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Preliminary Investigation of Teachers' Emotional Exhaustion, Teaching Efficacy, Hope, and Colleague Support during the COVID-19 Pandemic

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Abstract: The COVID-19 pandemic required teachers to quickly adapt to changes in teaching likely impacting teachers' emotional exhaustion and feelings of teaching efficacy. Further, teachers' experience in the classroom may have shaped how they responded to the crisis and changes. Although teachers faced these unprecedented shifts, it is possible that both internal (i.e., hope) and external (i.e., social support) sources of support may act as promotive factors for teacher outcomes. The present study describes how teachers' emotional exhaustion, teaching self-efficacy, and supports (hope and colleague) were associated with one another one year into the pandemic. Associations were compared across early-/mid-career and veteran teachers. Results showed higher emotional exhaustion and lower hope for early-/mid-career teachers compared to veteran teachers, and a negative relation between emotional exhaustion and hope for early-/mid-career teachers. Pre-pandemic emotional exhaustion predicted hope during the pandemic for all teachers. Implications include supporting teacher well-being and career longevity considering acute stress.

Keywords: COVID-19, hope, teacher emotional exhaustion, teaching experience, teaching self-efficacy.

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Introduction

The COVID-19 pandemic introduced multiple unprecedented stressors into the lives of teachers in the United States (U.S.). Sudden and prolonged school closures required teachers to shift their approach to instruction quickly, often requiring that classes be taught virtually. In fact, approximately 93% of households with school-aged children reported some form of distance/virtual learning during 2020-2021 (McElrath, 2020). Many teachers reported worrying about the well-being of their students, especially for those students who did not attend virtual learning settings consistently and/or lacked appropriate settings and technology for learning at home (The Inverness Institute, 2021). This shift to virtual learning also led to isolation from school colleagues and removal from the school climate, both of which are well-known sources of support for teachers' emotional exhaustion and are particularly important for early-career teachers (McLean et al., 2020). It is safe to say that since March 2020, teachers have had to navigate teaching in ways for which they were not trained. Teachers will need to continue to navigate changes and demonstrate their adaptability as schools return to in-person instruction with social distancing requirements and/or hybrid models of instruction (e.g., a blend of in person and online instruction), particularly in instances where quarantine/isolation is required.

Taken together, these changes have likely affected teachers' emotional exhaustion and teaching efficacy detrimentally. Furthermore, although a range of both internal and external supports (e.g., hope, collegiality) likely play a role in how teachers manage their emotional exhaustion and their feelings of teaching efficacy, it is currently unknown how these

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factors may operate during times of acute stress such as the COVID-19 pandemic. In response to this gap in knowledge, a central goal of the present study was to examine how teachers' emotional exhaustion and teaching efficacy were related to hypothesized supportive factors (i.e., hope and colleague support) among teachers approximately one year after the beginning of the COVID-19 pandemic. Additionally, for a subsample of teachers with longitudinal data, we examined how pre-pandemic emotional exhaustion, teaching efficacy, and supportive factors were related to each construct one-year into the pandemic. Limited research has examined the role of supportive factors during this time of acute stress. However, these factors likely help mitigate negative outcomes among teachers and can be easily fostered (Burke & Arslan, 2020), even during pandemic times (although creativity in method may be warranted).

A strong foundation of research on teacher attrition conducted prior to the pandemic has shown that teachers leave the field at staggeringly high rates, with estimates indicating that between 30% and 50% of teachers leave the profession due to reasons other than retirement (Carver-Thomas & Darling-Hammond, 2017). Early-career teachers are even more likely to leave their positions, with up to 50% of teachers leaving within the first five years of teaching (Skaalvik & Skaalvik, 2016). This is problematic for the field; teacher turnover negatively impacts student achievement (Milanowski & Odden, 2007), poses economic threats such as a mismatch between demand and availability of teachers (Ingersoll, 2003), and perpetuates systemic educational inequities as teachers in high-needs schools and districts leave their positions at the highest rates (Lankford et al., 2002). While the larger issue of teacher attrition is considerable, many teachers do remain in the career for ten or more years (i.e., veteran teachers). Those who remain in teaching may possess certain skills, resources, and/or supports that enable them to maintain positive levels of emotional exhaustion. As such, another goal of this study was to examine if the associations among teachers' emotional exhaustion, teaching efficacy, hope, and colleague support differed for early-/mid-career versus veteran teachers.

Theoretical Framework

We look to the job demands-resources model (Demerouti et al., 2001) to frame this investigation. Central to this model is the division of individuals' work-related experiences into two categories: demands and resources. Job demands are career-related factors that deplete the energy of the individual and lead to negative outcomes, while resources include experiences and characteristics that enable individuals to engage effectively with their work (Xanthopoulou et al., 2007). Importantly, a key role of job resources is to buffer the negative effects of job demands on individuals' outcomes; as such a balance between job demands and job resources is crucial to one's personal and professional well-being (Xanthopoulou et al., 2007). Studies applying this model to teacher samples have illustrated that teachers' job demands including onerous parents and stressful students/classrooms (e.g., problem behaviors and challenging classroom compositions), and job resources including professional development and collegial support, have notable implications for teachers' well-being and career outcomes (McLean et al., 2020; Roberts et al., 2019).

In the present study, we suspect that the job demands experienced by teachers, which are already more intense than in other professions during typical (non-pandemic) times (Greenberg et al., 2016), increased markedly during the pandemic and likely were associated with increased emotional exhaustion and lowered teaching efficacy. In addition, we view hope (e.g., identifying and pursuing goals) and colleague support as key job resources that are highly relevant to teachers and are currently understudied in their utility for combating the stressors of teaching. Specifically, we anticipated that hope and colleague support would act as important supportive factors amidst the added stressors of the COVID-19 pandemic.

Emotional Exhaustion and Teaching Efficacy

Career burnout is generally considered the end point of an individuals' chronic exposure to career-related stressors without successful resolution (Jennett et al., 2003). This is a particularly relevant construct in the teaching profession as teachers experience chronic stress at higher rates compared to other occupations (Katz et al., 2016), which likely contributes to the high rates of attrition among teachers. Past work has illustrated that burnout among teachers leads to poorer health outcomes, dampened motivation, lower professional performance, and lower job satisfaction (Schaufeli & Salanova, 2007; Skaalvik & Skaalvik, 2010), providing evidence that burnout and its components are worthy of careful study in the teaching profession, and especially in times of acute, large-scale stress.

In the present study, we focused on emotional exhaustion as a key teacher outcome of interest. Emotional exhaustion refers to feelings of being emotionally overextended and/or drained and is one of the most commonly studied indicators of burnout. Other indicators of burnout include depersonalization, or a tendency to view students, colleagues, parents, etc. with a cynical or dehumanizing attitude, and reduced feelings of personal accomplishment where one's feelings of competence and achievement decline (Maslach et al., 1996). These components of burnout are thought to occur sequentially, with the first stage of burnout being emotional exhaustion. Given that the COVID-19 pandemic and related stressors came on suddenly, unexpectedly, and fairly recently for teachers, we focused in this study on emotional exhaustion as the most relevant indicator of burnout as teachers were more likely to be experiencing this initial stage of burnout at the time of data collection.

Emotional exhaustion has been studied independently of other burnout indicators among teachers, with findings indicating that this construct on its own has much potential to inform teacher experiences and outcomes. For example, Skaalvik and Skaalvik (2016) reported that school climate and career conditions predicted teachers' emotional exhaustion, which then predicted their job satisfaction and likelihood of attrition from the profession. These same authors also reported that teachers' positive perceptions of their career autonomy and teaching efficacy were related to reduced feelings of emotional exhaustion (Skaalvik & Skaalvik, 2014). More recent work has even begun to illustrate important patterns regarding teacher emotional exhaustion during the COVID-19 pandemic: Pellerone (2021) reported an increase in burnout, which included emotional exhaustion, during the pandemic among teachers in Italy compared to their pre-pandemic burnout. However, it is yet unclear how emotional exhaustion is related to hope and feelings of colleague support, particularly during a pandemic. The present study aimed to explore these relations.

Traditionally defined, teaching efficacy is a teachers' "judgment of his or her capabilities to bring about desired outcomes of student engagement and learning" (Tschannen-Moran & Hoy, 2001, p. 783). Teachers' own perceived teaching efficacy has repeatedly been shown to relate to important classroom processes including classroom management and instructional support (Zee & Koomen, 2016), students' academic achievement (Goddard et al., 2000), and teachers' own well-being, career satisfaction and longevity (Zee & Koomen, 2016). Studies of teaching efficacy among beginning teachers have suggested that this factor is still fairly malleable as teachers establish themselves in their careers (Tschannen-Moran & McMaster, 2009), again highlighting early-career teachers as a group potentially more vulnerable to the career stressors introduced by the COVID-19 pandemic. This alternately suggests that veteran teachers may have a build-up of more personal resources, including higher teaching efficacy, to carry them through pandemic-related stressors. Although there has been limited work directly examining teaching efficacy during the pandemic, existing studies have shown that teachers had lower teaching efficacy during the pandemic compared to levels before the pandemic (Pressley, 2021; Pressley & Ha, 2021), and to our knowledge, no work has been done comparing teaching efficacy outcomes between early-/mid-career and veteran teachers during the pandemic.

Supportive Factors

Individual well-being is promoted via different sources of internal and external support. Within the present study, we focused on hope and colleague support, as measures of internal and external supports, respectively.

Hope

Hope is a cognitive-motivational construct that emphasizes the importance of goal-oriented pathways and agency thinking (Snyder, 1995). Those who have high hope are able to identify multiple routes to achieve their goals (pathways thinking) and feel efficacious in goal pursuit (agency thinking; Gilman et al., 2006). Additionally, those high in hope are more likely to demonstrate behaviors/actions that align with and support the pursuit of their goals and are able to make shifts in their routes as needed to ensure the successful completion of those goals (Snyder et al., 2002). Importantly, hope is a valuable strengths-based construct that is distinct from resilience, although the two are certainly related. In brief, resilience as a skill is typically something that occurs in the face of adversity and in response to trauma (Beutel et al., 2017). While hope may be helpful under those circumstances, adversity and trauma are not requirements for someone to employ hope skills. Further, hope and resilience have been shown to be distinct strengths-based skills that positively promoting flourishing (Munoz et al., 2020). A recent meta-analysis on the role of hope in the workplace showed that hope was positively related to work-related engagement, attitude, and performance, adapting to tasks, and perceived success and negatively related to employee turnover (Yotsidi et al., 2018).

Hope is likely to reduce teachers' emotional exhaustion and promote teaching efficacy. Researchers have shown that those with high levels of hope often view their goals as a challenge and feel excited about and capable of pursuing that challenge (Snyder et al., 1991). This approach may reduce levels of emotional exhaustion and promote high levels of teaching efficacy; hope provides a strong cognitive, motivation-based framework for pursuing goals, even in situations characterized by high stress. Moreover, in times of stress, those with high hope are better able to identify ways to address and overcome the situation (Snyder et al., 2002). In the 2020-2021 teaching context, this may mean that hope is associated with lower emotional exhaustion and increased feelings of teaching efficacy. Indeed, in non-pandemic times, hope has been shown to be negatively related to emotional exhaustion and positively related to teaching self-efficacy, not accounting for years of teaching (Kumarakulasingam, 2002; Sezgin & Erdogan, 2015).

Colleague Support

External sources of support may also be important in reducing emotional exhaustion and supporting teaching efficacy (Sezgin & Erdogan, 2015). One such example is support from colleagues. Colleague support is a measure of an individual's perceived support from others in their profession (Brouwers et al., 2001). Social support from colleagues is a well-established job resource which can mitigate the negative impacts of job demands on individuals' outcomes, likely through shared understanding of work-related situations and relevant support that can be both/either psychological or tangible. Extant research has shown that colleague support is important for teachers' well-being as it reduces stress and burnout, and increases job satisfaction and performance (Kinman et al., 2011; Russell et al., 1987).

Previous research has shown that teachers' perceptions of colleague support are negatively related to emotional exhaustion and positively associated with teaching efficacy (Brouwers et al., 2001). Additionally, in a study that examined differences between novice (three or fewer years of teaching experience) and career teachers (four or more years of experience), colleague support was only positively related to teaching self-efficacy among novice teachers (Tschannen-Moran & Hoy, 2007). Some qualitative literature has examined the role of teachers' perceived colleague support during the pandemic. In these analyses, teachers reported that positive relationships with colleagues were important to supporting their well-being and teaching efficacy (Kim et al., 2022).

Although we have highlighted existing literature that explores the associations among emotional exhaustion and supports among teachers, previous work is limited in four areas. First, this work was primarily conducted prior to the pandemic. It is possible that pandemic related changes (e.g., virtual learning and novel stressors) may influence these associations. Second, limited work during the COVID-19 pandemic has focused on the role of positive psychology and strengths-based assets such as hope and colleague support. This is a limitation as inter- and intra- personal assets have been shown to reduce negative outcomes (Burke & Arslan, 2020). Third, the work reviewed has not examined these associations among early-/mid-career versus veteran teachers. Researchers have highlighted the importance of examining the well-being of teachers and examining trends across, rather than just controlling for, years of teaching experience (Chan et al., 2021). Understanding how these two groups may differ in their overall emotional exhaustion and perceptions of support, especially during a time of crisis, may provide useful information about ways to tailor support for these groups of teachers. Finally, understanding the associations among these variables during the tail-end of the 2020-2021 virtual learning phase may have important implications for intervention points as teachers return to the classroom in a new academic landscape.

The Present Study

To adapt to the COVID-19 pandemic, schools and teachers made sudden and sweeping changes to instruction delivery, experienced interruptions in face-to-face support from colleagues, and were removed from their collective school climate. The field is still identifying the myriad ways this event impacted educators. Further, it is still largely unknown how available supports and professional experience (e.g., early-/mid-career and veteran teachers) may have played additional roles. To this end, our research questions were twofold. First, we asked what associations existed between emotional exhaustion, teaching efficacy, and supports one year into the pandemic, and did these associations differ for early-/mid-career versus veteran teachers. We hypothesized that higher levels of hope and colleague social support would be associated with higher teaching efficacy and lower emotional exhaustion in general, and that effects would be most profound among early-/mid-career teachers compared to veteran teachers. Second, for a subsample of participants with data reported both prior to and after the start of pandemic, we investigated the extent to which pre-pandemic emotional exhaustion, teaching efficacy, and colleague support predicted emotional exhaustion, teaching efficacy, and perceptions of support and during the pandemic. We hypothesized that pre-pandemic colleague support and teaching self-efficacy would positively predict optimal outcomes during the pandemic, and emotional exhaustion would negatively predict optimal outcomes.

Methodology

Research Design

Teachers received an email with a survey link in a partnering district as part of data collection efforts in February 2021 (hereafter *pandemic*). At the time of survey administration, 59% of the teachers were teaching remotely, and the remaining 41% had returned to teaching in-person within the previous two weeks. Teachers gave consent and were asked to complete the survey, which included demographic questions and questions about their emotional exhaustion, teaching efficacy, hope, and social support from colleagues. As this was part of an ongoing data collection, a subsample of these teachers ($n = 25$) had also completed the survey in early March 2020 (hereafter *pre-pandemic*) that included the emotional exhaustion, teaching efficacy, and colleague support scales. The hope questions were only administered in the 2021 survey.

Sample and Data Collection

Teachers participated in a survey as part of a regular data collection effort within one school district (four schools) in the Southwestern United States. In February 2021, 41 teachers (78% female; $M_{age} = 41.71$ years, $SD_{age} = 10.33$ years; 32% response rate) completed the survey. Participants taught between kindergarten and 12th grade, and 34% were high school teachers. Teachers experience in the classroom ranged from 2 to 27 years, with an average of 14.17 years of teaching experience ($SD = 6.68$ years). Early-/mid-career teachers ($n = 15$) had an average of 7.27 years of teaching experience ($SD = 2.43$ years; range = 2-8 years), and veteran teachers ($n = 26$) had an average of 18.15 years of teaching experience ($SD = 4.80$ years; range = 11-27 years). Across all teachers, in terms of educational attainment, 39% had a bachelor's degree, 56% had a master's degree, and 5% reported some other level of education. The teachers were predominantly White (80%), and 15% identified as Latino/a/x or Hispanic, 2.5% as Native American/Alaska Native, and 2.5% as Asian.

Measures

Emotional Exhaustion

Teachers reported on the frequency of their emotional exhaustion using the Maslach Burnout Inventory (Maslach et al., 2001). Nine items were rated on a six-point scale, *1 = never* to *6 = a few times a week*. Example items included, "I feel fatigued when I get up in the morning and have to face another day on the job," and "I feel emotionally drained from my work." Previous work has shown this scale to be reliable (Maslach et al., 1996). A mean composite was created where higher values indicated more emotional exhaustion (Cronbach's $\alpha = .94$).

Teaching Efficacy

Teachers reported on their own feelings of efficacy in teaching using the Teaching Self-efficacy Scale (TSES; Tschannen-Moran & Hoy, 2001) on a 5-point scale (*1 = nothing* to *5 = a great deal*). This scale consisted of 9 items; example items included, "how much can you do to get students to believe they can do well in school?" and "how much can you do to get your students to follow classroom rules?" Previous research has shown this is a reliable scale (Klassen et al., 2009), and this was consistent in the present study (Cronbach's $\alpha = .90$). A mean composite was created where higher scores indicated higher levels of teaching efficacy.

Hope

Teachers completed the 8-item Adult Hope Scale (AHS; Snyder et al., 1991). The AHS measures feelings of agency (e.g., "my past experiences have prepared me well for my future") and pathways (e.g., "there are lots of ways around any problem") thinking using an 8-point scale, *1 = definitely false* to *8 = definitely true*. Researchers have shown that this measure has good reliability (Edwards et al., 2007). All items were mean composited, where a higher score was indicative of higher hope (Cronbach's $\alpha = .90$).

Colleague Support

Teachers completed four items from the Multidimensional Scale of Perceived Social Support (MPSS, Zimet et al., 1988) about the types of supports they receive from colleagues using a 5-point scale (*1 = disagree* to *5 = agree*). Example items included, "I get the emotional help and support that I need from my colleagues," and "my colleagues are willing to help me make decisions." Previous research has shown this to be a reliable measure (Canty-Mitchell & Zimet, 2000). A mean composite score was created where higher scores indicated more colleague support (Cronbach's $\alpha = .92$).

Teaching Experience

Teachers reported their number of years of teaching experience. We used teacher self-reported experience to group teachers with less than 10 years teaching experience as the early-/mid-career teacher group, and those with 10 or more years of teaching experience into the veteran teacher group.

Analyzing of Data

Prior to study analyses, preliminary analyses examining descriptive statistics and normality of all pandemic study variables (data collected in 2021) were examined for the whole sample and by veteran teaching status. Next, we examined correlations among all pandemic variables to understand what associations existed by veteran status. Then, we conducted one-way analysis of variances (ANOVAs) to see if early-/mid-career and veteran teachers had mean-level differences on all pandemic study variables. Last, multiple regression analyses were conducted to determine if pre-pandemic emotional exhaustion, teaching efficacy, and colleague support predicted pandemic emotional exhaustion, teaching efficacy, hope, and colleague support. All analyses were run in SPSS 26.

Findings / Results

Descriptive statistics by veteran status and for the full sample are presented in Table 1. All study variables met normality assumptions (Tabachnick & Fidell, 2012). Pearson correlations showed two significant correlations among study variables within the early-/mid-career teacher group: hope was significantly, negatively related to feelings of emotional exhaustion and positively related to colleague support ($r_s = -.51$ and $.56$, $p_s < .05$). No significant correlations emerged for the veteran teachers.

Table 1. Descriptive Statistics and Pearson Correlations for Study Variables

	Emotional Exhaustion	Teaching Efficacy	Hope	Colleague Support	Years Teaching Experience
Emotional Exhaustion					
Teaching Efficacy	07/ -.23				
Hope	-.51*/ -.32	.34/ .26			
Colleague Support	-.37/ -.15	.26/ .29	.56*/ -.09		
Years Teaching Experience	08/ -.07	.51*/ .01	.33/ .10	.23/ .18	
<i>Descriptive Statistics by Veteran Status</i>					
Minimum	2.22/ 1.22	3.67/ 2.78	4.38/ 5.88	1.00/ 2.50	2.00/ 11.00
Maximum	5.78/ 5.67	5.00/ 5.00	8.00/ 8.00	5.00/ 5.00	10.00/ 27.00
Mean	4.18/ 2.78	4.56/ 4.49	6.59/ 7.17	3.83/ 4.07	7.27/ 18.15
SD	1.04/ 1.18	0.44/ 0.55	1.01/ 0.60	1.25/ 0.68	2.43/ 4.80
<i>Descriptive Statistics for Entire Sample</i>					
Minimum	1.22	2.78	4.38	1.00	2.00
Maximum	5.78	5.00	8.00	5.00	27.00
Mean	3.31	4.52	6.96	3.98	14.17
SD	1.31	0.51	0.81	0.92	6.68

Note. * $p < .05$. SD = standard deviation. Early-/mid-career teacher data presented first ($n = 15$), followed by veteran teacher data ($n = 26$) in **bold**.

Group Differences on Study Variables

One-way ANOVAs were conducted to examine if early-/mid-career teachers differed from veteran teachers on all 2021 study variables. For emotional exhaustion, early-/mid-career teachers reported significantly higher values ($M = 4.18$, $SD = 1.04$) than veteran teachers ($M = 2.78$, $SD = 1.18$, $F(1, 38) = 14.33$, $p < .01$, partial $\eta^2 = .27$). Early-/mid-career teachers had significantly lower hope scores ($M = 6.59$, $SD = 1.01$) than veteran teachers ($M = 7.17$, $SD = 0.60$), $F(1, 39) = 5.44$, $p = .03$, partial $\eta^2 = .12$. No significant mean differences emerged between early-/mid-career and veteran teachers on teaching efficacy or colleague support, $F(1, 39)$, $p = .67$, partial $\eta^2 = .01$ and $F(1, 39) = .61$, $p = .44$, partial $\eta^2 = .02$, respectively.

Pre-pandemic Emotional Exhaustion, Teaching Efficacy, and Colleagues Support Predicting Outcomes during the Pandemic

We utilized multivariate regression analyses to examine if pre-pandemic (2020 data) emotional exhaustion, teaching efficacy, and colleague support predicted pandemic (2021 data) emotional exhaustion, teaching efficacy, hope, and colleague support. In each regression analysis, all three pandemic variables were included as predictors in the same model and years of teaching experience was included as a covariate. To preserve statistical power, all regression analyses were run on the entire sample of teachers who had data at both time points ($n = 25$). All parameter estimates are presented in Table 2.

Table 2. Regression Analyses Parameter Estimates

2020 Predictors	2021 Outcomes							
	Emotional Exhaustion ($R^2 = .36$)		Teaching Efficacy ($R^2 = .51$)		Hope ($R^2 = .39$)		Colleague Support ($R^2 = .19$)	
	B (SE)	β	B (SE)	β	B (SE)	β	B (SE)	β
Emotional Exhaustion	.58** (.19)	.60	.05 (.06)	.14	-.36** (.13)	-.55	-.09 (.16)	-.13
Teaching Efficacy	.41 (.43)	.18	.52** (.13)	.65	.12 (.28)	.08	-.37 (.36)	-.23
Colleague Support	-.28 (.35)	-.17	.17 (.11)	.30	.22 (.23)	.20	.38 (.29)	.31
Teaching Experience	-.04 (.04)	-.22	.01 (.01)	.08	.03 (.03)	.25	.06 (.03)	.44

Note. ** $p < .01$. $N = 25$. B = unstandardized estimate; SE = standard error; β = standardized estimate

The multiple regression model with pandemic hope as an outcome was significant, $F(4, 21) = 3.36$, $p = .03$. Teachers' pre-pandemic emotional exhaustion significantly, negatively predicted hope. Overall, the model accounted for 39% of the variance in hope ($R^2 = .39$). In all remaining multiple regression models predicting the different pandemic outcomes, only the pre-pandemic levels of a given outcome were significantly related to outcomes except for colleague support.

Discussion

During the COVID-19 pandemic, teachers faced myriad teaching-related obstacles that were ever-changing, which impacted their emotional exhaustion and teaching efficacy. The present study examined how hope and colleague support were related to emotional exhaustion and teaching efficacy for teachers, and how these effects may have differed among early-/mid-career vs. veteran teachers. Hope emerged as a critical internal support, showing a positive association with colleague support and a negative association with emotional exhaustion for early-/mid-career teachers. Further, group differences emerged in emotional exhaustion and hope scores between early-/mid-career and veteran teachers such that early-/mid-career teachers were less hopeful and more emotionally exhausted than veteran teachers. Lastly, we found that for a subsample of teachers with two time-points of data, pre-pandemic emotional exhaustion was an important, negative predictor of hope during the pandemic. The present study adds to the literature on teachers' experiences during the pandemic by highlighting personal characteristics and career-related supports that appeared to have an impact on teachers' outcomes during this challenging time. The present study also offers information about potential avenues for teacher support, particularly through targeting hope and positive collegial relationships among teachers, particularly early-career teachers, via support, intervention, and professional development.

Differences between Early-/mid-Career and Veteran Teachers

In terms of mean-level differences, early-/mid-career teachers reported significantly higher emotional exhaustion and lower hope than veteran teachers. This finding is contrary to previous (non-pandemic) work that has shown no significant differences in emotional exhaustion levels or hope (Kumarakulasingam, 2002) between groups of teachers based on career status. In speculating why group differences were evident in the present study, one obvious possibility is that divergent findings are a by-product of the pandemic, with those who have less teaching experience feeling more exhausted and less hopeful than those with more experience. It may be that teachers with less experience are not as well-equipped as senior teachers with coping mechanisms and strategies needed to handle the acute stressors that have been a reality for teachers in 2020 and 2021. Indeed, Pellerone (2021) found increased levels of emotional exhaustion during the pandemic, and our findings seem to suggest this may be particularly relevant for early-/mid-career teachers. This may also be a function of larger patterns in teacher attrition wherein practitioners with lower levels of adaptive characteristics, such as hope, experience more emotional exhaustion and choose to leave the field during the early-career stage. This differential career attrition based on adaptive characteristics would result in veteran teachers who remain in the field having higher mean levels of hope, lower mean levels of emotional exhaustion, etc. In terms of hope, no other studies to our knowledge have examined this among teachers during the pandemic. With changing teaching requirements, early-/mid-career teachers may be less able to identify alternative routes to their goals, and when repeatedly facing obstacles in their career, may have less confidence toward reaching their goals.

Findings that teaching efficacy did not differ by teaching experience are consistent with *some* previous pre-pandemic work (Kumarakulasingam, 2002) and one study conducted during the COVID-19 pandemic that used the same cutoffs (10 years) as the present study (Beumer, 2021). Although our findings were supported in previous literature, they were still somewhat surprising. Studies of teaching efficacy among beginning teachers have suggested that this factor is still fairly malleable and that this group may be potentially more vulnerable to reductions in feeling of competency and the career stressors introduced by the COVID-19 pandemic (Tschannen-Moran & McMaster, 2009). Our findings reveal this may not be the case. We speculate that the lack of findings regarding career-stage-dependent differences in self-efficacy may have been a function of how we grouped our participants based on career-stage. Given our modest sample size, we combined early- and mid-career teachers and compared this group to veteran teachers. It could be that there is a more specific (shorter) window during the early-career stage during which teaching efficacy is reduced and/or still forming. Thus, examining this variable with a wider range of teachers (early and mid-career) did not capture this window as precisely, leading to null effects. Future studies could examine variations in self-efficacy among early-career (first 3 to 5 years) teachers as a function of the pandemic, and/or could compare such effects between early-career and veteran (10+ years) teachers in order to capture a more stark contrast between groups. Conversely, it could be that the group of early-/mid-career teachers felt comfortable with adapting to technological requirements of the pandemic, whereas the veteran teachers may not have felt as comfortable. Along this line of thinking, it may be that the veteran teachers' teaching efficacy was slightly diminished given the changes to the educational context to which they likely are accustomed. Nonetheless, this work continues to provide additional information comparing self-efficacy outcomes between early-/mid-career and veteran teachers during the pandemic, and it highlights that more research is necessary to understand how grouping teaching experience may result in different results across studies.

Consistent with past literature that highlights early-career teachers as a population are more vulnerable to struggles with well-being (Hobson & Maxwell, 2016), our findings showed that the pattern of associations between emotional exhaustion, teaching efficacy, and supports varied between early-/mid-career teachers and veteran teachers such that associations were only evident for early- and mid-career teachers. Among this group, emotional exhaustion was negatively related to hope, and colleague support was positively related to hope. In line with the job demands-resources framework, it is possible that hope is a potential individual characteristic (resource) that can mitigate

emotional exhaustion (demand). When faced with stressors, those with high hope may actively make changes to adjust to and overcome stressors through intentional goal setting and route planning (Gallagher et al., 2021), which then may decrease subsequent emotional exhaustion. This may be particularly true when considering the context of the COVID-19 pandemic and amount of teaching experience (Sokal et al., 2020). Indeed, teachers high in hope may be more equipped than those without hope skills to set manageable goals in a rapidly shifting teaching environment and draw on past experience to inform new routes to success. Although veteran teachers may already have these skills to draw on, this may be particularly hard for teachers who are newer to the field. Our findings support this notion, with emotional exhaustion depleting hopeful thinking for newer teachers. Encouragingly, our findings also show that added support can counteract this negative effect.

Although not explicitly included in our hypotheses, it is not surprising that hope and colleague support were positively associated. Extant literature has shown that having supportive interpersonal relationships are key contributors to hope (Fruht, 2015). For early-/mid-career teachers, it would seem that collegial support is particularly helpful as junior teachers navigate the school climate and begin to acclimate to their roles and collect resources (both physical and psychological) to support their teaching. It may be that having colleagues who understand the needs and difficulties inherent in the profession and who can support goal-planning and attainment (key aspects of hope) is particularly important for this group of teachers, particularly in times of unprecedented shifts in the field due to the pandemic.

Foundational research among the general population has shown that, broadly, social support is a strong contributor to individuals' well-being (Koeske & Koeske, 1990), and recent work has found that social support has been especially important during the pandemic (Li et al., 2020). In the field of education, teachers report less stress and experience fewer barriers to well-being and career satisfaction when they have strong social supports in place, especially those social supports afforded by their work including positive relationships with colleagues and supportive administrations (McLean et al., 2020; Taylor et al., 2019). In the present study, the lack of differences detected between early-/mid-career and veteran teachers in their perceived levels of social support indicates that, regardless of teaching experience, one group did not feel significantly more or less supported. And descriptive statistics revealed that most teachers reported adequate or higher levels of perceived colleague support. This is encouraging, especially given the broader context of the pandemic and the tendency identified in past research for beginning teachers to experience more feelings of isolation (Ingersoll, 2003). In fact, isolation from colleagues is noted as a primary job demand among educators in general (Ingersoll & Smith, 2004). The fact that teachers in the present study reported relatively high and consistent (between groups) social support could be evidence of a "rallying" effect whereby teachers and administrators made concerted efforts during prolonged school closures to maintain communication, commiserate, and foster productive collegial relationships. However, more work among larger samples and with more clearly specified groups of teachers is needed to draw any firm conclusions about how teachers in the pandemic experienced social support, especially in light of our findings that colleague support was particularly important for early- and mid-career teachers' hope.

Pre-pandemic Emotional Exhaustion, Teaching Efficacy, and Colleague Support Predicting Pandemic Outcomes

Lower pre-pandemic emotion exhaustion predicted higher hope during the pandemic. To our knowledge, this is the first study to examine these constructs within a context of acute, international stress among teachers, though the positive impacts of hope during the pandemic have recently been detected in other professions: In a study conducted among nurses during the COVID-19 pandemic, those who had high initial levels of hope reported less stress and anxiety than those with low hope (Zhang et al., 2021). Our finding regarding the relation between prior emotional exhaustion and hope highlights how low burnout may potentially positively serve individuals during times of stress. Individuals who do not feel emotionally overwhelmed/drained before a crisis may be better able to not only work towards goal attainment in a meaningful way during a later crisis, but also are likely to view hurdles, potentially introduced by the crisis, they face as a challenge rather than a stopping point (Zhang et al., 2021). There are also implications for their concurrent well-being. For example, a teacher who was not experiencing any emotional exhaustion prior to the pandemic may have had more emotional and cognitive capacity during the pandemic to acquire new technological skills as they adapted to online teaching and may have seen this situation as a productive challenge rather than as a stress-inducing barrier. Alternately, when teachers had already experienced marked emotional exhaustion pre-pandemic, their feelings of being emotionally overextended and drained could have made it more difficult for them to be able or want to identify and pursue new goals or reroute to previous goals.

Conclusion

During an unprecedented time of transition and change, it is critical that researchers, policymakers, and administrators work to understand how the pandemic has affected teachers' emotional exhaustion and teaching efficacy, particularly for early career teachers. This is not enough, though – identifying key supports that could mitigate the negative effects of this unique crises are crucial in seeing the workforce through the remainder of the pandemic and the longstanding changes it will no doubt introduce into the nation's schools. The present study highlights the important roles of emotional exhaustion and hope when considering how best to support teachers, an important first step toward this goal. Although scientific advances are allowing return to in-person instruction, it is critical that we acknowledge the

weight of the 2020-2021 school year on teachers and the carry-over effects of this experience into subsequent teaching years, and the impacts of these carry-over effects on students as well. We must also facilitate a supportive environment that decreases burnout and promotes hope. This investment has the potential to not only help with retention among teachers but support them as individuals.

Recommendations

Findings from the present study highlight key-points for teacher intervention and support, particularly for early-/mid-career teachers. To illustrate, reducing teacher emotional exhaustion may have implications for increasing hope in the face of adversity. Additionally, interventions may target additional avenues for directly improving teacher hope. Because hope is a malleable skill (Cheavens & Guter, 2018), it can be fostered by a supportive work environment. In this way, both colleagues and administrators likely are critical sources of support to foster hope. When faced with work-related stressors, colleagues and administrators can be a source of support that can improve hope (e.g., collaboratively brainstorm new workable routes for challenges; check-in on teacher well-being and confidence; Snyder et al., 2002). This may be particularly meaningful for early-/mid-career teachers, who may feel less hopeful than their more experience counterparts. Future research should support intervention efforts to teach hope and measure the efficacy of these interventions across teachers and schools. This approach would also allow researchers to examine causal relations between hope and teacher emotional exhaustion.

Furthermore, the inclusion of structured support/trainings for new teachers to understand how to meet the emotional demands of the teaching career may be a point of intervention for early-/mid-career teachers. While the pre-service preparation stage has the potential to be a time when future teachers learn strategies for adapting to and overcoming the common stressors of the career, very little emphasis on supporting one's own well-being is incorporated into teacher preparation (Newberry et al., 2013). This is the case despite the existence of evidence-informed frameworks for building resilience and other adaptive characteristics among new (Building Resilience in Teacher Education; Mansfield et al., 2016) and practicing (Cultivating Awareness and Resilience in Educators; Jennings et al., 2013) teachers that explicitly center hope-related topics. Recent work has illustrated that the adverse (stressful) experiences beginning teachers have during the pre-service stage have implications for their well-being during the first year of teaching and that effects of stress during the preservice stage surface in first-year teachers' emotional exhaustion (Taylor et al., 2019). This underscores the importance of supporting teacher stress and well-being by targeting factors that can mitigate these negative experiences (i.e., hope) before teachers even step foot in the classroom. We assert that existing frameworks to support educator well-being could be applied in the pre-service and/or early career stages via structured coursework and/or teacher induction programs that could directly address the increased emotional exhaustion and decreased hope observed in the present study, and this approach could be empirically evaluated by researchers. Outcomes would undoubtedly serve teachers in times of crisis (pandemic) as well as more normal circumstances.

Finally, schools and districts could focus on interventions targeting early-/mid-career teachers that emphasize collaboration and interactions, not only among themselves, but also in a structured way with colleagues who have more seniority. By creating connections with and having a supportive environment consisting of colleagues with more experience, the less senior teachers may be able to learn coping and hope skills from their more experienced colleagues. In turn, this may help promote hope skills while also giving a space to learn how to cope with and mitigate the negative effects of emotional exhaustion. These efforts could be empirically examined by researchers to not only better understand how effective these collaborations/interactions are for teacher's well-being outcome, but also examine how those positive changes are implicated in students' academic and well-being outcomes.

Limitations

The present study provides a novel and preliminary investigation into teacher emotional exhaustion and hope during the COVID-19 pandemic; however, it is not without limitations. With only 41 teachers involved in the present study, analyses are under-powered and, thus, more vulnerable to Type II error. Additionally, data are limited to a single school district and may not generalize to the broader context of schools and districts across the U.S. Within this vein, geographic location could have played a role in teachers' emotional exhaustion given that districts and states enacted a wide range of policies surrounding COVID-19 mitigation efforts. What was detected in this Southwestern state could have surfaced differently in other U.S. states that had different reactions to the pandemic. Additionally, all measures were self-reported by teacher participants, raising concern about common-method bias, and unfortunately, the hope scale was only administered during the pandemic survey, precluding our ability to control for previous hope levels. As such, it would be useful to examine if the patterns in the present study are generalized across location, school districts, and with larger sample sizes.

Authorship Contribution Statement

Bryce: Concept and design, data acquisition, data analysis / interpretation, drafting manuscript, critical revision of manuscript, statistical analysis, final approval. McLean: Concept and design, drafting manuscript, critical revision of

manuscript, final approval. Granger: Concept and design, drafting manuscript, critical revision of manuscript, final approval. Espinoza: Data acquisition, data analysis / interpretation, drafting manuscript, final approval. Fraser: Drafting manuscript, critical revision of manuscript, final approval.

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