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Educator perspectives on stressors and health: a qualitative study of U.S. K-12 educators in February 2022

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Abstract

Background Teachers experienced increased stressors and stress during the initial onset of the COVID-19 pandemic. While many educators returned to in-person instruction in the 2021–2022 school year, they faced changing job demands and stressors which has important implications for educator well-being. We sought to understand the stressors and health impacts faced by U.S. educators in the 2021–2022 school year, two years following the acute phase of the pandemic.

Methods Thirty-four certified educators based in Connecticut, USA participated in four virtual focus groups in February 2022. A semi-structured focus group script, designed by the research team and guided by the job demands-resources model, was administered to understand stressors and stress impacts. Data were transcribed and analyzed using the constant comparative method to identify themes and sub-themes. Themes were summarized based on how many participants mentioned them.

Results Analysis of the qualitative data yielded three themes concerning the well-being impacts of stress: physical health and health behaviors, psychological health, and relationships and social well-being behaviors. The majority of educators indicated impacts in these domains with 76% indicating impacts on physical health and health behaviors (e.g. poor sleep, physical exhaustion, lack of exercise, unhealthy eating), 62% indicating impacts on psychological health (e.g. emotional exhaustion, anxiety, negative self-evaluation); and 68% indicating impacts on relationships social well-being behaviors (e.g. connections with family or friends, connections with others, relationships with coworkers). The majority (94%) of educators indicated that stressors from the school or district with the majority (91%) citing stressors related to protocols/expectations (e.g. excessive or increased demands, insufficient or decreased resources) and some (38%) administrators. Over half (62%) indicated personal stressors including personal/home life (41%), high personal expectations (18%), and income (18%). Some (35%) indicated either the pandemic (26%) or safety concerns (9%) were stressors. Some (24%) cited students' parents as a stressor and a few indicated community (12%), students (12%), and state or national level (9%) stressors.

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Conclusion Educator well-being continued to be impacted in the post-pandemic era. Targeted interventions are needed to reduce school and district-related demands and to address stress-related educator well-being.

Keywords Educators, Stress, COVID-19, Well-being

Background

Teaching has long been characterized as a high-stress, high-burnout profession [1, 2] and the COVID-19 pandemic impacted educators' stress in unprecedented and varying ways. In a meta-analysis of 54 studies including data from over 200,000 educators across 22 countries, the prevalence of stress was calculated at 62% (95% confidence interval of 46–77) in the first 2 years of the pandemic [3].

Educator stress can be contextualized within the job demands-resources (JD-R) model which provides a framework for understanding the sources and impacts of occupational stress by considering the balance of job demands and job resources [4]. Job demands refer to the sustained psychological or physical effort within organizational, social, or physical aspects of work, with greater effort having a high psychological and physiological cost to the individual (e.g., exhaustion). Job resources refer to protective factors within organizational, social, or physical aspects of work that may aid in reducing the adverse physiological and psychological impacts of job demands, foster personal growth, and aid in accomplishing work goals.

The JD-R model posits that when job demands outweigh resources, workers can experience poor health impacts [4]. The sustained periods of stress across the pandemic have important implications. Evidence regarding temporal aspects of stress suggests that acute stress may have stronger associations for personal outcomes (e.g., sleep quality) while chronic stress may have stronger associations with work-related outcomes (e.g., work performance) because it persists over time and erodes psychophysiological resources through sustained activation and insufficient recovery [5–7]. Furthermore, prolonged and unmanaged workplace stress has been linked with higher allostatic load in female teachers, which has implications for increased risk for cardiovascular and all-cause mortality [8].

Within the context of the COVID-19 pandemic, the JD-R model can be used to explore educator-related job demands, job resources, and impacts on stress and health outcomes [9, 10]. During the various phases of the COVID-19 pandemic, the work demands of educators continually changed to meet students' evolving educational, health, and safety needs. At the start of the pandemic in March 2020, as schools abruptly closed, many teachers experienced increased stressors during distance learning including excessive workload, obstacles to online learning access, poor motivation, low participation from students and families, technological challenges, and lack of organizational preparedness [11]. During the initial phase of the pandemic in the summer of 2020, educator stress levels were elevated, with clinically significant anxiety and depressive symptoms observed in the majority of educators in a mid-sized urban school district [12]. In the fall of 2020, as many educators returned to in-person classroom instruction, educators faced new stressors and impacts. Results of a nationwide survey administered in the fall of 2020 indicated US educators' stressors included anxiety surrounding the pandemic, teaching demands, parent communication as well as a lack of administrative support [13]. Research suggests that the stress experienced by educators continued into the spring of 2021 one year following the onset of the pandemic, with 72% of US teachers reporting feeling very or extremely stressed in an online nationwide survey [14]. The impacts on teachers two years following the acute phase of the pandemic in the 2021–2022 school year are just becoming evident. Focus groups among US educators indicate continued stress due to student behaviors, staff shortages, and lack of communication with administrators [15]. The demands and impacts across the most recent pandemic phases are not fully evaluated and understood.

The impact of educator stress ripples beyond educators with impacts on the students they serve, the overall school climate, and the rate of job turnover. Stressed teachers are associated with poorer student outcomes in behavior, concentration, and academic achievement [16] as well as poorer parent-teacher relationships [17]. Research indicates that new teachers are more likely to leave the field within their initial years of working compared to veteran teachers, and high-stress environments contribute to teachers leaving the profession [18]. Educator turnover negatively affects social resources with colleagues (e.g., relationship quality and structure) [19], student performance, and school district finances [20].

Understanding the predictors and impacts of stress is important in supporting educators and school well-being. In this study, we aimed to comprehend the work-related stressors and health impacts experienced by teachers in the 2021–2022 school year, two years following the acute phase of the pandemic. We employed a qualitative approach, relying on the participants' own interpretations of well-being impacts and stressors to gain a comprehensive understanding of educators' work experiences

and overall well-being. This study was the first phase of a five-year research project investigating the implementation and evaluation of a participatory program to promote educator well-being using the Center for the Promotion of Health in the New England Workplace's Healthy Workplace Participatory Program. Importantly, the focus group information gained was shared with educator teams who identified and implemented workplace changes to support educator well-being.

Methods

Study design

This qualitative study used virtual focus groups to gather educator perceptions of the impact of work and non-work demands on their stress and well-being. The inclusion criteria for participation included: certified K-12 classroom teachers currently teaching in Connecticut with a general education certification. Exclusion criteria included unified arts teachers, special education teachers, interventionists, paraprofessionals, and administrators; not identifying as a certified K-12 teacher; not currently teaching in Connecticut; or not holding a certification. Focus groups (four groups, $n=34$ teachers) were conducted from February 1–8, 2022. The UConn Health Institutional Review Board reviewed the study and deemed it exempt and informed consent of participants was not applicable.

In Connecticut, schools returned to in-person learning for the 2021–2022 school year. At the start of the school in September 2021, the COVID-19 vaccine was available to adults aged 18 or older and booster doses were recommended later that fall. Vaccinations were also available to adolescents ages 12–15 years at the start of the school year and for children aged 5 through 11, later that fall. During this timeframe in Connecticut, SARS-CoV-2 exposure and illness protocols were put in place that included masking mandates for students and staff, vaccination requirements for school staff, regular testing for SARS-CoV-2, and mandatory sick leave for those who have tested positive for the virus [21]. Around the period of the focus groups in February 2022, Delta and Omicron variations of the coronavirus were spreading across the Northeast United States, which led to increased COVID-19 cases [22].

Focus group script

A semi-structured focus group script was designed by the research team to understand contributors to stress, stress impacts, resources to prevent stress, and possible workplace changes to promote teacher well-being (see Supplemental Material). The focus group script was guided by the JD-R model. In line with the U.S. National Institute for Occupational Safety and Health (NIOSH) integrative approach to worker well-being [23], our view of well-being was broad, including physical health, mental health, health behaviors, as well as social connections. This concept of well-being was described to participants during the focus group. Probes were used when the conversation was not naturally flowing and invited teachers to think of demands, impacts, resources, and changes both at work and outside of work. Although six questions were presented to the focus group participants, the current analysis focuses on responses to two questions about the contributors to stress and stress impacts (Table 1).

Participants

Participants were recruited via social media. A social media post was created indicating the inclusion criteria (certified K-12 teachers, currently working in Connecticut), and a convenience sampling approach was used to distribute across various social media platforms. The post included a QR code for a screening survey which was capped at 60 individuals. Respondents meeting the screening criteria were contacted for scheduling of the focus group. The process continued until 40 respondents were scheduled.

Four focus groups were conducted including two groups each of certified elementary ($n=17$, grades pre-K-5) and secondary ($n=17$, grades 6–12) school teachers on February 1, 3, 7, and 8, 2022. Individual focus group sizes ranged from eight to nine participants. Out of the 40 participants scheduled for a focus group, six educators did not attend. Of those six, three participants were elementary school teachers and three were secondary school teachers.

Focus group procedure

The focus groups were held virtually on the Webex platform. Teachers answered a brief electronic

Table 1 Focus group script question related to contributors to stress and stress impacts

1. What would you consider to be the main contributors to work stress?
   Probes:
   - Include contributors that you can and cannot change.
   - Think of contributors in the classroom, the school or district, the state or national requirements, or at home.
   - Contributors could be related to colleagues, administration, or parents.
2. How does stress affect your mental health, physical health, behaviors that keep you healthy, and social connections with others?
   Probes:
   - Healthy behaviors such as having a good diet, exercise, or sleep
   - Social connections at work, home, or in the community

demographic survey at the start of the focus group. Three researchers were present during the focus groups. One researcher facilitated the focus group using the script, a second researcher was responsible for responding to comments or questions posted in the virtual chat, and a third researcher took detailed notes of the verbal and nonverbal participant responses. Focus groups were audio recorded with participant permission, and participants were asked to only use first names to assure confidentiality. Each focus group took approximately one hour to explore all focus group questions, two of which are addressed within this paper.

Data analysis

Descriptive summary statistics were computed for the demographic data. Focus group recordings were transcribed, reviewed for accuracy, and imported into NVivo software for analysis. The constant comparative method [24] was used to systematically generate codes and themes within the focus group data using an inductive approach. Two researchers coded the data independently. A node structure for coding responses was created based on the focus group script to generate meaningful concepts and identify common sources (impacts or stressors), themes, and sub-themes. Sources, themes, and sub-themes were identified from the emerging codes by grouping common meaningful units within quotations and codes into code groups. This was done until no new themes emerged so that the data were organized into the lowest level of subtheme into which they fit. The data were nested within sources, themes, and sub-themes. To identify a code as a theme or sub-theme, three or more mentions were required. Not every source was required to have a theme nor were themes required to have subthemes. The research team discussed the emerging themes and sub-themes to ensure validity. The final code structure was based on continuous review by the two coding researchers. Once the final themes and sub-themes were created, the two researchers independently re-coded the data and calculated interrater agreement using Cohen's kappa. The baseline interrater agreement was 0.52 and improved to 0.97 after the researchers met for a reconciliation process. Any discrepancies that could not be reconciled between the two coders were determined by a third member of the research team. The number and percentage of participants mentioning each theme was summarized. Since participants may have mentioned numerous themes or sub-themes in their response to a question, the frequency within themes or sub-themes may not sum to the parent level.

Results

Of the 34 teachers within the focus groups, the majority were female ($n=31$) and White ($n=30$) and did not identify as Hispanic or Latino ($n=30$). The mean age of participants was 34 years old (range of 22–55 years) and the mean years of teaching was 10 years (standard deviation=9.7). In comparison with the Connecticut educator workforce in 2017, the percentage of female teachers within the focus groups was higher (91% vs. 76%) and younger by 10 years [25].

The educators taught in 22 public school districts across Connecticut and one educator taught at an independent, publicly-endowed, regional day academy. A total of 17 educators taught elementary school (grades pre-K-5), 3 taught middle school (grades 6–8), and 14 taught high school (grades 9–12). Of the 22 public school districts represented, 12 were of large suburban locale, four were fringe rural, three were small cities, one was a midsize city, one was a fringe town, and one was a midsize suburb. The majority of the districts captured contained mostly White students ($N=19$, percentages of students over 50%). There were three school districts that had a mix of races and ethnicity with no group representing the majority (over 50% of students). The school districts made up a range of socioeconomic statuses (SES); 12 were middle-class SES, seven were upper-middle-class, and three were lower-middle-class based on state standards.

Well-being impacts of stress

The thematic analysis of the educators' perceived well-being impacts of stress yielded three parent impacts: physical health and health behavior impacts, psychological health impacts, and relationship and social well-being impacts (Table 2). Themes and sub-themes were identified and organized by each impact and summarized by the frequency of individuals mentioning each theme (n).

Physical health and health behavior impacts ($n=26$ (76%))

The majority (76%) of participants reported that stress impacted their physical health and health behaviors. The separate themes of physical health and physical health behavior impacts emerged from this impact.

Theme 1: physical health (n=22 (65%))

Most (65%) teachers reported physical health impacts of stress with the sub-themes of poor sleep and physical exhaustion.

Subtheme 1.1: poor sleep ($n=20$ (59%)) A majority (59%) of participants reported poor sleep impacts due to stress. Numerous focus group participants noted that stress posed a significant challenge to achieving restful

Table 2 The well-being impacts of work stress among educators

Impact	Theme	Subtheme	Frequency *N* (%)
Physical health and health behaviors			26 (76%)
	1. Physical health		22 (65%)
		1.1 Poor sleep	20 (59%)
		1.2 Physical exhaustion	7 (21%)
	2. Physical health behaviors		20 (59%)
		2.1 Lack of exercise	15 (44%)
		2.2 Unhealthy eating habits	11 (32%)
Psychological health			20 (59%)
	3. Psychological symptoms		20 (59%)
		3.1 Emotional exhaustion	17 (50%)
		3.2 Anxiety	10 (29%)
Relationships and social well-being behaviors			23 (68%)
	4. Relationships		16 (47%)
		4.1 Family or friends	8 (24%)
		4.2 Coworkers	3 (9%)
	5. Social well-being behaviors		11 (32%)

sleep, which often resulted in poor sleep quality. Some reported stressful dreams related to work or that they woke up in the middle of the night preoccupied with the tasks they needed to do the next day.

> *"When I am overly stressed or anxious, I have a hard time sleeping, which just leads to the entire cycle continuing …"*

Subtheme 1.2: physical exhaustion (*n* = 7 (21%)) Fewer (21%) reported physical exhaustion impacts. Teachers described feeling drained and lacking the energy to do things outside of work. They also reported low energy and unhappiness with their physical health.

> *"When I feel stress, I get completely drained. I don't have the energy for other things outside of work."*

Theme 2: physical health behaviors (n = 20 (59%))

The majority (59%) of teachers reported that stress impacted their physical health-related behaviors including the sub-theme behaviors of lack of exercise and unhealthy eating habits.

Subtheme 2.1: lack of exercise (*n* = 15 (44%)) Overall, many (44%) participants indicated that workplace stress influenced their engagement in physical activity. Specifically, educators expressed that their demanding schedules hindered their ability to allocate time for exercise. They detailed the challenges of summoning the motivation to work out after enduring a lengthy day, they felt too fatigued or overwhelmed to engage in physical activity.

> *"Physically, I would love to be able to work out more, but I am lacking motivation. I want to spend what little free time I have doing something that I love …"*

Subtheme 2.2: unhealthy eating habits (*n* = 11 (32%)) Some (32%) of participants reported impacts on healthy eating habits. Teachers reported that they did not have the energy to eat a balanced diet or the time to cook healthy meals. Additionally, teachers noted that they resorted to junk food and comfort food to cope with stress.

> *"Stress affects my diet in that the more stressed I am the more likely I am to eat unhealthy or "quick" ready-made foods."*

Psychological health impacts (*n* = 20 (59%))

The majority (59%) reported psychological health impacts of stress.

Theme 3: psychological symptoms (n = 20 (59%))

The psychological symptoms most frequently reported by teachers formed the sub-themes of emotional exhaustion (50%) and anxiety (29%).

Subtheme 3.1: emotional exhaustion (*n* = 17 (50%)) Half (50%) of the teachers indicated that they experienced emotional exhaustion when they dealt with their own emotions in conjunction with the emotions of others. They described the dual challenge of managing students' emotions at work and family members' emotions at home, which challenged their ability to cope with their own emotions. Teachers described feeling more

impatient, anxious, angry, and easily upset when stressed. They reported that they cried more in the last few years than ever before and snapped at people more easily. Their emotional exhaustion also impacted their ability to focus.

> *"I'm still dealing with taking on everyone else's worries and feeling responsible for them on top of teaching and my own worries."*

Subtheme 3.2: anxiety (*n* = 10 (29%)) Some (29%) teachers described feelings of anxiety and overwhelm, and noted they felt as though they were waiting for the *"other shoe to drop."* Several teachers reported panic attacks due to work. Many said the term *"Sunday Scaries"* resonated with them because of the stress and anxiety around going back to work on Monday and having enough ready for the week ahead.

> *"I ended up having my first panic attack, um, at 2 am in the morning. Almost drove myself to the hospital cause I was like, ah, that's it. I'm done for."*

Relationship and social well-being behavior impacts (*n* = 23 (68%))

The majority (68%) of respondents reported that workplace stress had impacts on their relationships or social well-being behaviors.

Theme 4: relationships (n = 16 (47%))

Nearly half (47%) of teachers reported that their relationships with family or friends, others, or coworkers were impacted by workplace stress. Teachers reported that stress posed challenges for them in sustaining relationships. Additionally, they reported that the pandemic significantly and negatively impacted the energy levels needed to maintain social connections.

> *"My connections with others are affected by stress … because of the emotions I feel from the stress and a feeling of not having enough time to make those connections."*

While six instances broadly described the challenge of maintaining social connections and were not sorted into sub-themes, the remainder were more specific about the types of connections most impacted contributing to one of two sub-themes.

Subtheme 4.1: family or friends (*n* = 8 (24%)) Some (24%) teachers reported a strain on relationships with family or friends. This included being short with their children, particularly on days with high work stress. Teachers reported that work stress caused strained friendships as friends did not fully comprehend the stressors and stress that teachers faced.

> *"At extremely stressful times my relationships at home struggle because we have a shorter fuse in times of stress."*

Subtheme 4.2: coworkers (*n* = 3 (9%)) A few (9%) teachers reported that stress impacted their relationships with coworkers. They explained that it was challenging to maintain positive connections with colleagues amidst elevated stress levels.

Theme 5: Social well-being behaviors (n = 11 (32%))

Some (32%) teachers reported that stress influenced their ability to engage in social behaviors needed to maintain connections with others. For example, teachers reported that they avoided socializing with friends over the weekend and neglected texts and calls. Teachers noted that they preferred using downtime to relax and renew rather than staying connected to friends and family. Specifically, they cited school as the main source of their energy expenditure which made it challenging to talk to family members, and difficult to be socially active due to frequent experiences of stress and exhaustion.

> *"I often feel too drained to connect with friends after school at night."*

Stressors

Teachers' stressors came from a variety of sources with the majority of participants reporting stressors within the school or district (94%), followed by personal (62%), situations (35%), and to a lesser extent parents (24%), community (12%), students (12%), and state or national level (9%) (Table 3).

School or district stressors (*n* = 32 (94%))

The school- or district-level stressors reported by educators were categorized into two themes related to protocols or expectations and administrator stressors.

Theme 1: protocols or expectations (n = 31(91%))

This first theme included both the formal and informal requirements related to education and the pandemic. The theme of protocols and expectations can further be broken down into two subthemes: excessive or increased demands and insufficient or decreased resources.

Subtheme 1.1: excessive or increased demands (*n* = 28 (82%)) The primary stressor mentioned by the major-

Table 3 Sources and themes of educator stressors

Stressor	Theme	Subtheme	Frequency *n* (%)
School or District			32 (94%)
	1. Protocols or expectations		31 (91%)
		1.1 Excessive or increased demands	28 (82%)
		1.2 Insufficient or decreased resources	12 (35%)
	2. Administrators		13 (38%)
Personal			21 (62%)
	3. Personal life/home		14 (41%)
	4. High personal expectations		6 (18%)
	5. Income		6 (18%)
Situational			12 (35%)
	6. COVID-19 pandemic		9 (26%)
	7. Safety concerns		3 (9%)
Parents			8 (24%)
Community			4 (12%)
Students			4 (12%)
State or national			3 (9%)

ity (82%) of teachers in the focus groups was the overwhelming demands posed by the school or district. These demands encompassed a continuous escalation in job responsibilities, the requirement to implement new initiatives with limited guidance, and the expectation to conduct business as usual during the pandemic. Teachers expressed that their workloads consistently expanded, incorporating tasks for which they lacked adequate training, such as handling social-emotional lessons and addressing increased post-pandemic behavioral issues. They felt that mandates continually accumulated without any corresponding reduction in their responsibilities. The dynamic nature of the demands made it challenging to keep pace. Teachers also noted the expectation to maintain a sense of 'normalcy' in their teaching despite the extraordinary circumstances of the pandemic. Teachers recounted feeling placed in stressful situations that substantially increased during the pandemic. Last, teachers reported constant multitasking, with insufficient time for basic needs like drinking water, sitting down, or even taking a moment to 'catch their breath.'

> *"I feel like, I'm now like an epidemiologist, I'm a first responder, I'm a detective, I'm a social worker, I'm a crisis interventionist and then, at some point, I'm also a teacher, and that's actually my main job that I get paid for and I've been trained to do, right?"*

Subtheme 1.2: Insufficient or decreased resources (*n* = 12 (35%)) Some (35%) teachers mentioned insufficient or decreased school resources as a stressor. This stressor was primarily associated with insufficient in-classroom support and a lack of ample preparation periods. Teachers described a pervasive lack of support in the classroom, particularly given the numerous students with specialized instruction and accommodation plans (i.e., Sect. 504, Individualized Education Plan). Issues with teacher training were also highlighted with concerns that the training did not align with teacher roles or was rushed. Additionally, teachers noted they frequently lacked the resources to effectively teach their students and had to 'fight' for necessary materials.

> *"...we have a lot of behavior issues and not a lot of support, a lot of academic issues, with not a lot of support."*

Theme 2: administrators (n = 13 (38%))

Another stressor depicted by some (38%) teachers was the relationships with administrators. Challenges with administrators included insufficient support, a lack of appreciation, and communication gaps. Numerous teachers expressed a sense of inadequate support from their administrators and felt misunderstood. Several teachers reported a lack of communication, responsiveness, and empathy from administrators regarding their needs.

> *"I feel like the higher-ups are in their own little bubble world and they have no idea what's going on in the classroom ... "*

Personal stressors (*n* = 21 (62%))

The personal stressors reported by teachers were broken down into three themes: personal life/home, other personal factors, and income.

Theme 3: personal life/home (n = 14 (41%))

Some (41%) teachers identified personal life stressors and home responsibilities as a contributor to stress. Home responsibilities included aspects such as childcare and family caregiving. Teachers felt stress at both home and school which made it feel impossible for them to find a stress-free zone. The pandemic intensified these stressors, particularly when they managed work responsibilities alongside caring for sick family members. Teachers pointed out that the demanding nature of their work often left them with insufficient time to address personal tasks, such as household repairs or personal finances.

> *"I think too, there's a sense of guilt when you are…so busy trying to get school stuff done, or grade work, or whatever happens, and it always feels like work, kind of takes the forefront and family takes the back …".*

Theme 4: high personal expectations (n = 6 (18%))

Some educators (18%) described the pressure teachers placed on themselves to take on more responsibility and to go above and beyond. They noted they often found themselves overextended and feeling tired. Specifically, teachers expressed that new trends and technology often made them feel inadequate.

> *"I also think there's a degree of competitiveness in our profession. Not always intentionally. …but you look around…especially in today's stage where we're inundated with…things on the Internet and social media or …some teacher …created this whole song, and they choreographed this whole performance with their class".*

Theme 5: income (n = 6 (18%))

Income was also named as a stressor for some (18%) teachers. Teachers reported struggling with being adequately compensated for their work and reported having to take on other jobs to support their families. Those with higher education degrees conveyed dissatisfaction with not being fairly compensated for their advanced qualifications. Teachers also stated they paid for classroom needs out of pocket, which is another financial stressor.

> *"I think, for me personally, myself, being a single mom, the income is not what I would like it to be and I have to find other sources of income."*

Situational stressors (*n* = 12 (35%))

Situational stressors including the pandemic and safety concerns were reported as contributors to stress as reported by some (35%) focus group participants.

Theme 6: COVID-19 pandemic (n = 9 (26%))

Approximately one in four (26%) of teachers described the stressors due to the repercussions of the pandemic. Elementary teachers indicated that some children had entered schools without the conventional in-person classroom experience. Other teachers were concerned with learning gaps due to three years of pandemic-impacted learning. COVID-19 mitigation strategies in schools were reported to be hard to balance. For example, disruptions in the classroom when teachers stopped class to remind students to keep their masks on.

> *"A source of my personal stress … is these COVID mitigation factors are getting harder and harder to contend with, as I feel like I have a really hard time establishing good relationships with my students."*

Theme 7: safety concerns (n = 3 (9%))

A few (9%) teachers described that safety-related disciplinary actions were not being taken when necessary, out of the administrator's concern that students had faced pandemic-related trauma and teachers needed to make allowances. One teacher reported not feeling safe in her school because fights were not being addressed. Administrators were portrayed as ignoring situations such as fights and attributing them to the stress of the pandemic.

> *"We just did an active shooter drill, and the kids were told to be ready to fight. We don't need to add that to the stress and trauma… Fights are already happening left and right."*

Stressors from parents (*n* = 8 (24%))

Parents were reported to be a source of stress for some (24%) teachers, specifically when it came to pandemic-related issues. Teachers described feeling unsupported and disrespected by parents since the pandemic. Teachers illustrated this stress by describing how parents went from treating teachers as heroes when the pandemic started to the enemy when parents wanted their children back in school before safety precautions were lifted. Teachers noted parents took to social media speaking poorly about teachers, which was described as especially stressful for teachers when parents included the

teacher's name in the post. Parents were reported to often put pressure on teachers to make up for the losses that students suffered during the pandemic and brought these issues up in parent conferences. Another reported stressor was the increased pressure to be available outside of work hours to communicate with parents. Behavior issues were also reported to be a big stressor between teachers and parents when parents did not support consequences for behavior at home or did not believe that their child did anything wrong.

> *"So, whether I'm calling a parent to say, hey, your child did this, and they're like, oh, they would never or saying oh, well, that happens all the time at home that's fine. So not being supportive in that way".*

Stressors from the community (*n* = 4 (12%))

A few (12%) teachers described that they experienced considerable messaging from the community that they were not doing enough. Teachers communicated that they were told that their stressors aren't 'important' since they receive the summers off to recover. There was a lot of pressure described from the community to keep schools open during the pandemic. One teacher reported being approached by a stranger and being told that shutting down during the pandemic was unacceptable. Another teacher reported being told that teachers should do professional development on the weekend. Overall, teachers described that they felt like they were not respected by the community and the media (i.e., low occupational prestige).

> *"But when you have parents, and community, TV, media, bashing teachers and then when we do say how we feel, we're complaining…"*

Stressors from students (*n* = 4 (12%))

A few (12%) teachers described worrying about their students, especially those who missed significant portions of the school year and students who did not have their basic needs met at home. Teachers reported that they worried about what was going on at home, whether they needed to call the state child protection organization (i.e., the Department of Children and Families), and if they could promote them to the next grade. Additionally, with the pandemic, teachers reported that they worried about students not being prepared for social interactions and had to deal with more classroom interruptions than they did previously. Teachers also reported student behavior as much worse than in the past and that typical consequences for challenging behavior did not seem to work.

> *"And our school, … they're not being accommodating to new different kind of families, socioeconomic backgrounds, different family make ups, like having divorced parents and that kind of thing. And so, …one of the stresses for me is there's kids coming in where they don't have, like, those basic needs or basic interactions, especially with the pandemic, like social interactions and things…."*

Stressors from the state or national levels (*n* = 3 (9%))

A few (9%) teachers noted stress from both the state and national levels due to the different metrics they are required to maintain, such as test scores and evaluations. Teachers stated the state and federal government pushed for test scores to go back to pre-pandemic levels and teachers felt as though the government wanted schools to conduct business as usual with no acknowledgment of the pandemic. School district leaders were also reported to push for better performance and mentioned projected growth at every meeting.

> *"So, it's like, systemically, there's this extreme amount of pressure from the … government, all these people who are making these decisions who haven't stepped in a classroom and like just want the test scores to go back up."*

Discussion

Although the well-being of educators during the early phase of the pandemic in spring of 2020 has been explored [3, 12], our results suggest that impacts of the pandemic were still being felt by educators upon return to in-person learning in the 2021–2022 school year. The majority of participants reported that stress had impacted their psychological health most often citing emotional exhaustion and their physical health, explicitly poor sleep. Nearly half of the educators also described impacts to their social well-being and behaviors including strained relationships and a decline in social activities.

In terms of psychological health impacts during this period, the most common experiences cited by participants included emotional exhaustion and anxiety. Many teachers described feeling emotionally drained from always having to deal with other people's emotions and having increased anxiety from the constant criticism they faced. This is consistent with what was observed in the early phase of the pandemic. Cross-sectional studies of educators upon returning to work for the 2020–2021 school year also report high symptoms emotional exhaustion as a component of burnout [26] and anxiety [26–29]. Studies have also noted high levels of depressive

symptoms among educators in the year following the acute phase of the pandemic [26–29], although depression was not explicitly mentioned by the focus group participants we surveyed in the second year post-pandemic.

Although the majority of studies examining educator well-being after the pandemic focus on mental health [26–29], our participants also focused on physical health and health behavior impacts, with the majority of participants indicating impacts on sleep. Poor sleep can adversely affect physical and psychological health, as it is vital for the functioning, repair, and restoration of physiological systems including the immune, cardiovascular, endocrine, and nervous systems; it also supports important psychological processes, promoting emotional stability, executive functioning, and memory [30]. The field of lifestyle medicine underscores the importance of sleep and identifies it as one of six health behaviors along with good nutrition, physical activity, stress management, avoidance of risky substances, and positive social connections, that together prevent the majority of chronic conditions and non-communicable diseases, including cardiovascular diseases, metabolic syndrome and obesity [31, 32].

Social well-being, which includes relationships and positive interactions and behaviors with family members, colleagues, and others, was also negatively impacted. The negative social well-being impacts are mostly related to challenges maintaining connections with individuals due to time constraints, lack of energy to engage, and the need to prioritize some relationships over others. Widespread and growing deficits in social well-being prompted the U.S. Surgeon General to identify loneliness and isolation as an epidemic and major public health concern of 2023 [33]. Social connection is associated with better physical and mental health outcomes, health behaviors, and premature mortality risk. Further, socially connected communities have healthier populations, more economic opportunities, lower rates of crime and violence, and are more resilient when facing challenges [33].

In evaluating the stressors facing educators two years past the acute phase of the pandemic, we found that the stressors were multi-level with sources stemming from the school/district, personal, situational (pandemic). The current study results show parallels with the adapted socio-ecological framework presented by Robinson et al. [34] where educator stressors are influenced at the levels of the individual (or personal), the classroom context (or student or school), school leadership (administration) and the pandemic (situational). Notably, we identified additional, albeit less frequently mentioned, sources of stress from parents, the community, as well as the state or national level factors in the form of protocols and mandates.

In the present study, teachers overwhelmingly identified systems-level sources of stress (i.e., school and/or district level), with increased demands and a lack of resources in line with the JD-R model. Consistent with pre-pandemic [35] as well as the early pandemic phase during remote learning [36], excessive demands were mentioned as a stressor by the majority (79%) of educators. Although requiring educators to take on more tasks is not new, the tasks required by the pandemic were ever-changing. Early in the pandemic, the switch to distance learning required many teachers to learn new technology, and stress due to technical barriers was reported [11]. Upon returning to in-person learning, technology stress persisted for elementary school teachers [37], with the additional and new stress due to escalating responsibilities in incorporating new health, safety, and educational protocols, consistent with the experience of US elementary school teachers in this same period [34]. Some evidence suggests that during this time, educators were being asked to draw upon new skills that prior experience may not have prepared them for, as studies show that teacher experience was not a protective factor for health outcomes including depression [26]. At the time of the focus groups, the Delta and Omicron COVID-19 variants were beginning to spread across the Northeast with additional cases requiring vigilance in masking and quarantine protocols [22]. Educator stress due to the demands of their job had been a focus even before the pandemic [38]. However, our research points to the additional challenge of the changing nature of demands brought on by the pandemic, particularly the resulting lack of time and energy to nurture interpersonal relationships. Educators noted that strain in relationships impacted their ability to draw upon social support, an important resource that can buffer job demands [39].

As with this study, prior work [34] has found an overlap with stressors with administrative-level impacts intertwined with the roll-out of COVID-19 mitigation protocols and expectations. Focus group participants reported the increased demands due to administrators' expectation to maintain pre-pandemic level learning while juggling students with increased social-emotional and behavioral needs. Likewise, teachers described a lack of support, communication, and appreciation from their administrators, a stressor also reported during this period by teachers across the US [13, 34]. To a lesser extent, participants also reported pressure from parents, the community, and state/national levels to make up for COVID-19 learning losses and to conduct business as usual once returning to in-person learning. In addition to external pressures, teachers described an increased internal pressure placed on themselves to perform for their students and make up for the lost time of distance

learning. Teachers also reported worrying about the impact the pandemic had on their students and more generally worrying about students having their basic needs met, consistent with studies of US educators [34]. A study of U.S. educators two years post-pandemic in the 2021–2022 school year highlights that poor student behaviors as well as administrators' lack of engagement in decision making continue to be primary stressors [15].

The study results have many implications. The long-term effects of the COVID-19 pandemic are still emerging. Student learning loss across academic domains and school readiness skills continue to be documented [40] with disproportionate effects on students from low socioeconomic backgrounds and elementary school students [40]. These gaps in learning and skill acquisition, combined with the high pre-pandemic rates of teacher stress, indicate that teacher stress is not likely to subside in the years that follow, making educator well-being a top priority for school systems to address. Teacher well-being is pivotal in student academic, social, and emotional success [16, 41].

Furthermore, educator stress is a main factor in educator turnover [18]. We are just beginning to understand the impact of the COVID-19 pandemic on educator turnover. Nationwide, there was an increase in US teacher turnover in the 2020–2021 school years [42–44] with a continued rise in attrition and highest levels of attrition in the fall of 2022 [42, 44]. The full impact of the pandemic on teacher turnover may be yet to come.

Although educators overwhelmingly identified system-level stressors, interventions addressing educator stress and well-being are primarily focused on the individual by treating or coping with stressors [45–50]. In two recent systematic reviews [47, 49], interventions primarily focused on developing educators' knowledgebase, teaching cognitive and behavioral approaches, utilizing mindfulness strategies, behavioral interventions, positive psychology interventions, and wise interventions, which targeted educator perspectives in areas such as self-efficacy, positive emotions, burnout, stress, mood, and self-compassion. Though important, these interventions target the individual teacher's response to stressors rather than focus on systems-level prevention strategies that eliminate the causes of stress [51].

The generalizability of the study results should be considered in light of the participant population. For example, heterogeneity in pandemic and job-related protocols varied by school district, health district, state and country, adding to or alleviating the health impacts of stress on educators. Likewise, these varied policies and protocols may or may not contribute to the stressors identified by educators. Furthermore, educator characteristics may play a role in the stressors and health impacts which was not fully explored in the current study. For example, our study was limited to certified teaching staff, the well-being and stressors for support staff and administration may contain both overlapping and unique features that deserve additional research. Similarly, the unique experiences of educators who are part of minoritized groups, working with students with special needs, or working in school districts with low resources should be further explored. Most of the teachers who participated in the focus groups were White and female; therefore, it would be beneficial to gain the perspective of educators of color and non-female educators on these well-being issues. Although the lack of diversity in the current study populations does not threaten the study's validity, it does highlight the need to further understand the well-being and stressors of diverse school populations. An additional limitation of this study was the lack of timeframe specificity in the focus group script. Because the focus group questions did not specify a timeframe for the teachers to reflect on, it is possible they may have reported on stressors and impacts they have faced over the past several years rather than active stressors and impacts at the time of the focus groups.

The results of this study can be used to inform changes to support educator well-being. To improve educator mental health, experts recommend a multi-faceted, integrated approach that includes reducing work-related stressors, promoting workplace conditions that support mental health, and addressing workers with poor mental health [52]. Given the changing nature of educator demands, in addressing workplace-level stressors, it is important to leverage the knowledge of the educators themselves rather than assuming a one-size-fits-all approach, such as a participatory approach [53]. Resources, including social support, can be leveraged as a preventive approach to balance the demands of job and support the positive aspects of work. Lastly, identifying and treating workers at risk plays an important role. Educators' mental well-being can be monitored with administrator check-ins or peer mentors [38]. There is an urgent need and call to continue to develop methods to address psychosocial hazards and to improve the mental health of workers [54], including educators.

Conclusions

In February 2022, two years from the onset of the COVID-19 pandemic, educators continued to report impacts on physical and mental health as well as social well-being. Most stressors reported by educators were modifiable factors at the school or district-level such as excessive demands, limited resources, or support from administrators. Interventions to support educator well-being should prioritize school or district-level changes in addition to personal support.

Abbreviations

JD-R Job Demands-Resources
NIOSH National Institute for Occupational Safety and Health

Supplementary Information

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Supplementary Material 1

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Author contributions

JC, AD, LS, MB designed the study methods and hypotheses and focus group script. ST, AS, and MM implemented the focus groups. JC, ST, and NC conducted data analyses. JC, AD, LS, NC, MM and ST assisted in the interpretation of the results. JC, NC, and ST were major contributors in the writing of the manuscript. All authors read and approved the final manuscript.

Data availability

Data will be provided upon reasonable request from the corresponding author.

Declarations

Ethics approval and consent to participate

This study was performed in line with the principles of the Declaration of Helsinki. The University of Connecticut School of Medicine Human Subject Institutional Review Board determined the study posed none to minimal risk to subjects and therefore qualified for exempt status (22X-123-2).

Consent for publication

Not applicable. Identifiable information has been removed from data.

Competing interests

The authors declare no competing interests.

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