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Teacher burnout in the light of workplace, organizational, and social factors

***Eva Szabo*[1] *& Balazs Jagodics*[2]**

Abstract

Background and aims: We studied teacher burnout and its relationship with job demands and resources, collective self-efficacy, and social support. Previous studies indicate that the factors of burnout (depersonalization, emotional exhaustion, and reduced personal accomplishment) develop in work environment where demands exceed resources, and where social support and collective self-efficacy are both perceived to be low. *Methods:* Online survey method was used ($N = 664$) in this study. Organizational and social context was measured using the job demands and resources model, and measuring perceived collective self-efficacy of the workplace and social support of the coworkers. *Results:* Based on the results of correlation analysis, different types of job demands are associated positively with burnout, while job resources, collective self-efficacy, and social support prove to have negative relationship with burnout. The ratio of demands and resources (workload index) also has a strong link to burnout scores. Using linear regression analysis to build a model revealed professional social support, possibility of personal development and job demands as significant predictors of burnout. *Discussion:* These findings emphasize the importance of professional social support in the prevention of burnout. The results indicate that training programs which strengthen social support between coworkers are much needed, and that school psychologists can help teachers to develop more supportive communities.

[1] Department of Social and Developmental Psychology, Institute of Psychology, University of Szeged, Egyetem u. 2., Pecs 6722, Hungary, Email address: eva.szabo@psy.u-szeged.hu, ORCID: 0000-0001-7804-5549

[2] Doctoral School of Psychology, University of Pecs, Egyetem u. 2, Pecs 6722, Hungary, Email address: balazs.jagodics@gmail.com, ORCID: 0000-0003-4100-5257

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Keywords: teacher burnout, social support, collective self-efficacy, job demands and resources

Introduction

Education is an important part of raising successful generations. Therefore, well-prepared and motivated teachers are much needed in the schools. However, research data show a distressingly high rate of teachers dealing with burnout problems all over the world (Fernet, Guay, Senecal, & Austin, 2012).

The notion of burnout was first defined by Freudenberger (1974), who used this concept to describe the symptoms of prolonged workplace stress. Consequently, burnout is a dynamic state in which everyday job overload results in emotional exhaustion, reduced personal accomplishment, and depersonalization (Maslach, 1982). Besides the three main components, behaviors such as impatience and cynicism can also indicate burnout. Moreover, burnout is associated with biological stress indicators such as increased hair cortisol level, which is a sign of chronic stress (Penz et al., 2018). It indicates that along with burnout, physical stress symptoms, such as sleep disorders (Ekstedt, Soderstrom, Akerstedt, Nilsson, &Perski, 2006) and impaired health can also develop (Maslach & Goldberg, 1998).

Although burnout was first described among healthcare employees, other professions are also at risk. Workplaces where responsibility is high, workload is significant, and caring for others is frequently needed are commonly threatened by the symptoms of burnout. Burnout is prevalent among occupations outside of human services, too, such as line workers and air control staff (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). In addition to the professions mentioned, teachers are also widely affected because they generally face heavy workload (Hakanen, Bakker, & Schaufeli, 2006). Moreover, teachers usually have to deal with emotionally loaded situations through student discipline problems, which negatively affect job satisfaction (Malinen & Savolainen, 2016). Although our research focuses on teacher burnout, we have to take into account those results, which draw attention to the necessity of comparative studies between different jobs. A nationally representative research was conducted in Belgium to determine whether burnout among teachers is more prevalent than in other professions (van Droogenbroeck & Spruyt, 2015). The results show that teachers and other human service workers do not differ significantly in terms of psychological impairment. The research found that elementary occupations such as housekeepers and restaurant service workers deemed to have more mental health problems. Furthermore, a review of 28 studies was conducted to determine differences in burnout among teachers and other professions. The findings make clear that evidence claiming teachers to be more prone to develop burnout symptoms are often contradictory and less conclusive (Van Droogenbroeck & Spruyt, 2015).

These results indicate that different mechanisms are present behind the development of burnout in each occupation. Analyzing teacher burnout is therefore important, because specific causes and effects can be identified, which seems to be important in the light of the results related to teachers' mental health (Maslach & Leiter, 2008).

Studies focusing on teacher mental health report high prevalence of burnout all over the world, for example, in Finland (Hakanen et al., 2006), Turkey, (Ozer & Beycioglu, 2010), Canada (Fernet et al., 2012), or in the United States (Lackritz, 2004). Teachers experiencing the symptoms of burnout are less enthusiastic in the classroom and demonstrate impatient and anxious behavior more frequently, which deteriorates their performance (Fernet et al., 2012). Burnout can also result in changing the workplace or even leaving the profession. Studies in the US on teachers' desire and tendency to modify their occupation showed that teacher attrition is linked to burnout and is indirectly associated with accountability and administrative tasks (Ryan et al., 2017). These findings suggest that occupational conditions and organizational features play an important role in developing burnout syndrome.

The symptoms of teacher burnout affect not only the individual and close colleagues, but also influence the behavior of students. Studies show that students are prone to be more motivated to learn if they perceive their teachers to be enthusiastic in the classroom (Lazarides, Buchhold, & Rubach, 2018). Therefore, signs of burnout, such as cynical responses, anxiety, or lack of professional development, can result in reduced student motivation, which indirectly deteriorates teaching efficiency and productivity in the long run.

The role of the organization in the development of burnout – The Job Demand-Resources model

Every employee faces various effects while at work. Time pressure makes tasks more challenging, and some situations are emotionally upsetting, making them even harder to resolve. Other obstacles are difficult to overcome because of workplace conflicts, and there are problems, which are hard to solve due to attention divided between multiple tasks. These workplace factors are defined as job demands (Demerouti et al., 2001). Anything that makes everyday tasks difficult to complete belongs to this category. On the other hand, there are resources, which help someone overcome such obstacles. The support of a superior is important, such as learning new skills and reaching personal development. Making autonomous decisions regarding when and how certain tasks are completed makes someone more committed to the work. In addition, those who get enough information and receive regular feedback on their performance are more motivated (Demerouti et al., 2001).

The Job Demand-Resource (JD-R) model is a useful and efficient tool to measure workplace factors affecting burnout (Demerouti et al., 2001). Studies have found strong links between demands and burnout, while resources are negatively associated with the

symptoms of job stress (Hakanen et al., 2006). Our former research showed that the ratio of demands and resources is a stronger predictor of burnout than the two factors (demand/resources) on their own (Jagodics & Szabo, 2014). If demands surpass resources for a prolonged period of time, burnout is more likely to develop. Based on the strong empirical evidence supporting the relationship of the JD-R model and burnout, we decided to use the JD-R model as the core element of this study.

The JD-R model has several factors related to the social aspects of the workplace, for example, personal conflicts or the support of the superior. However, studies show social factors to be reliable predictors of burnout. As the JD-R model does not particularly highlight the role of any social factor, we decided to examine how collective self-efficacy and social support are linked to burnout.

Organizational factors are important because the symptoms of burnout can develop not only on an individual level but can also spread within the organization. Studies found the level of burnout to be related to the motivational state of close colleagues. A social network analysis revealed that close relation to peers who are affected by burnout is associated with increased burnout scores, i.e., a higher average level of burnout in the organization is linked to deepened individual symptoms (Kim, Youngs, & Frank, 2017). These findings draw our attention to organizational factors, which have an impact on this phenomenon.

Collective teacher self-efficacy as resource

Collective self-efficacy is the sum of a group's beliefs regarding their own abilities to perform well (Schwarzer, Schmitz, & Daytner, 1999). Organizations with higher collective self-efficacy tend to establish common goals and values, which makes the members of the community more committed to the joint objectives. Although teaching is basically an individual task, there are some tasks that have to be handled on an organizational level. Research results show that collective efficacy could be an efficient method to reduce job stress (Esnard & Roques, 2014). Based on their findings, sense of collective efficacy is more strongly connected to problem-focused coping than self-efficacy, which indicates the importance of community in individual reactions to stressful situations.

Public school teachers in Hungary work in institutes of 40–60 members, which indicate the importance of community when dealing with tasks requiring a joint effort. The perceived level of collective efficacy can reveal the relationship between the individual teacher and the community and can even be an indicator of school climate.

The perceived collective self-efficacy is a relevant factor in coping with job demands independent of cultural differences (Schaubroeck, Lam, & Xie, 2000). As part of the coping

mechanism, it probably has an important role in burnout prevention. A recent study shows that perceived collective self-efficacy is not related directly to burnout and however has a moderate indirect connection with teacher burnout mediated by teacher self-efficacy (Skaalvik & Skaalvik, 2007).

Social support as a protective factor

In addition to workplace factors, studies state social context to be linked to burnout. Similar to some resources like support of superior and lack of interpersonal conflicts, supportive colleagues can reduce job stress, as different studies found a negative link between workplace social support and teacher burnout (Brouwers, Tomic, & Boluijt, 2011; Hare, Pratt, & Andrews, 1988; Ju, Lan, Li, Feng, & You, 2015).

Social support can take effect in different ways. Colleagues can help each other complete their tasks or can set up an innovative organizational climate, which leads to creative new ideas and solutions. The former is linked to reducing demands like time pressure and mental challenges, whereas the latter can improve personal growth. Besides professional help, emotional support is also important. If someone faces emotionally concerning situations, like teachers do everyday, caring and supportive attitude of colleagues can boost coping and reduce stress (Maslach, Schaufeli, & Leiter, 2001).

In our prior research, we found a link between burnout and different types of social support. Both emotional and professional help among peers had a negative correlation with burnout scores; however, professional support could be a stronger preventive factor (Jagodics & Szabo, 2014). This result is in congruence with recent studies, which showed that professional social support is helpful in burnout prevention, even if it is available outside the school. Kelly and Antoinio (2016) found online social network sites to be efficient in sharing knowledge, ideas, or good practices between peers.

Research conclusions show that social support and organizational factors are related to each other. The study of Avanzi et al. (2018) highlighted that organizational identification can boost social support and therefore can have an indirect effect on burnout. As we discussed in the case of collective self-efficacy, being connected to a community and having shared goals with the organization can increase work-related motivation and dedication (Schwarzer et al., 1999). Therefore, we think that a proper model to describe the development of burnout cannot be built without social and organizational factors.

Reviewing the results of former studies underlines the importance of exploring teacher burnout. Our goal was to deepen our understanding regarding factors, which can reduce or increase job stress and, therefore, burnout. We used a mixed model of workplace and individual factors to find patterns in the way teacher burnout develops. In the next part,

we review the factors used to build our model. In the Hungarian school context, it is specifically important to conduct such measures, because there are only a few recent studies focusing on this field (Paksi et al., 2015; Petroczi, 2007). However, teaching hours have increased recently to 22–26 hr per week, and the administration load is also perceived to be more significant due to policy changes. As a result, teacher burnout seems to be an urgent, relevant, and important field of study, yet we do not have knowledge about other ongoing researches on this area.

Research goals

The primary purpose of this study is to explore the combined effect of job demands/resources and social factors on teachers' burnout. The suitability of the job demands/resources model to explain teacher burnout is widely confirmed (Hakanen et al., 2006; Jagodics & Szabo, 2014). This study makes further analyses between these factors and we also include two new factors in this study, namely social support and collective self-efficacy, which we assume to be protective factors against burnout. Third, our aim is to test a model, which includes the original factors of JD-R and the social support and perceived collective self-efficacy.

We set out to test the following hypothesis:

H_1: According to previous research, job demands and task overload are a serious risk factor of burnout (Hakanen et al., 2006; Jagodics & Szabo, 2014). Therefore, we assume that workload index, which represents the ratio of demands and resources, is positively linked to burnout.

H_2: Based on the JD-R model (Demerouti et al., 2001), we suppose workload index to be a stronger predictor of burnout than job demands and resources on their own (Hakanen et al., 2006; Jagodics & Szabo, 2014). Furthermore, higher workload index is supposed to be associated with higher burnout scores.

H_3: As the findings of former researches claimed, social support can be an important factor in the prevention of burnout (Brouwers et al., 2011; Hare et al., 1988). Therefore, we assume higher social support to be associated with lower burnout score.

H_4: Based on the JD-R model (Demerouti et al., 2001), and according to the previously revealed association between social support and burnout (Brouwers et al., 2011; Hare et al., 1988), we suppose that social support is negatively related to workload index.

H_5: In accordance with the previous findings, we suppose that perceived collective self-efficacy is negatively related to burnout (Schwarzer et al., 1999; Skaalvik & Skaalvik, 2007).

H_6: Based on the JD-R theory (Demerouti et al., 2001), we assume perceived collective self-efficacy to be negatively related to workload index (Schwarzer et al., 1999; Skaalvik & Skaalvik, 2007).

H_7: As previous studies revealed, burnout is negatively linked to several organizational and social factors. Based on these findings, we suppose that collective self-efficacy and social support are positively related (Schwarzer et al., 1999; Skaalvik & Skaalvik, 2007).

H_8: We suppose that the factors of JD-R model and social support are significant predictors of the variance of burnout score in regression analysis (Demerouti et al., 2001; Skaalvik & Skaalvik, 2007).

Methods and Procedure

Participants

A total of 664 teachers participated in this study (519 women and 145 men, $M_{age} = 46.78$ years, $SD_{age} = 9.28$ years; $M_{teaching\ experience} = 21.14$ years, $SD_{teaching\ experience} = 10.67$ years). About 49.9% of the participants work in primary school, whereas 42.1% work in secondary school. Eight percent works in both school types.

Measures

Four questionnaires were used in this study, and participants were asked to answer questions regarding demographic background (sex, age, place of work, teaching experience, and school type).

Burnout. Symptoms of burnout were measured by the Burnout – School Edition questionnaire (Hennig & Keller, 1995), which is the modified version of the widely used Maslach Burnout Inventory (Maslach & Jackson, 1981). The Hungarian version of this scale was presented in previous studies (Jagodics & Szabo, 2014; Szabo & Jagodics, 2016). Confirmatory factor analysis (CFA) was used to test the model fit for Burnout Scales. The analysis showed moderate fit indices compared to the standards (Schreiber, Stage, King, Nora, & Barlow, 2006): Chi square/degree of freedom = 5.171, CFI = 0.945, TLI = 0.929, RMSEA = 0.063, RMR = 0.035.

The questionnaire uses three scales to measure burnout. Emotional exhaustion (e.g., "I often feel anxious and worried"), personal accomplishment (e.g., "I have doubts regarding my professional competence"), and depersonalization (e.g., "I prefer to stay away from professional discussions with my colleagues"). The items of the Burnout Questionnaire were answered on a 5-point Likert scale from 0 to 4.

Job demands and resources. The JD-R questionnaire (Jagodics & Szabo, 2014) was created based on the model of Demerouti et al. (2001). The measurement tool has two

scales: demands and resources, both divided into four subscales. The subscales of job demands are mental demands (e.g., "When I am working, I have to pay attention to different things simultaneously"), emotional demands (e.g., "When I am working, I often face situations which upset me"), personal conflicts (e.g., "There are lots of conflicts between me and my colleagues"), and work style (e.g., "I have to do lots of work together"). The subscales of job resources are support of superior (e.g., "I can get help from my superior if I need it"), personal growth (e.g., "My job enables me to develop my professional skills"), control (e.g., "I can decide how to solve problems at my workplace"), and information/feedback (e.g., "I get sufficient feedback at my workplace"). CFA was used to test the model fit for JD-R Scales. The analysis showed moderate fit indices compared to the standards (Schreiber et al., 2006): Chi square/degree of freedom = 3.673, CFI = 0.967, TLI = 0.954, RMSEA = 0.063, RMR = 0.5.

The items of the JD-R questionnaire were answered on a 5-point Likert scale from 1 to 5. Apart from the subscales, we use another variable named workload index. Workload index is generated by subtracting the job resources score from job demands.

Social Support Questionnaire (SSQ). The SSQ (Jagodics & Szabo, 2014) was used to determine how much support teachers perceive to get from their colleagues. The questionnaire has two scales to measure both professional (e.g., "Me and my colleagues share our teaching experiences with each other") and emotional support (e.g., "My colleagues makes easier to bear workplace stress"). The items of SSQ were answered on a 5-point Likert scale from 1 to 5.

Collective self-efficacy. The Collective Self-Efficacy Questionnaire (CSEQ; Jagodics & Szabo, 2014) was used to measure how the participants perceive their organization with respect to collective tasks and values (e.g., "I am convinced that we, as teachers, can guarantee high instructional quality even when resources are limited or become scarce"). The Hungarian version of CSEQ was based on Schwarzer, Schmitz, and Daytner's (1999) measure tool. The items of CSEQ were answered on a 4-point Likert scale from 1 to 4.

Procedures

An anonymous online survey was used to collect data from the participants. Schools were asked via e-mail to participate in the study informing all participants of the goal of the study before answering the questions. Participants did not receive any payment and all of them answered the questions voluntarily. After answering all the questions, the participants could read a short automatic feedback of their results, based on the result of the scales of the Burnout Questionnaire. The feedback was created based on a former database, dividing the scores into three sections according to the distance from the mean score. Low and high scores were defined using standard deviation.

Statistical analysis was carried out using SPSS for Windows 24.0 software (Armonk, NY, USA).

Results

Preliminary analysis

As Table 1 shows, participants reported relatively low scores on burnout scales, especially regarding social factors, which partly contradicted our main presumptions. Scores on job demands were diverse: participants reported high scores on mental demands and medium scores on work style and emotional demands, while personal conflicts are represented on a low level. On the contrary, all four types of resources had medium and high averages. Similarly, both professional and emotional social supports were perceived to be prevalent. On the other hand, collective self-efficacy of the organization was below the midpoint. On the whole, we can find a slight preponderance in resources over demands.

Correlation analysis

The goal of our research was to examine the relationship between the variables. Pearson's correlation analysis was used to test the presumed hypothesis. As Table 2 shows, the results of the analysis supported our main hypothesis. Burnout score has a statistically significant positive link to both job demands and workload index (H_1). Contrarily, job resources, social support, and collective efficacy are negatively associated with burnout symptoms (H_3 and H_5). As presumed, the workload index proved to have a stronger relationship with burnout scores than JD-R subscales of their own (H_2).

Although social support scales have a negative relationship with workload index scores, professional support proved to have a stronger link to workload index than emotional support (H_4). Similarly, collective self-efficacy and workload index were associated negatively (H_6). Moreover, collective self-efficacy related positively to social support (H_7), confirming the hypothesis regarding the link between social and organizational factors.

Workload index

First of all, the sample was divided into two groups based on the average scores on workload index. In the low workload index group, the mean scores of resources surpassed demand ($N = 479$, 368 women and 111 men, $M_{\text{age}} = 46.84$ years, $SD_{\text{age}} = 9.46$ years, $M_{\text{teaching experience}} = 20.93$ years, $SD_{\text{teaching experience}} = 10.89$ years). In the high workload index group, the mean scores of demands were higher than resources (151 women and 34 men, $N = 185$, $M_{\text{age}} = 46.64$ years, $SD_{\text{age}} = 8.82$ years; $M_{\text{teaching experience}} = 21.69$ years, $SD_{\text{teaching experience}} = 10.1$ years). Frequency data show that 72.13% of the sample belonged to the group with resource predominance, which contradicted our hypothesis regarding the dominance of demands.

Table 1. Descriptives of the measurement scales

Scale	Subscale	*N*	Range	*M*	*SD*	Skewness	Kurtosis
Burnout	Emotional exhaustion	664	0–4	1.61	0.72	0.14	−0.441
	Depersonalization	664	0–4	0.74	0.57	0.76	0.43
	Personal accomplishment	664	0–4	1.12	0.64	0.63	0.43
Job demands	Mental demands	664	1–5	4.31	0.60	−0.882	0.931
	Emotional demand	664	1–5	2.76	0.66	−0.94	−0.714
	Personal conflicts	664	1–5	1.47	0.53	1.296	1.542
	Work style	664	1–5	3.40	0.90	−0.427	−0.262
Job resources	Support of superior	664	1–5	3.91	1.01	−0.848	0.04
	Personal growth	664	1–5	3.83	0.72	−0.474	0.06
	Control	664	1–5	3.56	0.73	−0.30	−0.13
	Information/feedback	664	1–5	3.16	0.78	−0.13	−0.40
SSQ	Professional support	664	1–5	3.83	0.72	−0.77	0.46
	Emotional support	664	1–5	3.44	0.37	−0.46	0.44
CSEQ	Collective self-efficacy	664	1–4	2.76	0.66	−0.94	−0.71

Note. SSQ: Social Support Questionnaire; CSEQ: Collective Self-Efficacy Questionnaire; *SD*: standard deviation.

Table 2. Correlations among variables

Factor	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Burnout	1. Personal accomplishment	1	–	–	–	–	–	–	–	–	–	–	–	–	–
	2. Emotional exhaustion	.657*	1	–	–	–	–	–	–	–	–	–	–	–	–
	3. Depersonalization	.566*	.516*	1	–	–	–	–	–	–	–	–	–	–	–
Job demands	4. Mental demands	.005	.058	.153*	1	–	–	–	–	–	–	–	–	–	–
	5. Emotional demand	.288*	.352*	.352*	.379*	1	–	–	–	–	–	–	–	–	–
	6. Personal conflicts	.282*	.351*	.351*	.021	.271*	1	–	–	–	–	–	–	–	–
	7. Work style	.248*	.341*	.341*	.477*	.386*	.182*	1	–	–	–	–	–	–	–
Job resources	8. Support of superior	–.237*	–.394*	–.219*	.081	–.115*	–.434*	–.059	1	–	–	–	–	–	–
	9. Personal growth	–.319*	–.333*	–.341*	.279*	.137*	–.078	.075	.176*	1	–	–	–	–	–
	10. Control	–.331*	–.380*	–.199*	–.075	–.205*	–.218*	–.258*	.296*	.256*	1	–	–	–	–
	11. Information/feedback	–.258*	–.478*	–.279*	–.037	–.107*	–.300*	–.179*	.473*	.326*	.408*	1	–	–	–
Social support	12. Professional social support	–.315*	–.142*	–.380*	.140*	–.083	–.395*	–.051	.393*	.315*	.262*	.427*	1	–	–
	13. Emotional social support	–.121*	–.385*	–.211*	.068	.006	–.269*	–.007	.171*	.123*	.103*	.142*	.341*	1	–
	14. Collective self-efficacy	–.367*	–.422*	–.380*	.131*	–.116*	–.396*	–.103*	.439*	.342*	.298*	.452*	.634*	.256*	1
	15. Workload index	.486*	.638*	.336*	.332*	.538*	.552*	.587*	–.623*	–.315*	–.635*	–.661*	–.422*	–.168*	–.479*

Note. $*p < .001$.

Second, independent sample *t*-tests were applied to determine differences between the two groups. The results show that the high workload index group scored significantly higher on all burnout scales than the low workload index group. In the case of social support and collective self-efficacy, there was also a significant difference as the high workload index group scored lower in all scales. These results support our main hypothesis regarding workload index scores (see Table 3 for details).

Regression analysis

The final purpose of the study was to establish a model in which workplace factors and social support are used to predict burnout (H_8). Linear regression analysis with stepwise method was used to build a model. Total burnout score was used as a dependent variable whereas the subscales of job demands, job resources, social support, and collective self-efficacy were selected as independent variables. Collective self-efficacy and support of the superior were excluded from the model. The other variables together explained a significant proportion of variance in burnout score [$R^2 = .391$; $F(5,\ 658) = 84.434$; $p < .001$], but not all variables could predict the burnout score significantly (see Table 4 for details).

Discussion

General discussion

The goal of this study was to examine burnout in a complex way, including both workplace and personal factors. There are generally two types of burnout research. The first one focuses on the individual characteristics, such as coping mechanism (Maslach & Jackson, 1982) or emotional intelligence (Ju et al., 2015). The second approach highlights the importance of workplace factors. Accordingly, the classic JD-R model of Demerouti et al. (2001) was used in this study, but several social and organizational factors were used for augmentation to grasp those mechanisms, which are important at every workplace, but especially in case of schools and teaching. These two factors are professional social support and collective self-efficacy.

Our former results showed that professional social support is also an important factor related to burnout, besides job demands and resources (Jagodics & Szabo, 2014). However, there was no evidence of the effect of collective self-efficacy. Therefore, we decided to include social support and perceived collective self-efficacy in the research.

The first important result of this study is that both the average and the standard deviation of the burnout scores are low. Based on our personal experience and the reports of school psychologists, this result might not reflect precisely the concrete situation. We suppose that burnout is some sort of a taboo among Hungarian teachers, which can lead them to

Table 3. Results of the independent t-tests in terms of burnout, social support, and collective self-efficacy scores

Scale	Subscale	Group	Mean score	*t*	*p*
Burnout	Emotional exhaustion	Low workload	1.39	−14.305	<.001
		High workload	2.18		
	Depersonalization	Low workload	0.65	−6.400	<.001
		High workload	0.99		
	Personal accomplishment	Low workload	0.97	−9.368	<.001
		High workload	1.51		
SSQ	Professional support	Low workload	3.96	7.076	<.001
		High workload	3.49		
	Emotional support	Low workload	3.46	2.163	.031
		High workload	3.39		
CSEQ	Collective self-efficacy	Low workload	2.90	9.157	<.001
		High workload	2.40		

Note. High/low workload groups were used as grouping variables. All differences in mean scores were statistically significant. SSQ: Social Support Questionnaire; CSEQ: Collective Self-Efficacy Questionnaire.

Table 4. Results of linear regression analysis

Variable	*B*	*SE B*	β
Professional social support	–2.496	.297	–.275**
Job demands – work style	1.850	.262	.254**
Job demands – mental	–0.854	.407	–.078*
Job demands – emotional	–1.985	.283	.241**
Job resources – personal development	–3.037	.304	–.333**
R^2	.391		
F for charge in R^2	84.434**		

Note. Total burnout score was used as dependent variable.
*$p < .05$. **$p < .01$.

report lower scores on questionnaires due to social desirability (Ashton, Buhr, & Crocker, 1984). On the other hand, they have high expectations about themselves, so it could be they do not realize the real symptoms, or they are not aware of it. Another possible explanation is that the participants truly had low burnout scores because those teachers volunteered to join to the study who are less affected by the symptoms and, as a result, they could be more motivated to get feedback on their work. These aspects highlight the most important methodological limitations of the research of burnout, but they do not refute the results of this study.

Despite low average scores, the results of this study repeatedly confirmed that job demands are positively linked to burnout, and that job resources can prevent developing the symptoms (Demerouti et al., 2001; Hakanen et al., 2006). In this study, we set up a workload index, which indicates the ratio of job demands and job resources. According to low burnout scores, we found that most of the teachers were in the low workload index group, and only 30% of them belonged to the high workload index group. In spite of the differences, our findings proved that the workload index has a strong correlation with burnout.

In this study, we included two new aspects of burnout. In light of the results, it seemed to be a good idea to complete the variable set with these two aspects. According to our hypothesis, the role of social factors in the development of burnout gained proof. Teachers who feel more social support by their colleges are less compromised about burnout (Brouwers et al., 2011; Ju et al., 2015). The perceived collective self-efficacy, which refers to the success of common work toward joint goals, seems to be indirectly linked to burnout through strengthening job resources in the workload index. The results seem to confirm this conclusion as the low workload index group scored significantly higher perceived collective self-efficacy than the high workload index group.

These findings also highlighted the necessity of cooperation among teachers and the need for regular communication about their goals, roles, and their values. In Hungary, these kinds of discussions are not parts of organizational culture. Teachers prefer to work alone instead of cooperating with their colleagues. In recent years, there were several changes in the education system, which include the obligation for taking regular qualifying exams. These changes come with many new requirements and administration tasks for the teachers. Therefore, they generally feel overloaded, and they claim to have no time to talk with each other about their common problems at school.

Previous studies also proved that social support at workplace is a possible factor in preventing burnout (Brouwers et al., 2011; Hare et al., 1988). The results of this study underlined that the various types of social support can play a role in the prevention of burnout in different ways. Emotional support of the colleagues seems to have an indirect effect on burnout, strengthening the effect of resources in the workload index. The results of the regression analysis support this conclusion because the emotional social support score did not have a significant direct effect on the burnout score. On the other hand, emotional social support is negatively linked to burnout according to the correlation analysis, and it is significantly more prevalent in the low-workload index group. The regression analysis revealed that the other type of social support, namely professional help, has a direct effect on burnout score. Higher professional support is associated with lower burnout score, which indicates that professional support can be a possible protective factor against burnout.

The results of regression analysis showed that resources (personal growth and professional social support) and the demand of work style have the strongest effect on burnout score. The results indicate that these are the most important factors on which it is worth concentrating on teacher education and in teacher-supporting programs.

The school psychologists have an important role in increasing professional support level in the organization. In addition to psychoeducation, both individual and group consultation could give excellent opportunities for school psychologists to fulfill what this role requires. According to Caplan's model, the consultation is the most common form of professional social support (Caplan, Caplan, & Erchul, 1994). The aim of the consultation is not only to solve a given problem but to improve teacher's coping strategies. As a result of effective consultation, teachers get new viewpoints and they can mobilize their problem focus coping mechanisms, which seem to be a protective factor against burnout.

The other opportunity to increase the level of professional support in school is group consultation led or facilitated by school psychologist (Erchul & Martens, 2010). Organizing groups to discuss case studies can significantly improve social support among teachers while developing better problem-solving skills (Otten, 2018) and strengthening

collective self-efficacy. The problem-focused or topic-centered group consultation helps teachers to realize that their problems are not unique and create an opportunity for them to share their experiences and knowledge about problem-solving and conflict management (Levin, 1995). It also increased the empathy among teachers and facilitated the expression of their negative emotions and frustration without guilt (Richert, 1990). This type of consultation increases the positive and supportive school climate, which also helps to prevent the burnout (Cohen, 2006; Maslach & Goldberg, 1998).

The school psychologist can give professional support to the teacher by psychoeducation as well. Increasing and refreshing the teachers' pedagogical knowledge and introducing them new methods and perspectives in problem-solving also serve as burnout prevention.

Limitations

As we highlighted above, one possible limitation of this study is the presumably high social desirability, which could have distorted the burnout scores. In the future, we will need to consider using a scale for measuring social desirability, which could possibly help us decrease the distortion effect of dishonest answers. Another limitation is present regarding the participants: the sample of the research is not representative. The distribution of the demographic variables such as age and sex does not make it possible for us to properly analyze their link to other variables. Although we nationwide invited teachers and schools to participate in the research, there were some areas where we did not gather enough data. Accordingly, teachers from cities were overrepresented in the sample compared to those who work in small towns and villages in rural regions. Further studies are needed to comprehend the current processes in the Hungarian school context, which are strongly affected by the changes in regulation as mentioned above. Another limitation is the cross-sectional study design, which prevents the inference of casual relationship between the studied factors. Longitudinal study design would be a possible option for identifying the casual connection between variables.

Further directions

Even in spite of the clear limitations, the results of the study are important because (a) they highlighted professional social support as a possible way to prevent burnout, and (b) they confirmed the link between the JD-R model and burnout. The methods used in this study seem suitable for assessing those organizational factors, which can prevent or help the development of teacher burnout. Therefore, this type of measurement can help specialists in planning intervention based on the specific results.

This study highlighted the role of workplace factors and professional social support regarding burnout. Other studies also showed that the development of burnout is

associated with such personal factors as coping behaviors or personality traits (Maslach & Jackson, 1982). One possible goal for further research is to integrate organizational and personal factors. Another important area to explore is emotional intelligence. As the study of Ju et al. (2015) showed, there is a negative link between trait emotional intelligence and teacher burnout, whereas workplace social support is positively connected to it. Further exploration of emotional intelligence, similar to coping behavior, can contribute to building a more extensive model, which contains personal factors. The results from researching emotional intelligence could also have possible practical indications for burnout prevention.

Another possible improvement for this study would be to invite more schools to participate in the research. This way complete teachers boards could be measured, which could unravel the interaction between workplace factors and individual characteristics. We suppose that teachers from the same school perceive social and organizational factors differently, and identifying these patterns could lead to possible prevention methods. Moreover, the participation of complete school boards would make the sample more diverse and could include those teachers, who otherwise would be left out. On the basis of findings, we are able to give suggestion for school leaders and school psychologist for decreasing level of burnout risk factors.

These mixed models could help us understand burnout, which is important on both individual and a societal levels. Improving teacher education based on the results can be a possible first step in empowering teachers, which could reduce the reality shock of beginner teachers (Dicke, Elling, Schmeck, & Leutner, 2015).

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About the Authors

ESz is a psychologist, associate professor at the University of Szeged. She is the head of the Institute of Psychology and she is responsible for the Counselling and School Psychology MA program. Her research field is related to school well-being achievement (underachievement) and burnout. In specific teacher and student burnout syndrome, exploring the personal and social factors behind this problem, including self-efficacy, collective self-efficacy, sense of responsibility, organizational and societal aspects of burnout; psychological resources behind school achievement: school connectedness (school bonding), goal orientation, responsibility, self-efficacy, mindset, etc.; school climate and its impact on achievement, burnout, and well-being. She was involved in study concept and design and study supervision.

BJ is a psychologist and works as an assistant lecturer at University of Szeged. Besides, he is a student in the Doctoral School of Psychology at the University of Pécs. His research field is related to school psychology, as he studies the organizational, social, and workplace processes leading to burnout among both teachers and students. Moreover, he is interested in the research of academic motivation and is devoted to creating innovative ways to strengthen the engagement of the students. He is exploring the use of gamification methods in classrooms. He was involved in statistical analysis and interpretation of data.

All authors had full access to all data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.

Ethics

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The research methodology was accepted by the Hungarian United Ethical Review Committee for Research in Psychology prior to data collection. Informed consent was obtained from all individual participants included in the study. The research was not founded by any organization.

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