



Teacher exhaustion: The effects of disruptive student behaviors, victimization by workplace bullying, and social support from colleagues

Lenka Kollerová¹ · Petr Květon¹ · Kateřina Zábrodská¹ · Pavlína Janošová¹

Received: 26 July 2021 / Accepted: 27 February 2023
© The Authors 2023

Abstract

Exhaustion, as a key facet of burnout, is one of the most common risks that compromises teacher well-being and contributes to a shortage of teachers. While the school social environment has been identified as an influential context for teacher exhaustion, the relative importance of its different facets remains unclear. This study focused on the most proximal social environment in school and examined the role of teachers' social experiences with students, fellow teachers, and leadership. The sample comprised teachers ($N=740$; 77% women and 23% men) of adolescent students. In an online survey, participants reported their exhaustion and perceptions of student disruptive behaviors, victimization by workplace bullying, and social support from colleagues. A sequential linear regression controlling for gender, school type, and length of teaching experience indicated that exhaustion was positively associated with disruptive student behaviors and victimization by workplace bullying and negatively associated with social support from leadership. Regarding the individual control variables, exhaustion was higher in female teachers and in less experienced teachers. The type of school (elementary vs. secondary) did not play a role in exhaustion. The main findings suggest that to help prevent teacher exhaustion, teacher education should aim to better prepare teachers to handle disruptive student behaviors, and schools should maximize their efforts to reduce workplace bullying and foster leadership support for teachers.

Keywords Disruptive student behaviors · Teacher burnout · Teacher exhaustion · Victimization · Workplace bullying

Extended author information available on the last page of the article

1 Introduction

Teaching is a stressful profession, and teachers worldwide experience exhaustion that has been understood as a core of burnout, a syndrome related to chronic stress at work (Gray et al., 2017; Peeters et al., 2005; Pyhältö et al., 2021). Exhaustion refers to physical and psychological fatigue and loss of energy related to being involved in emotionally demanding work (Kristensen et al., 2005). The multifaceted concept of burnout also includes a dimension of cynicism or depersonalization and a dimension of reduced accomplishment (Maslach et al., 2001). Overall teacher burnout is associated with poor mental health (García-Carmona et al., 2019; Seth, 2016), reduced work engagement (Hakanen et al., 2006), ineffectiveness of teaching (Seth, 2016), and absenteeism and attrition (Aloe et al., 2014; Dupriez et al., 2016; Skaalvik & Skaalvik, 2017). The present study followed the line of research (e.g., Bottiani et al., 2019; Pas et al., 2012) that focuses solely on teacher exhaustion. The reason was that exhaustion is the strongest contributor to burnout syndrome (Grayson & Alvarez, 2008) and a critical facet that bridges burnout syndrome and depression, thus endangering teachers' mental health (Skaalvik & Skaalvik, 2020). The aim of this study was to contribute to understanding the associations between exhaustion and the school social environment, including understudied victimization by workplace bullying, that teachers experience in the most proximal school context.

Despite sustained efforts to reduce teacher burnout, including exhaustion, research continues to demonstrate that these problems are still common. For example, in a study among Finnish elementary school teachers, almost half of the respondents were found to display an increased burnout risk (Pyhältö et al., 2021). A recent meta-analysis by García-Carmona and colleagues (2019) analyzed 49 studies and found that 28% of secondary school teachers suffer from severe burnout. The Czech Republic, the Central European country in the EU, where the present study was conducted, is no exception, with a recent study (Smetackova et al., 2019) indicating that approximately 20% of elementary school teachers experience moderate to serious burnout. No prevalence rates are available for secondary school teachers in the Czech Republic, but burnout has been identified as one of the important sources of diminished work ability among this group of teachers (Hlad'o et al., 2020).

Given the high global prevalence of teacher burnout, much research has been done to examine relevant risk factors (for a review, see Gray et al., 2017). Type of school might play a role as some studies found higher burnout in secondary school teachers (Pyhältö et al., 2021). Regarding teaching experience, the findings are mixed, with some studies finding more burnout in less experienced teachers (Fisher, 2011), others in more experienced teachers (Dias et al., 2021) and some studies resulting in no effect of years of experience (Pas et al., 2012). Furthermore, many studies have found a consistent gender difference, suggesting that burnout is more prevalent among female teachers (Grayson & Alvarez, 2008; Klassen & Chiu, 2010; O'Brennan et al., 2017), but some studies have found no gender difference (Pas et al., 2012).

The key correlates of teacher stress and burnout identified by previous studies include individual characteristics, such as professional self-efficacy beliefs, coping skills (Brouwers & Tomic, 2000; O'Brennan et al., 2017; McCarthy et al., 2009), and resilience (Richards et al., 2016). Other studies have included an examina-

tion of organizational characteristics, involving excessive workload, time pressure (Skaalvik & Skaalvik, 2020), and barriers to professional development (Collie et al., 2020). Finally, a promising line of research has focused on the role of the social environment and demonstrated that the school social environment presents a critical source of teacher exhaustion (e.g., Grayson & Alvarez, 2008; Rodríguez-Mantilla & Fernández-Díaz, 2017; Pyhältö et al., 2021; Richards et al., 2018; Smetackova et al., 2019; Skaalvik & Skaalvik, 2020). Teaching is enacted through everyday social experiences (Pyhältö et al., 2015, 2021) that can involve sources of stress or support and thus increase or decrease exhaustion, an essential aspect of burnout (Collie et al., 2016). Relevant social experiences have been assumed to lie in the social school environment that is most proximal to teachers and includes primarily teacher experiences with colleagues, leadership, and students (Grayson & Alvarez, 2008; Yang et al., 2022). Thus, teacher social experiences with students, fellow teachers, and school leadership can be assumed to make unique contributions to teacher exhaustion.

1.1 Student behaviors and teacher exhaustion

The stress and exhaustion experienced by teachers was found to be associated with teacher perceptions of a lack of positive interactions with students (Rodríguez-Mantilla & Fernández-Díaz, 2017), lower connectedness with students (O'Brennan et al., 2017), and lack of positive peer relations among students (Grayson & Alvarez, 2008). The most consistent links to exhaustion as a core dimension of burnout were teacher perceptions of disruptive student behaviors, such as aggressive or disrespectful behaviors (Aloe et al., 2014; Collie et al., 2020; Frey et al., 2009; Otero-López et al., 2010, 2014; Simões et al., 2019). It should also be noted that teachers who believe that they do not have sufficient skills to meet their students' educational needs and manage their behaviors are more susceptible to stress and burnout (Bottiani et al., 2019; O'Brennan et al., 2017). Disruptive student behaviors have been of high practical concern because they were found to have an indirect effect on intentions to leave the job via diminished well-being (Galand et al., 2007). Similar detrimental effects were documented for teacher perceptions of a lack of academic motivation, such as that the perceptions contributed to subsequent increases in intentions to quit teaching (Skaalvik & Skaalvik, 2020). In sum, the current literature shows that student disruptive behaviors have been considered the main social stressor that increases the demands of teaching and contributes to teacher exhaustion. Other potentially highly relevant social stressors include victimization by workplace bullying (Reddy et al., 2018).

1.2 Victimization by workplace bullying and teacher exhaustion

Although organizational research has thoroughly documented that victimization by workplace bullying is a common adversity with severe negative outcomes, including burnout (Eisele, 2015; Nielsen & Einarsen, 2012; Savicki et al., 2003; Trépanier et al., 2013; Zabrodská et al., 2016), a recent systematic review pointed to a surprising lack of research on associations between workplace bullying and teacher burnout (Reddy et al., 2018). The negative consequences of victimization by workplace bul-

lying on teacher well-being call for further investigation because a safe workplace presents a fundamental prerequisite for occupational health (Nielsen & Einarsen, 2012; Savicki et al., 2003; Trépanier et al., 2013). Victimization by workplace bullying refers to a situation in which one or more employees are repeatedly targeted with aggressive acts at work over a long period of time, typically over 6 or 12 months or longer (Einarsen et al., 2011; Hershcovis, 2011). In contrast to interpersonal conflicts at work, workplace bullying can be distinguished by five characteristics: frequency, negative social acts, a power imbalance between actors and targets, the length of negative behavior and perceived harmful intent (Baillien et al., 2017).

Burnout was found to be more prevalent among teachers who report lower feelings of safety at school (O'Brennan et al., 2017) and among teachers who experience frequent interpersonal conflicts, including conflicts with colleagues, students, and parents (Peditz et al., 2020). Additionally, preservice teachers view collegial negativity as one of the key risks for teacher burnout (Lindqvist et al., 2020). Teachers victimized by workplace bullying were found to experience emotional difficulties (Wilson et al., 2011) and occupational stress (Malik & Björkqvist, 2019). The handful of studies focusing on the link between victimization by workplace bullying and burnout confirmed the link for total burnout score (Fox & Stallworth, 2010) as well as for all the individual burnout dimensions, including exhaustion, depersonalization, and reduced accomplishment (Yang et al., 2022). Although Yang and colleagues (2022) proved the associations when accounting for a composite measure of broadly defined positive school climate, to date, no studies have assessed the relative contribution of victimization by workplace bullying to teacher exhaustion in the context of other specific social experiences in schools.

1.3. Social Support from Colleagues and Teacher Exhaustion.

The quality of social support from fellow teachers and school leadership have been assumed to be influential forces in teachers' lives (e.g., Kallestad & Olweus, 2003; Malinen & Savolainen, 2016). Social support from fellow teachers helps teachers cope with their professional tasks and can thus shape their occupational well-being (Collie et al., 2012; Kinman et al., 2011; Skaalvik & Skaalvik, 2011). Indeed, supportive relations with fellow teachers were found to be associated with lower levels of teacher stress and burnout (Bottiani et al., 2019; Rodríguez-Mantilla & Fernández-Díaz, 2017; Skaalvik & Skaalvik, 2011). Additionally, teacher perceptions of quality school leadership were identified as one of the predictors of reduced exhaustion (Grayson & Alvarez, 2008; O'Brennan et al., 2017; Pas et al., 2012; Rodríguez-Mantilla & Fernández-Díaz, 2017; Skaalvik & Skaalvik, 2020). Interestingly, the literature suggests that to prevent exhaustion, leadership needs to provide not only support to teachers but also a sufficient amount of autonomy (Skaalvik & Skaalvik, 2020). The studies that examined social support as a broader construct (i.e., support received not only from fellow teachers but also from leadership or other groups, such as parents or friends) confirmed that teachers who perceived lower social support reported higher burnout (Fiorelli et al., 2017; Ho, 2016; Kinman et al., 2011; Smetackova et al., 2019; Skaalvik & Skaalvik, 2017), lower well-being and higher professional disengagement (Galand et al., 2007). While the existing literature offers key insights into the issue, studies simultaneously addressing multiple facets of the school social environment are scant (e.g., Rodríguez-Mantilla & Fernández-Díaz, 2017; Skaalvik

& Skaalvik, 2011). A comprehensive examination that includes a whole set of key teacher social experiences in school is warranted.

1.3 The present study

Following the knowledge reviewed above, the present study examined whether teacher exhaustion would be predicted by student disruptive behaviors, victimization by workplace bullying, social support from leadership, and social support from fellow teachers. In the investigation, relevant individual characteristics (gender and teaching experience) and the type of school were controlled for. The study focused on teachers of 6th to 9th grades. Following the educational system in the Czech Republic, it involved primarily elementary schools that provide education to the majority of students in these grades and secondary schools that provide education to a smaller portion of students in these grades. The study also controlled for a potential effect of the type of school. Controlling for these potentially interfering variables allowed a more unbiased assessment of the main effects of interest. The goal of this study was to better inform teacher education and schools about what facets of the school social environment have effects on teacher exhaustion and thus should be targeted in prevention and intervention efforts.

2 Methods

2.1 Participants

The sample consisted of 740 teachers (77.4% females; 22.6% males) with an average age of 45 years ($SD=10$ years, range: 22–67 years). Regarding gender and age, the sample was approximately representative of the population of interest, i.e., 6th–9th grade teachers in the Czech Republic (Maršíková & Jelen, 2019). Elementary (88%) and secondary (12%) schoolteachers participated in the study. Participants from both types of schools taught 6th to 9th graders (i.e., adolescents aged 11 to 16 years). In Czech education, schools that provide education to 6th to 9th graders are typically elementary schools (approx. 90%) and sometimes secondary schools (10%). Following this structure, 118 elementary (91%) and secondary (9%) schools from 14 regions were selected using a clustered stratified sampling design across all regions of the Czech Republic. Participants were most often ethnic Czechs (97%). Some participants reported Slovak (2%) or other (1%) ethnicities.

Of the 740 participants, 24 teachers were excluded because of missing data on the key variables used in the present study. Next, prior to running the main analyses, we screened the data for multivariate outliers. The criterion was the Mahalanobis distance at $p < .001$ (see Finch, 2012). Any case with a Mahalanobis distance greater than $\chi^2(8)=26.124$ was considered a multivariate outlier. Using this criterion, seven cases were identified as multivariate outliers, leaving 709 nonoutlying cases. This reduced data set was used for all analyses.

2.2 Procedure

Data were collected at a single time point using an online survey. All 6th - to 9th-grade teachers at the selected schools were invited to complete an anonymous online survey, and the participation rate reached 38%, which resulted in a sample size of 740 respondents. Online informed consent was a prerequisite for participation. Participants were offered a gift voucher (with a value corresponding to 10 EUR) after they completed the survey. The procedures complied with the ethical guidelines of the authors' institution and the ethical standards of the 1964 Helsinki Declaration and its amendments. The institutional board of the authors' institution that ensures that all projects conducted by the organization meet the highest research and ethical standards approved the project.

2.3 Measures

Teacher exhaustion. Exhaustion was measured using the Burnout scale from the Copenhagen Psychosocial Questionnaire II (COPSOQII; Pejtersen et al., 2010), a well-established standardized instrument for assessing psychosocial factors at work. The study used a previously validated Czech translation of the measure (Zábrodská et al., 2017). The scale focuses on exhaustion as an essential aspect of burnout and consists of four items that ask participants to evaluate how often they had exhaustion-related experiences during the last 4 weeks. Participants responded on a five-point scale ranging from 1 (*Always*) to 5 (*Never/Hardly ever*). The scale included the following items: *How often have you felt worn out? How often have you felt physically exhausted? How often have you felt emotionally exhausted? and How often have you felt tired?* The scores were recorded such that higher values represented higher levels of exhaustion, and the mean of the four items was used as an indicator of teacher exhaustion. The scale demonstrated sufficient internal consistency in our data (ordinal Cronbach's $\alpha=0.93$). CFA indicated an acceptable model fit for the scale ($\chi^2=10.11$, $df=2$, $p<.01$; RMSEA=0.075, 95% CI [0.034; 0.124]; CFI=1.000).

Victimization by workplace bullying. Victimization by workplace bullying was assessed using the Negative Acts Questionnaire-Revised (NAQ-R—Einarsen et al., 2009). The Czech translation of the NAQ-R showed good psychometric properties (Zabrodská & Květon, 2013). The instrument comprises 22 items referring to victimization by workplace bullying. The bullying included work-related bullying (behaviors that are directed at the target's professional role and his or her ability to conduct their work proficiently, e.g., *Excessive monitoring of your work*), person-related bullying (behaviors predominantly demeaning for the target personally, e.g., *Hints or signals from others that you should quit your job*), and physically intimidating bullying (behaviors of a more physical nature, e.g., *Intimidating behaviors, such as finger pointing, invasion of personal space, shoving, blocking your way*). The respondents were asked how often they had been exposed to the behavior during the last six months, with the response categories being 1 (*Never*), 2 (*Now and then*), 3 (*Monthly*), 4 (*Weekly*), and 5 (*Daily*). The mean of the 22 items was used as an indicator of victimization by workplace bullying. The internal consistency of the questionnaire was high (ordinal Cronbach's $\alpha=0.94$). CFA (diagonally weighted

least squares estimator) indicated a good model fit for the scale ($\chi^2=461.28$, $df=189$, $p<.01$; RMSEA=0.045, 95% CI [0.040; 0.050]; CFI=0.984).

Student disruptive behaviors. Teachers reported their perceptions of student disruptive behaviors using the student disruptive behaviors scale by Frey and colleagues (2009). For the purpose of this study, one item was dropped from the original scale because the item did not refer to the misbehavior of students. The resulting 6-item version of the scale included statements such as *There are often fights at school and its surroundings*, *Students spend a lot of class time just talking to each other*, or *Students do not do what teachers tell them*. The teachers indicated their responses on a 6-point Likert scale ranging from 1 (*Does not apply at all*) to 6 (*Applies exactly*). The total scale score was computed as the mean of all the items. The scale had good internal consistency (ordinal Cronbach's $\alpha=0.85$). CFA (diagonally weighted least squares estimator) indicated a good model fit for student disruptive behaviors ($\chi^2=27.99$, $df=8$, $p<.01$; RMSEA=0.059, 95% CI [0.036; 0.084]; CFI=0.997) when the additional correlation between item residuals was included (due to content similarity between two of the items).

Social support from colleagues. The perceived quality of social support from colleagues was assessed using two main subscales retrieved from the scale developed by Kallestad and Olweus (2003) and revised by Kallestad (2010). The scale was translated into Czech by Kollerová and colleagues (2021). The subscales included in the present study were social support from leadership (4 items; e.g., *The collaboration between the teachers and the leadership group is generally good*; *The leadership group generally supports teachers' suggestions for changes in the school*; ordinal Cronbach's $\alpha=0.92$) and social support from fellow teachers (6 items; e.g., *Teachers at this school are helpful toward each other*; *Teachers at this school generally agree on working and teaching methods*; ordinal Cronbach's $\alpha=0.89$). A 6-point Likert scale ranging from 1 (*Does not apply at all*) to 6 (*Applies exactly*) was used, and a mean of the scale items was computed for each of the two scales. CFA (diagonally weighted least squares estimator) indicated an acceptable model fit for social support from colleagues ($\chi^2=132.52$, $df=34$, $p<.01$; RMSEA=0.064, 95% CI [0.052; 0.075]; CFI=0.997).

Teaching experience. Teachers reported the length of their teaching experience in response to the question: *How many years have you been teaching?* The number of years reported was used as the teaching experience score.

Type of school. Teachers indicated whether they worked at an elementary or a secondary school. The type of school score was 0 for elementary schools and 1 for secondary schools.

2.4 Data analysis

As a starting point, the psychometric characteristics of all instruments were evaluated. We assessed internal consistency (using ordinal Cronbach's α) and factorial structure (using ordinal confirmatory factor analysis with DWLS estimation and the following criteria for acceptable fit (CFI>0.90 and RMSEA<0.08) and for good fit (CFI>0.95 and RMSEA<0.06) suggested by Hu and Bentler (1998). Next, we conducted a preliminary analysis of the relatedness of the clustered data to decide whether

Table 1 Descriptive statistics of the variables

	<i>M</i>	<i>SD</i>
Teaching experience (years)	18.68	10.82
Victimization by workplace bullying	1.17	0.21
Disruptive student behaviors	2.60	0.72
Social support from leadership	4.52	0.88
Social support from fellow teachers	4.59	0.68
Teacher exhaustion	2.62	0.78

Note. Dimensional units: 1 (never) to 5 (daily) for victimization by workplace bullying, 1 (*does not apply at all*) to 6 (*applies exactly*) for disruptive student behaviors and social support indicators, and 1 (never) to 5 (never/hardly ever) for teacher exhaustion

Table 2 Bivariate relationships between variables

	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Gender	-.03	.11**	-.05	-.07	-.04	-.01	.14**
(2) Type of school	-	-.07	.03	-.05	-.18**	-.08*	-.03
(3) Teaching experience		-	-.03	-.19**	.08*	.10**	-.16**
(4) Victimization by workplace bullying			-	.23**	-.41**	-.37**	.28**
(5) Disruptive student behaviors				-	-.25**	-.30**	.26**
(6) Social support from leadership					-	.61**	-.26**
(7) Social support from fellow teachers						-	-.25**
(8) Teacher exhaustion							-

Note. ** $p < .01$, * $p < .05$. Gender (0=male; 1=female)

a multilevel analytical approach was needed for the main analysis. A multilevel analytical approach was not adopted because intraclass correlations of teacher exhaustion within clusters defined by either school or region ($ICC_{\text{school}} = 0.06$ and $ICC_{\text{region}} = 0.02$) suggested that the proportions of overall variance that were explained by cluster memberships could be considered low (Tabachnick & Fidell, 2007) and that design effects ($deff_{\text{school}} = 1.32$; $deff_{\text{region}} = 1.84$) were below the threshold value of 2 (Muthen & Satorra, 1995). Finally, descriptive statistics were computed, and the main analysis employed sequential linear regression analysis of teacher exhaustion. In Step 1, only control variables (gender, teaching experience, and type of school) were entered as predictors. In Step 2, negative social experiences (student disruptive behaviors and victimization by workplace bullying) were added to the model, and in Step 3, the model was completed by adding social support from colleagues (social support from fellow teachers and social support from leadership).

3 Results

3.1 Descriptive statistics

First, we inspected descriptive statistics (Table 1) and the bivariate correlations between the variables (Table 2). Teacher exhaustion, the main variable of interest, showed intercorrelations with all other variables except type of school. It had positive relationships with female gender, victimization by workplace bullying and stu-

dent disruptive behaviors, and it had negative relationships with teaching experience, social support from leadership and social support from fellow teachers.

3.2 Prediction of teacher exhaustion

Next, we conducted the main analysis. Sequential regression analysis was conducted to examine whether negative social experiences (student disruptive behaviors and victimization by workplace bullying) and social support from colleagues (social support from leadership and social support from fellow teachers) have significant effects on teacher exhaustion above and beyond the effects of demographic characteristics. The analysis comprised three steps. In Step 1, we entered gender, teaching experience, and type of school as control variables. In Step 2, we simultaneously entered student disruptive behaviors and victimization by workplace bullying. In Step 3, we simultaneously entered social support from leadership and social support from fellow teachers (the results are shown in Table 3).

The analysis indicated that the demographic variables entered in the first step explained 5.0% of the variance in exhaustion, with women showing a higher level of exhaustion than men and the length of teaching experience being negatively related to exhaustion. In the second step, adding student disruptive behaviors and victimization by workplace bullying increased the explained variance by 11.1%. Both of these variables had the expected significant positive effects ($\beta=0.19$ and $\beta=0.24$, respectively) on exhaustion. In the third step, adding social support from fellow teachers and social support from leadership resulted in a significant increase in the explained variance. However, the increase was relatively low (1.5%). Both facets of social support from colleagues examined showed the expected negative relationship to exhaus-

Table 3 Hierarchical regression analysis predicting teacher exhaustion

Predictor	Step 1 β [95% CI]	Step 2 β [95% CI]	Step 3 β [95% CI]
Gender	0.37** [0.19, 0.54]	0.42** [0.25, 0.58]	0.39** [0.23, 0.55]
Type of school	-0.12 [-0.33, -0.10]	-0.10 [-0.30, 0.10]	-0.17 [-0.37, 0.04]
Teaching experience	-0.18** [-0.25, -0.10]	-0.14** [-0.21, -0.07]	-0.13** [-0.20, -0.07]
Victimization by workplace bullying		0.24** [0.17, 0.31]	0.18** [0.11, 0.26]
Disruptive student behaviors		0.19** [0.12, 0.26]	0.16** [0.09, 0.24]
Social support from leadership			-0.10* [-0.19, -0.01]
Social support from fellow teachers			-0.06 [-0.15, 0.03]
R^2	0.050**	0.162**	0.177**
ΔR^2		0.111**	0.015**

Note. ** $p < .01$, * $p < .05$; Gender (0=male; 1=female). The outcome variable and variables entered in steps 2 and 3 were z-standardized

tion ($\beta = -0.06$ and $\beta = -0.10$, respectively), but only the relationship with social support from leadership was statistically significant.

4 Discussion

This study investigated whether experiencing disruptive student behaviors, victimization by workplace bullying, and a lack of social support from colleagues (leadership or fellow teachers) contribute to teacher exhaustion. The most important finding of the present study is that disruptive behaviors and victimization by workplace bullying had comparable effects on teacher exhaustion and together explained a non-negligible portion (11.1%) of its variance. This is an important outcome that expands current knowledge because prior research has not fully uncovered the important role of victimization by workplace bullying in teacher exhaustion.

The demographic variables that the analyses controlled for explained 5.0% of the variance in exhaustion. Consistent with gender differences found in other countries (Grayson & Alvarez, 2008; Klassen & Chiu, 2010; O'Brennan et al., 2017), female teachers were more likely to experience exhaustion. Similar to the cited research, the present study only registered gender dichotomously, so it remains a question of what the level of exhaustion is in teachers who identify with other than female or male gender. The existing research was inconclusive regarding the role of teaching experience, with some studies finding no effects (Grayson & Alvarez, 2008; Pas et al., 2012) and other studies finding higher burnout in less experienced teachers (Fisher et al., 2011; Pyhältö et al., 2021). The gained results complied with the latter outcome by showing that less experienced teachers were more vulnerable to exhaustion. No association between exhaustion and type of school was observed. The sample included a representative portion of elementary and secondary schools providing education to early and middle adolescents in the Czech Republic, and the teachers from elementary and secondary schools reported similar levels of exhaustion.

4.1 The effects of student disruptive behaviors and victimization by workplace bullying

Confirming our expectations, the results showed that teachers who perceived higher levels of disruptive behaviors of students in their schools were more likely to report exhaustion. This outcome corresponds with the finding that problematic student behaviors are associated with lower work-related well-being (Collie et al., 2020) and increase teacher stress and exhaustion over time (Bottiani et al., 2019). The present study adds to this line of literature by documenting the link between student disruptive behaviors and teacher exhaustion. Given that the reductions in well-being associated with student negative behaviors fuel intentions to leave teaching (Galand et al., 2007), it is critical to find ways to better support teachers in dealing with student misbehavior. Bottiani and colleagues (2019) emphasize that teacher self-efficacy in the area of classroom management can mitigate the consequences of disruptive student behaviors on teacher stress and teacher exhaustion. Effective measures should address how to prevent and handle unacceptable student behaviors (Skaalvik

& Skaalvik, 2011) and how to promote desirable student behaviors and closeness in teacher-student relations (Simões et al., 2019). Importantly, teachers as individuals can contribute to diminishing disruptive behaviors of students but cannot control them. Their efforts need to be supported by a favorable school climate, and students themselves and their parents should take a responsible and active approach to this issue (Grayson & Alvarez, 2008).

The results showed that disruptive behaviors of students are not the only negative social experience that plays an important role in teacher exhaustion. As hypothesized, the experience of being a target of workplace bullying presented another social stressor that was positively associated with teacher exhaustion. This finding mirrors the outcomes of organizational research documenting that workplace bullying presents a dangerous problem that depletes the psychological resources of victimized employees (Eisele, 2015; Malik & Björkqvist, 2019; Nielsen & Einarsen, 2012; Savicki et al., 2003; Trépanier et al., 2013). Importantly, the effects found in the present study for student disruptive behaviors and for victimization by workplace bullying were of a comparable size. The severe consequences of workplace bullying have been well documented in many organizations (Nielsen & Einarsen, 2012; Savicki et al., 2003; Trépanier et al., 2013). Our study confirmed the link between victimization by workplace bullying and exhaustion, which has thus far been documented only by a handful of studies (Fox & Stallworth, 2010; Yang et al., 2022), and showed that the strength of this association is comparable to the strength of the link between exhaustion and student disruptive behaviors, which has traditionally been considered the main social stressor compromising teachers' well-being (e.g., Bottiani et al., 2019; Grayson, & Alvarez, 2008). While there is extant research on the latter issue, the ways in which victimization by workplace bullying may fuel teacher exhaustion deserve more research attention.

4.2 The effects of social support from colleagues

Our hypotheses regarding the effects of social support from colleagues at school were only partially confirmed. We focused on two critical facets of quality social support from colleagues: social support from leadership and social support from fellow teachers (Kallestad & Olweus, 2003). While no significant effects were found for social support from fellow teachers, social support from leadership proved to have the expected effect on teacher exhaustion. It is difficult to interpret why social support from teachers did not play a unique role in teacher exhaustion. This result was not expected because supportive relations with fellow teachers are assumed to support teachers and were previously found to be associated with lower levels of teacher stress and burnout, including emotional exhaustion (Bottiani et al., 2019; Pas et al., 2012; Richards et al., 2018; Rodríguez-Mantilla & Fernández-Díaz, 2017). One possible explanation could be that teachers in the Czech Republic work more individualistically and are therefore less likely to rely on collaborative collegial efforts than teachers in other countries with a longer tradition of group collaborative efforts in education. Another possible explanation could be a suppression effect resulting from differential effects of social support from fellow teachers on various groups of teachers, with many teachers being uplifted by the support, but some teachers possibly

being concerned about their autonomy or involved in negative emotional contagion. It should be noted that this study only traced a single facet of burnout, and thus, it is unclear whether social support from fellow teachers would have predicted the other burnout dimensions. In sum, these findings suggest that the practical implications of the examined facets of social support from colleagues require future research.

The negative association between social support from leadership and exhaustion in this study is consistent with the knowledge that teacher perceptions of support from leadership relate to teacher burnout (Grayson & Alvarez, 2008; O'Brennan et al., 2017; Rodríguez-Mantilla & Fernández-Díaz, 2017; Skaalvik & Skaalvik, 2020). This association confirms the notion that if school leadership adopts a supportive approach, it can generate not only instrumental but also psychological benefits for teachers. High-quality social support from teachers and leadership may represent a component of nurturing the school environment that protects teachers from depleting their energy and experiencing burnout (Richards et al., 2018). However, it should be noted that social support from colleagues explained only 1.5% of the variance in exhaustion in the present study, which implies that the practical relevance of the identified association between social support from leadership and exhaustion is limited. Future research could reexamine the role of social support from leadership, possibly addressing more specific aspects of the support, such as support in handling the risk factors for exhaustion, such as student disruptive behaviors or workplace bullying.

4.3 Limitations and directions for future research

The present study had several limitations. First, the study predicted only exhaustion without taking into account the other burnout dimensions. Because school environment factors often show differential links with individual burnout dimensions (e.g., Grayson & Alvarez, 2008; Skaalvik & Skaalvik, 2020) and the burnout dimensions are interconnected, it would have been useful to register all the dimensions and allow for multiple dependent variables in a single model. Second, as only 38% of the invited teachers agreed to participate in the study, self-selection bias could limit the representativeness of our sample. Although the sample was representative of the population of Czech teachers of early and middle adolescents in terms of gender and age, we cannot rule out the possibility that the sample slightly overrepresented teachers interested in the topic of peer relations among students because this topic was presented to teachers as the focus of the online survey. The third limitation of the study was that the study employed a cross-sectional design, so it cannot provide any evidence regarding the directionality of the associations found. The interpretations of the directionality suggested in this study rely on previous longitudinal studies (e.g., Bottiani et al., 2019; Skaalvik & Skaalvik, 2020). Future research could help answer the question regarding to what extent teacher exhaustion may affect teacher perceptions of their social experiences (Galand et al., 2007). Finally, although the study assessed a relatively broad area of the social environment in school, it did not include relevant individual characteristics, such as proactive coping or professional self-efficacy, which were previously found to moderate the links between social stressors and exhaustion (Bottiani et al., 2019; Pyhältö et al., 2021). Future investigations that also

include these individual characteristics could further expand the understanding of the social context of teacher exhaustion.

4.4 Practical implications

The findings underscore the need for teacher education to better support teachers in their coping and classroom management skills to better handle student disruptive behaviors. For example, Pyhältö and colleagues (2021) indicated that teachers can reduce exhaustion with the use of proactive coping strategies that focus on building resources to handle stress. In addition, teachers seem to benefit from education targeted at effective classroom management that can empower them to better handle student misbehavior (Grayson & Alvarez, 2008). Next, the results suggest that schools should maximize their prevention and intervention efforts to reduce workplace bullying (for an overview, see Vartia & Leka, 2011). Each school should implement a workplace bullying policy, i.e., a school statement of intent and processes related to bullying prevention and intervention (Rayner & Lewis, 2011), and aim to improve the availability of counseling and therapy to victimized teachers at schools (Vartia & Leka, 2011). Finally, the findings provide further support for the already well-established notion that schools should prioritize quality leadership because it is associated with teachers' improved well-being (e.g., Pas et al., 2012; Skaalvik & Skaalvik, 2020).

5 Conclusion

This study adds to the current literature on the important role of the school social environment in teacher exhaustion. Using a sample of elementary and secondary school teachers retrieved from a nationally representative sample indicated that to prevent teacher exhaustion, the most proximal social context that includes students and colleagues should be taken into account. If we want to support teachers in their highly stressful jobs, we need to primarily address the issue of disruptive behaviors of students and the thus far largely overlooked problem of bullying among school professionals. In addition to these efforts, quality social support from the side of the leadership should be systematically fostered because it can make a difference in teacher exhaustion.

Funding This output was supported by the NPO “Systemic Risk Institute” number LX22NPO5101, funded by European Union – Next Generation EU (Ministry of Education, Youth and Sports of the Czech Republic, NPO: EXCELES) and by the Czech Science Foundation under Grant Number 18-09443 S.

Data Availability Data will be made available on request.

Code Availability Code will be made available on request.

Declarations

Conflicts of interest/Competing interests The authors declare that they have not conflict of interest/competing interests.

Ethics approval The procedures complied with the ethical guidelines of the authors' institution and the ethical standards of the 1964 Helsinki Declaration and its amendments. The institutional board of the authors' institution approved the project.

Consent to participate All participants expressed their consent to participate using an online informed consent.

Consent for publication All authors agreed with the content of the manuscript and all gave explicit consent to submit it to the Social Psychology of Education. As well, they obtained consent from the responsible authorities at the institution where the work has been carried out, before the work was submitted.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Aloe, A. M., Shisler, S. M., Norris, B. D., Nickerson, A. B., & Rinker, T. W. (2014). A multivariate meta-analysis of student misbehavior and teacher burnout. *Educational Research Review*, *12*, 30–44. <https://doi.org/10.1016/j.edurev.2014.05.003>.
- Baillien, E., Escartin, J., Gross, C., & Zapf, D. (2017). Towards a conceptual and empirical differentiation between workplace bullying and interpersonal conflict. *European Journal of Work and Organizational Psychology*, *26*(6), 870–881. <https://doi.org/10.1080/1359432X.2017.1385601>.
- Bottiani, J. H., Duran, C. A. K., Pas, E. T., & Bradshaw, C. P. (2019). Teacher stress and burnout in urban middle schools: Associations with job demands, resources, and effective classroom practices. *Journal of School Psychology*, *77*, 36–51. <https://doi.org/10.1016/j.jsp.2019.10.002>.
- Brouwers, A., & Tomic, W. (2000). A longitudinal study of teacher burnout and perceived self-efficacy in classroom management. *Teaching and Teacher Education*, *16*(2), 239–253. [https://doi.org/10.1016/S0742-051X\(99\)00057-8](https://doi.org/10.1016/S0742-051X(99)00057-8).
- Collie, R. J., Shapka, J. D., & Perry, N. E. (2012). School climate and social-emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. *Journal of Educational Psychology*, *104*(4), 1189–1204. <https://doi.org/10.1037/a0029356>.
- Collie, R. J., Shapka, J. D., Perry, N. E., & Martin, A. J. (2016). Teachers' psychological functioning in the workplace: Exploring the roles of contextual beliefs, need satisfaction, and personal characteristics. *Journal of Educational Psychology*, *108*(6), 788–799. <https://doi.org/10.1037/edu0000088>.
- Collie, R. J., Malmberg, L. E., Martin, A. J., Sammons, P., & Morin, A. J. S. (2020). A multilevel person-centered examination of teachers' workplace demands and resources: Links with work-related well-being. *Frontiers in Psychology*, *11*. <https://doi.org/10.3389/fpsyg.2020.00626>.
- Dias, P. C., Peixoto, R., & Cadime, I. (2021). Associations between burnout and personal and professional characteristics: A study of Portuguese teachers. *Social Psychology of Education*, *24*(4), 965–984. <https://doi.org/10.1007/s11218-021-09640-z>.
- Dupriez, V., Delvaux, B., & Lothaire, S. (2016). Teacher shortage and attrition: Why do they leave? *British Educational Research Journal*, *42*(1), 21–39. <https://doi.org/10.1002/berj.3193>.

- Einarsen, S., Hoel, H., & Notelaers, G. (2009). Measuring exposure to bullying and harassment at work: Validity, factor structure and psychometric properties of the Negative Acts Questionnaire-Revised. *Work and Stress*, 23(1), 24–44. <https://doi.org/10.1080/02678370902815673>.
- Einarsen, S. E., Hoel, H., Zapf, D., & Cooper, C. L. (2011). The concept of bullying at work: The European tradition. In S. Einarsen, H. Hoel, D. Zapf, & C. L. Cooper (Eds.), *Bullying and harassment in the workplace: Developments in theory, research, and practice* (2nd ed., pp. 3–39). Taylor and Francis.
- Eisele, P. (2015). The relationships between psychological work climate and general well-being: Testing a model with workplace bullying and burnout as mediating variables. *Baltic Journal of Psychology*, 11(1/2), 111–126.
- Finch, W. H. (2012). Distribution of variables by method of outlier detection. *Frontiers in Psychology*, 3(211), <https://doi.org/10.3389/fpsyg.2012.00211>.
- Fiorilli, C., Albanese, O., Gabola, P., & Pepe, A. (2017). Teachers' emotional competence and social support: Assessing the mediating role of teacher burnout. *Scandinavian Journal of Educational Research*, 61(2), 127–138. <https://doi.org/10.1080/00313831.2015.1119722>.
- Fisher, M. H. (2011). Factors influencing stress burnout, and retention of secondary teachers. *Current Issues in Education*, 14, 1–37. Retrieved from <http://cie.asu.edu/>
- Fox, S., & Stallworth, L. E. (2010). The battered apple: An application of stressor-emotion-control/support theory to teachers' experience of violence and bullying. *Human Relations*, 63(7), 927–954. <https://doi.org/10.1177/0018726709349518>.
- Frey, A., Ruchkin, V., Martin, A., & Schwab-Stone, M. (2009). Adolescents in transition: School and family characteristics in the development of violent behaviors entering high school. *Child Psychiatry and Human Development*, 40(1), 1–13. <https://doi.org/10.1007/s10578-008-0105-x>.
- Galand, B., Lecocq, C., & Philippot, P. (2007). School violence and teacher professional disengagement. *British Journal of Educational Psychology*, 77(2), 465–477. <https://doi.org/10.1348/00070906X114571>.
- García-Carmona, M., Marín, M. D., & Aguayo, R. (2019). Burnout syndrome in secondary school teachers: A systematic review and meta-analysis. *Social Psychology of Education*, 22(1), 189–208. <https://doi.org/10.1007/s11218-018-9471-9>.
- Gray, C., Wilcox, G., & Nordstokke, D. (2017). Teacher mental health, school climate, inclusive education and student learning: A review. *Canadian Psychology/Psychologie Canadienne*, 58(3), 203–210. <https://doi.org/10.1037/cap0000117>.
- Grayson, J. L., & Alvarez, H. K. (2008). School climate factors relating to teacher burnout: A mediator model. *Teaching and Teacher Education*, 24(5), 1349–1363. <https://doi.org/10.1016/j.tate.2007.06.005>.
- Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology*, 43(6), 495–513. <https://doi.org/10.1016/j.jsp.2005.11.001>.
- Herscovis, M. S. (2011). Incivility, social undermining, bullying... oh my!?: A call to reconcile constructs within workplace aggression research. *Journal of Organizational Behavior*, 32(3), 499–519. <https://doi.org/10.1002/job.689>.
- Hlad'o, P., Dosedlová, J., Harvánková, K., Novotný, P., Gottfried, J., Rečka, K., Petrovová, M., Pokorný, B., & Štorová, I. (2020). Work ability among upper-secondary school teachers: Examining the role of burnout, sense of coherence, and work-related and lifestyle factors. *International Journal of Environmental Research and Public Health*, 17(24), 9185. <https://doi.org/10.3390/ijerph17249185>.
- Ho, S. K. (2016). Relationships among humour, self-esteem, and social support to burnout in school teachers. *Social Psychology of Education*, 19(1), 41–59. <https://doi.org/10.1007/s11218-015-9309-7>.
- Hu, L., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, 3(4), 424–453. <https://doi.org/10.1037/1082-989x.3.4.424>.
- Kallestad, J. H. (2010). Changes in school climate in a long-term perspective. *Scandinavian Journal of Educational Research*, 54(1), 1–14. <https://doi.org/10.1080/00313830903488429>.
- Kallestad, J. H., & Olweus, D. (2003). Predicting teachers' and schools' implementation of the Olweus Bullying Prevention Program: A multilevel study. *Prevention and Treatment*, 6(1), <https://doi.org/10.1037/1522-3736.6.1.621a>.
- Kinman, G., Wray, S., & Strange, C. (2011). Emotional labour, burnout, and job satisfaction in UK teachers: The role of workplace social support. *Educational Psychology*, 31(7), 843–856. <https://doi.org/10.1080/01443410.2011.608650>.

- Klassen, R. M., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of Educational Psychology, 102*(3), 741–756. <https://doi.org/10.1037/a0019237>.
- Kollerová, L., Soukup, P., Strohmeier, D., & Caravita, S. C. S. (2021). Teachers' active responses to bullying: Does the school collegial climate make a difference? *European Journal of Developmental Psychology, 18*(6), 912–927. <https://doi.org/10.1080/17405629.2020.1865145>
- Kristensen, T. S., Borritz, M., Villadsen, E., & Christensen, K. B. (2005). The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. *Work and Stress, 19*(3), 192–207. <https://doi.org/10.1080/02678370500297720>.
- Lindqvist, H., Weurlander, M., Wernerson, A., & Thornberg, R. (2020). Talk of teacher burnout among student teachers. *Scandinavian Journal of Educational Research, 65*(7), 1266–1278. <https://doi.org/10.1080/00313831.2020.1816576>.
- Malik, N. A., & Björkqvist, K. (2019). Workplace bullying and occupational stress among university teachers: Mediating and moderating factors. *Europe's Journal of Psychology, 15*(2), 240–259. <https://doi.org/10.5964/ejop.v15i2.1611>.
- Malinen, O. P., & Savolainen, H. (2016). The effect of perceived school climate and teacher efficacy in behavior management on job satisfaction and burnout: A longitudinal study. *Teaching and Teacher Education, 60*, 144–152. <https://doi.org/10.1016/j.tate.2016.08.012>.
- Maršiková, M., & Jelen, V. (2019). *Hlavní výstupy z Mimořádného šetření [Main results of the Special investigation]*. Ministry of Education, Youth and Sport of the Czech Republic. <https://www.msmt.cz/file/50371/>
- Maslach, C., & Leiter, M. P. (2008). Early predictors of job burnout and engagement. *Journal of Applied Psychology, 93*(3), 498–512. <https://doi.org/10.1037/0021-9010.93.3.498>.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology, 52*, 397–422. <https://doi.org/10.1146/annurev.psych.52.1.397>.
- McCarthy, C. J., Lambert, R. C., O'Donnell, M., & Melendres, L. T. (2009). The relation of elementary teachers' experience, stress, and coping resources to burnout symptoms. *Elementary School Journal, 109*(3), 282–300. <https://doi.org/10.1086/592308>.
- Muthen, B. O., & Satorra, A. (1995). Complex sample data in structural equation modeling. *Sociological Methodology, 25*, 267–316. <https://doi.org/10.2307/271070>.
- Nielsen, M. B., & Einarsen, S. (2012). Outcomes of exposure to workplace bullying: A meta-analytic review. *Work and Stress, 26*(4), 309–332. <https://doi.org/10.1080/02678373.2012.734709>.
- O'Brennan, L., Pas, E., & Bradshaw, C. (2017). Multilevel examination of burnout among high school staff: Importance of staff and school factors. *School Psychology Review, 46*(2), 165–176. <https://doi.org/10.17105/SPR-2015-0019.V46-2>.
- Otero-López, J. M., Santiago, M. J., Castro, C., & Villardefrancos, E. (2010). Stressors rendering school coexistence difficult, personal variables and burnout: Towards an explanatory model. *European Journal of Education and Psychology, 3*(2), 299–316. <https://doi.org/10.30552/ejep.v3i2.43>.
- Otero-López, J. M., Villardefrancos, E., Castro, C., & Santiago, M. J. (2014). Stress, positive personal variables and burnout: A path analytic approach. *European Journal of Education and Psychology, 7*(2), 95–106. <https://doi.org/10.30552/ejep.v7i2.105>.
- Pas, E. T., Bradshaw, C. P., & Hershfeldt, P. A. (2012). Teacher- and school-level predictors of teacher efficacy and burnout: Identifying potential areas for support. *Journal of School Psychology, 50*(1), 129–145. <https://doi.org/10.1016/j.jsp.2011.07.003>.
- Pedditz, M. L., Nicotra, E. F., Nonnis, M., Grassi, P., & Cortese, C. G. (2020). Teacher stress and burnout: A study using MIMIC modelling. *Electronic Journal of Applied Statistical Analysis, 13*(3), 739–757. <https://doi.org/10.1285/i20705948v13n3p739>.
- Peeters, M. C. W., Montgomery, A. J., Bakker, A. B., & Schaufeli, W. B. (2005). Balancing work and home: How job and home demands are related to burnout. *International Journal of Stress Management, 12*(1), 43–61. <https://doi.org/10.1037/1072-5245.12.1.43>.
- Pejtersen, J. H., Kristensen, T. S., Borg, V., & Bjorner, J. B. (2010). The second version of the Copenhagen Psychosocial Questionnaire. *Scandinavian Journal of Public Health, 38*(Suppl 3), 8–24. <https://doi.org/10.1177/1403494809349858>.
- Pyhältö, K., Pietarinen, K., & Soini, T. (2015). Teachers' professional agency and learning – from adaption to active modification in the teacher community. *Teachers and Teaching, 21*(7), 811–830. <https://doi.org/10.1080/13540602.2014.995483>.

- Pyhältö, K., Pietarinen, J., Haverinen, K., Tikkanen, L., & Soini, T. (2021). Teacher burnout profiles and proactive strategies. *European Journal of Psychology of Education, 36*(1), 219–242. <https://doi.org/10.1007/s10212-020-00465-6>.
- Rayner, C., & Lewis, D. (2011). Managing workplace bullying: The role of policies. In S. Einarsen, H. Hoel, D. Zapf, & C. L. Cooper (Eds.), *Bullying and harassment in the workplace: Developments in theory, research, and practice* (2nd ed., pp. 327–340). London: Taylor & Francis.
- Reddy, L. A., Espelage, D. L., Anderman, E. M., Kanrich, J. B., & McMahon, S. D. (2018). Addressing violence against educators through measurement and research. *Aggression and Violent Behavior, 42*(9–10), 9–28. <https://doi.org/10.1016/j.avb.2018.06.006>.
- Richards, K. A. R., Hemphill, M. A., & Templin, T. J. (2018). Personal and contextual factors related to teachers' experience with stress and burnout. *Teachers and Teaching, 24*(7), 768–787. <https://doi.org/10.1080/13540602.2018.1476337>.
- Richards, K. A. R., Levesque-Bristol, C., Templin, T. J., & Graber, K. C. (2016). The impact of resilience on role stressors and burnout in elementary and secondary teachers. *Social Psychology of Education, 19*(3), 511–536. <https://doi.org/10.1007/s11218-016-9346-x>.
- Rodríguez-Mantilla, J. M., & Fernández-Díaz, M. J. (2017). The effect of interpersonal relationships on burnout syndrome in secondary education teachers. *Psicothema, 29*(3), 370–377. <https://doi.org/10.7334/psicothema2016.309>.
- Savicki, V., Cooley, E., & Gjesvold, J. (2003). Harassment as a predictor of job burnout in correctional officers. *Criminal Justice and Behavior, 30*(5), 602–619. <https://doi.org/10.1177/0093854803254494>.
- Seth, A. (2016). Study of mental health and burnout in relation to teacher effectiveness among secondary school teachers. *Indian Journal of Health and Wellbeing, 7*(7), 769–773.
- Simões, F., & Calheiros, M. M. (2019). A matter of teaching and relationships: Determinants of teaching style, interpersonal resources and teacher burnout. *Social Psychology of Education 22*(4), 991–1013. <https://doi.org/10.1007/s11218-019-09501-w>.
- Skaalvik, E. M., & Skaalvik, S. (2011). Teacher job satisfaction and motivation to leave the teaching profession: Relations with school context, feeling of belonging, and emotional exhaustion. *Teaching and Teacher Education, 27*(6), 1029–1038. <https://doi.org/10.1016/j.tate.2011.04.001>.
- Skaalvik, E. M., & Skaalvik, S. (2017). Still motivated to teach? A study of school context variables, stress and job satisfaction among teachers in senior high school. *Social Psychology of Education, 20*(1), 15–37. <https://doi.org/10.1007/s11218-016-9363-9>.
- Skaalvik, E. M., & Skaalvik, S. (2020). Teacher burnout: Relations between dimensions of burnout, perceived school context, job satisfaction and motivation for teaching. A longitudinal study. *Teachers and Teaching, 26*(7–8), 602–616. <https://doi.org/10.1080/13540602.2021.1913404>.
- Smetackova, I., Viktorova, I., Martanova, P., Pachova, V., Francova, A., V., & Stech, S. (2019). Teachers between job satisfaction and burnout syndrome: What makes difference in Czech elementary schools. *Frontiers in Psychology, 10*. <https://doi.org/10.3389/fpsyg.2019.02287>
- Trépanier, S., Fernet, C., & Austin, S. (2013). Workplace bullying and psychological health at work: The mediating role of satisfaction of needs for autonomy, competence and relatedness. *Work and Stress, 27*(2), 123–140. <https://doi.org/10.1080/02678373.2013.782158>.
- UIV (2018). *Statistická ročenka školství 2010* [Statistical Yearbook on Education 2018]. Retrieved from the Institute for Information on Education website <http://www.uiv.cz>
- Vartia, M., & Leka, S. (2011). Interventions for the prevention and management of bullying at work. In S. Einarsen, H. Hoel, D. Zapf, & C. L. Cooper (Eds.), *Bullying and harassment in the workplace: Developments in theory, research, and practice* (2nd ed., pp. 359–380). London: Taylor & Francis.
- Wilson, C. M., Douglas, K. S., & Lyon, D. R. (2011). Violence against Teachers: Prevalence and Consequences. *Journal of Interpersonal Violence, 26*(12), 2353–2371. <https://doi.org/10.1177/0886260510383027>.
- Yang, C., Chan, M., Lin, X., & Chen, C. (2022). Teacher victimization and teacher burnout: Multilevel moderating role of school climate in a large-scale survey study. *Journal of School Violence, 21*(2), 206–221. <https://doi.org/10.1080/15388220.2022.2041023>.
- Zabrodská, K., & Květon, P. (2013). Prevalence and forms of workplace bullying among university employees. *Employee Responsibilities and Rights Journal, 25*(2), 89–108. <https://doi.org/10.1007/s10672-012-9210-x>
- Zabrodská, K., Ellwood, C., Zaeemdar, S., & Mudrák, J. (2016). Workplace bullying as sensemaking: An analysis of target and actor perspectives on initial hostile interactions. *Culture and Organization, 22*, 136–157. <https://doi.org/10.1080/14759551.2014.894514>

Zábrodská, K., Mudrák, J., Šolcová, I., Květon, P., Blatný, M., & Machovcová, K. (2017). Burnout among university faculty: The central role of work–family conflict. *Educational Psychology, 38*(6), 800-819. <https://doi.org/10.1080/01443410.2017.1340590>

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Springer Nature or its licensor (e.g. a society or other partner) holds exclusive rights to this article under a publishing agreement with the author(s) or other rightsholder(s); author self-archiving of the accepted manuscript version of this article is solely governed by the terms of such publishing agreement and applicable law.

Authors and Affiliations

Lenka Kollerová¹ · Petr Květon¹ · Kateřina Zábrodská¹ · Pavlína Janošová¹

✉ Lenka Kollerová
kollerova@praha.psu.cas.cz

Petr Květon
kveton@psu.cas.cz

Kateřina Zábrodská
zabrodska@psu.cas.cz

Pavlína Janošová
janosova@praha.psu.cas.cz

¹ Institute of Psychology of the Czech Academy of Sciences, Brno, Czech Republic