & Goodman, J. (2021). The pandemic's effect on demand for public schools, homeschooling, and private schools. In *NBER Working Paper Series*. http://www.nber.org/papers/w29262

National Academies of Sciences, Engineering, and Medicine (2020*). Reopening K-12 Schools during the COVID-19 pandemic: Prioritizing health, equity and communities*. Washington, DC: The National Academies Press.

https://nap.nationalacademies.org/catalog/25858/reopening-k-12-schools-during-the-covid-19-pandemic-prioritizing

Nganga, L., Kambutu, J., & Han, K. T. (2019). Caring schools and educators a solution to disparities in academic performance: Learners of colors speak. *SAGE Open*, *9*(2), 1–12. https://doi.org/10.1177/2158244019841923

Park, C. L., Russell, B. S., Fendrich, M., Finkelstein-Fox, L., Hutchison, M., & Becker, J. (2020). Americans' COVID-19 stress, coping, and adherence to CDC guidelines. *Journal of General Internal Medicine*, 2296–2303. https://doi.org/10.1007/s11606-020-05898-9

Pressley, T., Ha, C., & Learn, E. (2021). Teacher stress and anxiety during COVID-19: An empirical study. *School Psychology*, *36*(5), 367–376.

Rubin, D. B. (1976). Inference and missing data. *Biometrika*, *63*(3), 581-592. https://doi.org/10.1093/biomet/63.3.581

Scafidi, B., Tutterow, R., & Kavanagh, D. (2021). This time really is different: The effect of COVID-19 on independent K-12 school enrollments. *Journal of School Choice*, 1–26. https://doi.org/10.1080/15582159.2021.1944722

Schatz, N. K., Fabiano, G. A., Raiker, J. S., Hayes, T. B., & Pelham, W. E. (2021). Twenty-year trends in elementary teachers' beliefs about best practices for students with ADHD. *School Psychology*, *36*(4), 203–213. https://doi.org/10.1037/spq0000442

Sidpra, J., Abomeli, D., Hameed, B., & Al., E. (2020). Rise in the incidence of abusive head trauma during the COVID-19 pandemic. *Archives of Disease in Childhood*, *0*(0), 2020. https://doi.org/10.1136/archdischild-2020-319872

StataCorp. (2015). *Stata Statistical Software: Release 14*. College Station, TX: StataCorp LP.

Steiner, E.D., & Woo, A., (2021). Job-related stress threatens the teacher supply: Key findings from the 2021 State of the U.S. Teacher Survey. Santa Monica, CA: RAND Corporation. https://www.rand.org/pubs/research_reports/RRA1108-1.html.

Thomas, E. Y., Anurudran, A., Robb, K., & Burke, T. F. (2020). Spotlight on child abuse and neglect response in. *The Lancet Public Health*, *5*(7), e371. https://doi.org/10.1016/S2468-2667(20)30143-2

Troia, G. A., & Graham, S. (2016). Common core writing and language standards and aligned state assessments: A national survey of teacher beliefs and attitudes. *Reading and Writing*, *29*(9), 1719–1743. https://doi.org/10.1007/s11145-016-9650-z

Udalova, V. (2021). *Pandemic Impact on Mortality and Economy Varies Across Age Groups and Geographies*. https://www.census.gov/library/stories/2021/03/initial-impact-covid-19-on-united-states-economy-more-widespread-than-on-mortality.html. U.S. Census Bureau.

U.S. Department of Education, National Center for Education Statistics. (2016). Table 206.30: Percentage distribution of students enrolled in grades 1 through 12, by public school type and charter status, private school orientation, and selected child and household characteristics: 2016. In U.S. Department of Education, National Center for Education Statistics (Ed.), *Digest of Education Statistics* (2018 ed.). Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_206.30.asp?referer=schoolchoic

USC Rossier School of Education (2020). *Supporting online learning in a time of pandemic* (April).

Van Horn, J. E., Taris, T. W., Schaufeli, W. B., & Schreurs, P. J. G. (2004). The structure of occupational well-being: A study among Dutch teachers. *Journal of Occupational and Organizational Psychology*, *77*, 365–375.

Veldman, I., van Tartwijk, J., Brekelmans, M., & Wubbels, T. (2013). Job satisfaction and teacher-student relationships across the teaching career: Four case studies. *Teaching and Teacher Education*, *32*, 55–65. https://doi.org/10.1016/j.tate.2013.01.005

Veldman, I., Admiraal, W., van Tartwijk, J., Mainhard, T., & Wubbels, T. (2016). Veteran teachers' job satisfaction as a function of personal demands and resources in the relationships with their students. *Teachers and Teaching: Theory and Practice*, *22*(8), 913–926. https://doi.org/10.1080/13540602.2016.1200546

Walden, J., Vareberg, K., Zeng, C., & Croucher, S. (2021). Speaking up and out: Examining the predictors of prohibitive voice among teachers. *Communication Quarterly*, *69*(5), 544–563. https://doi.org/10.1080/01463373.2021.1974912

Walter, S. L., Seibert, S. E., Goering, D., & O'Boyle, E. H. J. (2019). A tale of two sample sources: Do results from online panel data and conventional data converge? *Journal of Business and Psychology*, *34*(4), 425–452. https://doi.org/10.1007/s10869-018-9552-y

Yang, C. (2021). Online teaching self-efficacy, social–emotional learning (SEL) competencies, and compassion fatigue among educators during the COVID-19 pandemic. *School Psychology Review*, *50*(4), 505–518. https://doi.org/10.1080/2372966X.2021.1903815

Table 1
Sample Demographics

	N	%
Profession		
Teacher	481	79.1
Administrator	127	20.9
School-level		
Elementary	354	45.6
Secondary	423	54.4
School-type		
Public	676	85.8
Private	112	14.2
Locale		
Rural	102	12.9
Small town	87	11.0
Suburban	415	52.7
Urban	184	23.4
Region		
Northeast	161	20.4
South	292	37.0
Midwest	185	23.5
West	150	19.0

Note: Years in education (M = 16.8, SD = 10.0) and years at current school (M = 10.4, SD = 8.5) were also collected.

Table 2

Perceptions of Negative Impact of COVID-19, Percentage of Teachers and Administrators by School Type

	Teachers %				Administrators %			
	Elementary		Secondary		Elementary		Secondary	
Item	Public	Private	Public	Private	Public	Private	Public	Private
Personal Life								
Your social relationships	33.0	40.0	20.1	22.7	26.7	50.0	46.6	10.0
Your family life	20.6	26.7	13.1	18.2	17.8	28.6	27.6	20.0
Your physical health	17.7	11.1	12.1	9.1	13.3	14.3	27.6	30.0
Your mental health	29.7	20.0	23.1	13.6	31.1	42.9	24.1	20.0
Professional Life								
Your job/work related stress	41.6	33.3	34.7	31.8	44.4	35.7	37.9	10.0
Your relationships with your students	51.2	33.3	38.7	36.4	51.1	35.7	43.1	20.0
Your relationships with your colleagues and administrators	30.6	24.4	21.6	9.1	24.4	7.1	32.8	20.0
Your school's climate	37.3	31.1	36.2	27.3	33.3	35.7	43.1	10.0
Students' Lives								
Your students' academic learning	62.7	35.6	53.8	31.8	64.4	14.3	56.9	10.0
Your students' classroom behavior	28.2	24.4	26.6	13.6	20.0	21.4	19.0	10.0
Your students' social-emotional well-being/development	47.8	46.7	44.7	31.8	62.2	28.6	50.0	10.0
Your students' family life	35.4	31.1	36.2	18.2	44.4	35.7	51.7	10.0
How, if at all, are these areas improving since the beginning of the COVID-19 crisis in March 2020?	11.5	4.4	12.1	4.5	17.8	21.4	19.0	20.0

Note: All items on the *Negative Impacts* domain were originally rated on a 6-point Likert scale from 1 = *Not at all* to 6 = *Extremely*. All items were recoded such that original values of 5 and 6 were scored as 1, while values of 1 through 4 were scored as 0. Thus, values in the table represent the percentage indicating impact as 5 = *A lot* or 6 = *Extremely.*

Table 3

Perceptions of Top Challenges due to COVID-19, Percentage of Teachers and Administrators by School Type

	Teachers %				Administrators %			
	Elementary		Secondary		Elementary		Secondary	
Item	Public	Private	Public	Private	Public	Private	Public	Private
Personal Life								
Your social relationships	22.0	46.7	22.6	22.7	22.2	35.7	36.2	20.0
Your family life	17.2	22.2	13.1	27.3	11.1	14.3	22.4	10.0
Your physical health	23.0	15.6	15.6	18.2	11.1	28.6	31.0	40.0
Your mental health	41.6	35.6	44.2	31.8	28.9	57.1	31.0	30.0
Professional Life								
Your job/work related stress	43.1	51.1	45.7	50.0	53.3	50.0	37.9	60.0
Your relationship with your students	33.0	24.4	37.2	27.3	13.3	7.1	22.4	10.0
Your relationships with colleagues and administrators	6.2	6.7	7.5	13.6	4.4	7.1	17.2	10.0
Students' Lives								
Your students' academic learning	58.9	42.2	58.8	63.6	64.4	35.7	50.0	40.0
Your students' classroom behavior	5.7	8.9	8.0	4.5	2.2	14.3	1.7	10.0
Your students' social-emotional/ well-being development	34.0	28.9	30.2	22.7	55.6	35.7	32.8	50.0
Your students' family life	11.0	11.1	10.1	9.1	17.8	0.0	8.6	10.0
Your school's climate	3.8	6.7	7.0	9.1	15.6	14.3	8.6	10.0

Note: All items on the *Challenges Faced* domain that were originally ranked as top-3 challenge (i.e., the respondent ranked as either 1, 2, or 3) were recoded as 1, while unranked responses (i.e., item is *not* a top-3 challenge) were recoded as 0. Thus, values in the table represent the percentage indicating it was a top-3 challenge.

Table 4

Perceptions of Stress, Coping and Worry related to COVID-19, Percentage of Teachers and Administrators by School Type

	Teachers %				Administrators %			
	Elementary		Secondary		Elementary		Secondary	
Item	Public	Private	Public	Private	Public	Private	Public	Private
Personal Life								
Compared to prior years, I'm more stressed by teaching since the beginning of the COVID-19 crisis in March 2020.	67.9	64.4	53.3	50.0	60.0	71.4	70.7	70.0
Compared to prior years, my students are more stressed since 2020.	64.1	55.6	63.3	59.1	68.9	71.4	62.1	80.0
My students' stress varies due to their home environment since March 2020.	71.8	57.8	70.4	68.2	91.1	71.4	75.9	90.0
Professional Life								
I am struggling to cope with professional challenges related to the COVID-19 pandemic.	77.5	77.8	69.8	77.3	73.3	71.4	60.3	100.0
I am struggling to cope with personal challenges related to the COVID-19 pandemic.	71.8	75.6	66.3	72.7	71.1	85.7	67.2	90.0
Students' Lives								
I am worried about my students right now related to the COVID-19 pandemic.	43.5	33.3	38.2	31.8	66.7	42.9	44.8	20.0

Note: All items were originally rated on either a 6-point Likert scale ranging from 1 = *Disagree strongly* to 6 = *Strongly agree* or a 6-point Likert scale ranging from 1 = *Not at all* to 6 = *Extremely* and were recoded such that values of 5 and 6 were scored as 1, while values of 1 through 4 were scored as 0. Items in the *Coping* domain were reverse coded to reflect problems or a struggle with coping. Thus, values in the table represent the percentage of respondents who expressed concern about stress, coping, and worry across various domains.

Table 5

Contrasts across Respondent Types

Teacher and Administrator Perceptions of Negative Impact of COVID-19

	Teacher (vs. Administrator)		Elementary School (vs. Secondary)		Public School (vs. Private)	
Item Area	*d*	SE	*d*	SE	*d*	SE
Personal Life	-0.157	0.011	0.147	0.087	-0.026	0.117
Professional Life	-0.027	0.106	0.174*	0.088	0.196	0.118
Students' Lives	-0.045	0.107	0.113	0.088	0.265*	0.119

Teacher and Administrator Perceptions of Top Challenges due to COVID-19

	Teacher (vs. Administrator)		Elementary School (vs. Secondary)		Public School (vs. Private)	
Item Area	OR	95% CI	OR	95% CI	OR	95% CI
Personal Life	1.286	[0.833, 1.985]	0.919	[0.644, 1.311]	0.669	[0.418, 1.071]
Professional Life	1.254	[0.770, 2.042]	0.885	[0.597, 1.311]	0.992	[0.584, 1.683]
Students' Lives	0.627*	[0.404, 0.974]	1.231	[0.841, 1.803]	1.656	[0.957, 2.866]

Teacher and Administrator Perceptions of Stress due to COVID-19

	Teacher (vs. Administrator)		Elementary School (vs. Secondary)		Public School (vs. Private)	
Item Area	*d*	SE	*d*	SE	*d*	SE
Personal Life	-0.148	0.106	0.044	0.088	0.192	0.117
Professional Life	-0.041	0.106	-0.024	0.783	0.161	0.174
Student's Lives	-0.238*	0.105	0.244**	0.087	0.223	0.116

Note: *$p < .05$, **$p < .01$, ***$p < .001$. *d* = Cohen's *d*. Other covariates included in the model were locale (i.e., rural, small town, suburban, urban), region (i.e., Northeast, Midwest, South, West), gender (i.e., male female), and race (i.e., White and non-White).