

# **The association between maladaptive and adaptive perfectionism and burnout among primary school teachers**

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<p><b>Abstrakti</b></p> <p>Tämän tutkimuksen tarkoituksena oli tarkastella positiivisen ja negatiivisen perfektionismin yhteyttä opettajien työuupumukseen. Tutkimukseen osallistui 76 opettajaa. Tutkimusaineisto kerättiin vuosina 2013-2014 Tutkimuksessa käytetyt menetelmät olivat taustatietokysely, Maslachin yleinen työuupumuksen arviointimenetelmä MBI-GS ja perfektionismia arviointiin käyttämällä urheilussa käytettyä moniulotteista kyselylomaketta sovellettuna opettajille. Tutkimuksen tulokset osoittivat, että opettajien perfektionistiset pyrkimykset (ns. positiivinen perfektionismi) eivät ole yhteydessä työuupumukseen. Sen sijaan perfektionistiset huolet ja omaan epätäydellisyyteen kohdistuva itsekkriittisyys (ns. Negatiivinen perfektionismi) olivat tutkimustulosten mukaan yhteydessä opettajien työuupumukseen. Tutkimuksen tuloksia voidaan hyödyntää esimerkiksi työhyvinvointi-interventioiden kehittämisessä henkilöille, joilla on negatiivisia perfektionistia piirteitä ja siten kohonnut riski työuupumuksen kehittymiselle.</p>			
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<p><b>Abstract</b></p> <p>We examined the association between maladaptive and adaptive aspects of perfectionism and burnout among Finnish primary school teachers. Burnout was measured using the Maslach Burnout Inventory General Survey (MBI–GS), and assessed perfectionism using a questionnaire applied to teachers from the Multidimensional Inventory on Perfectionism in Sport. Participants consisted of 76 primary school teachers. After adjusting multiple regression analyses for age, gender, and years in education, we found that striving for perfection (adaptive perfectionism) did not associate with burnout. However, maladaptive aspects of perfectionism, such as negative reactions to imperfection and, to a lesser extent, pressure from students and their parents to perform perfectly were associated with higher burnout scores. In conclusion, primary school teachers characterized by maladaptive perfectionism could be targeted for interventions to reduce rates of burnout in education.</p>			
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## *1. Introduction*

Previously, physical and chemical hazards in the workplace represented the primary occupational safety concerns. In recent years, work disability based on mental health problems (Toker, Melamed, Berliner, Zeltser, & Shapira, 2012) and the risk of accidents caused by burnout syndrome have increased (Ahola, Salminen, Toppinen-Tanner, Koskinen, & Väänänen, 2013). Burnout commonly occurs in occupations that carry an emotional component to one's work, such as that which accompanies education (Maslach, Schaufeli, & Leiter, 2001). However, individual differences also play an important role in the development of burnout.

### *1.1 Burnout*

Burnout is a psychological syndrome preceded by excessive and prolonged work stress (Maslach *et al.*, 2001), and includes dimensions of exhaustion, cynicism, and reduced professional efficacy (Maslach *et al.*, 2001). As such, exhaustion refers to being emotionally overextended and exhausted by one's work. Cynicism, in turn, refers to unfeeling and an impersonal response towards the recipients of one's service, care, treatment, or instruction. Reduced professional efficacy, in this case, refers to feelings of competence and achievement in one's work. On an individual level, burnout is associated with a diminished well-being and mental and physical health problems, such as psychological distress, anxiety, and depression (Maslach *et al.*, 2001).

Previous research indicates that burnout negatively impacts one's quality of life, mental health (Ahola *et al.*, 2009; Ahola *et al.*, 2013; Hintsala *et al.*, 2016; Schaufeli & Enzmann, 1998; Toppinen-Tanner, Ojajarvi, Väänänen, Kalimo, & Jäppinen, 2005), physical well-being (Toker *et al.*, 2012), and permanent work disability (Ahola *et al.*, 2009). In addition, burnout has been associated with a risk of coronary heart disease (Toker *et al.*, 2012), type 2 diabetes (Melamed, Shirom, Toker, &

Shapira, 2006), sleep disturbances (Armon, Shirom, Shapira, & Melamed, 2008), the onset of musculoskeletal pain (Armon, Melamed, Shirom, & Shapira, 2010), and depression (Hakanen & Schaufeli, 2012).

In the field of education, every second employee experiences their job as fairly or extremely stressful (Onnismaa, 2010). While the number of educators experiencing fair or extreme stress has decreased in recent years, this figure remains higher than that in other professions (Onnismaa, 2010). Stress experienced by teachers has been linked to the high demands placed upon them (Hakanen, Bakker, & Schaufeli, 2006). Personality, time pressure, and managing misbehaving students were linked to stress and burnout among Cypriot teachers (Kokkinos, 2007). Similarly, a heavy workload was the most significant factor explaining differences in psychosomatic symptoms, such as persistent irritability, anxiety, high blood pressure, and insomnia, among teachers in Hong Kong (Jin, Yeung, Tang, & Low, 2008). Furthermore, a link was established between cumulative exposure to pupils' problem behavior and violent or threatening situations in schools (Ahola *et al.*, 2013; Ervasti *et al.*, 2012), as well as school dissatisfaction and teacher sick leave (Ervasti *et al.*, 2012; Kokkinos, 2007). Teachers face different stressors at work, which may cause insufficient recovery during the working day and after work. Insufficient recovery, in turn, is linked to burnout (Gluschkoff *et al.*, 2016).

Personality has been linked both to recovery experiences and how an individual copes with stressors. In terms of personality traits, individuals who exhibit high degrees of neuroticism tend to express more negative emotions, display more emotional instability, and more strongly react to stress; therefore, they appear more vulnerable to burnout (Kokkinos, 2007). Research has explored various personality traits to identify the links with recovery experiences and burnout. As such, studies show that burnout occurs more often among persons who have an emotional coping style and an external locus of control, and who fall within the big five personality dimensions, all of which have been linked to neuroticism (Maslach, Schaufeli, & Leiter, 2001). Neuroticism, one such

personality dimension, has in turn been linked to maladaptive perfectionism (Egan, Piek, & Dyck, 2015). Personality traits, such as a hard-driving type-A personality dimension, predict higher work stress in terms of job strain and an effort–reward imbalance (Hintsala, Hintsanen, Jokela, Pulkki-Råback, & Keltikangas-Järvinen, 2010). Furthermore, in a meta-analysis, type-A personality was linked to the burnout dimension of reduced professional efficacy, but not to cynicism or exhaustion (Alarcon, Eschleman, & Bowling, 2009). Furthermore, negative aspects of perfectionism among teachers were associated with maladaptive coping, increased levels of stress, and burnout (Stoeber & Rennert, 2008).

### *1.2 Perfectionism and its dimensions*

Perfectionism is a personality trait characterized by striving for flawlessness, setting high performance standards, and judging one's behavior in an overly critical way (Hewitt & Flett, 1991). Recent evidence suggests that perfectionism is best conceptualized as a multidimensional construct, involving both negative and positive aspects (Stoeber & Childs, 2010; Stoeber & Rennert, 2008). Three primary forms of perfectionism have been identified: self-oriented, other-oriented, and socially prescribed perfectionism (Hewitt & Flett, 1991). Self-oriented perfectionism is internally motivated, and consists of striving for perfection, setting high standards for oneself, and being perfect, all of which are considered important. In other-oriented perfectionism, expectations are outwardly directed and involve high or unrealistic expectations towards the behavior of others. Finally, socially prescribed perfectionism is externally motivated, and it is driven by fear of losing approval and acceptance of others. This type of perfectionism is based on the approval of others, consisting of concern over others' negative evaluation of oneself and concern regarding living up to the high standards of others (Hewitt & Flett, 1991).

In a study among teachers, perfectionism fell along three dimensions, which were typically characterized as adaptive or maladaptive aspects of perfectionism. First, striving for perfection (adaptive perfectionism) refers to setting high standards for oneself accompanied by low self-criticism. Second, negative reactions to imperfection (maladaptive perfectionism) combine high standards and high self-criticism. Third, perceived pressure emphasizes others' perceptions of oneself as perfect (socially prescribed maladaptive perfectionism) (Stoeber & Rennert, 2008).

Stoeber and Rennert (2008) found that striving for perfection and negative reactions to imperfection carried opposing effects on burnout and its dimensions. Negative reactions to imperfection predicted higher levels of total burnout, exhaustion, and cynicism and a reduced professional efficacy, whereas striving for perfection predicted lower levels for these same dimensions.

Similarly, the researchers also identified differences regarding the perceived pressure from students, students' parents, and colleagues. Perceived pressure from students' parents was associated with total burnout and a reduced professional efficacy. However, pressure from colleagues exerted an opposing effect, predicting lower levels of total burnout, a reduced professional efficacy, and less emotional exhaustion. By contrast, perceived pressure from students imposed no significant effect on burnout or its dimensions (Stoeber & Rennert, 2008). Another study supported these findings, whereby socially prescribed perfectionism may contribute to burnout among teachers (Childs & Stoeber, 2012). In that study, Childs & Stoeber (2012) found that teachers high in socially prescribed perfectionism experienced an increase over time in two subscales of burnout, specifically in exhaustion and cynicism. Moreover, a study among Iranian English teachers linked perfectionism to burnout-related cynicism and to exhaustion due to the intervening impact of anxiety (Mahmoodi-shahreabaki, 2017).

Aside from these studies, relatively few have examined the relationship between different dimensions of perfectionism and burnout among teachers. Most studies examining the different

dimensions of perfectionism have focused on athletes, students, or other professions beyond education (Appleton, Hall, & Hill, 2009; Stoeber & Eismann, 2007; Stoeber & Rambow, 2007). As such, those studies that have studied the link between perfectionism and burnout among teachers have not focused on primary school teachers. Thus, it is important to examine this particular population since primary school teachers play an important role in the upbringing of children and in building the foundation for further education, motivating both children and parents.

### *1.3 Perfectionism and burnout*

Maladaptive aspects of perfectionism in particular have been linked to stress, dysfunctional coping, and burnout (Stoeber & Rennert, 2008; Van Yperen, Verbraak, & Spoor, 2011). A longitudinal study carried out among teachers found that socially prescribed perfectionism was associated with all dimensions of burnout, including exhaustion, cynicism, and a reduced professional efficacy (Childs & Stoeber, 2012). Comparing teachers who scored high on socially prescribed perfectionism scales to teachers who scored low, symptoms of stress and burnout increased over a three-month interval among the high-scoring group. These results suggest that a socially prescribed personality trait may contribute to the development and persistence of burnout among teachers (Childs & Stoeber, 2012). Another study among teachers found that the pressure associated with parents' perception of perfection was associated with higher levels of reduced professional efficacy and total burnout, whereas perceived pressure from colleagues predicted lower levels of exhaustion, reduced efficacy, and total burnout (Stoeber & Rennert, 2008). Furthermore, negative reactions to imperfection among teachers served as a predictor for higher levels of total burnout and its dimensions (Stoeber & Rennert, 2008). By contrast, striving for perfectionism appeared to have an inverse effect on burnout (Stoeber & Rennert, 2008), potentially serving as a protective factor against it (Hill & Curran, 2016).

#### *1.4 Aims of the study*

This study examined whether personality characteristics vis-à-vis perfectionism associate with burnout among Finnish primary school teachers. A previous study by Stoeber & Rennert (2008) found that secondary school teachers perceived the highest pressure from their students' parents, which exhibited the highest correlation with burnout and its dimensions. While this earlier study focused on secondary school teachers, the study here, by contrast, examines the associations between adaptive and maladaptive aspects of perfectionism, burnout, and its components in a sample of Finnish primary school teachers. We examined three dimensions of perfectionism: striving for perfection (adaptive perfectionism), negative reactions to imperfection (maladaptive perfectionism), and perceived pressure to be perfect (socially prescribed perfectionism). As such, we tested the following hypotheses: 1) striving higher for perfection is associated with a lower degree of burnout and its dimensions; 2) negative reactions to imperfection are associated with a higher level of burnout and its dimensions; and 3) perceived pressure from students, students' parents, and colleagues are divergently associated with burnout and its dimensions.

## *2. Methods*

### *2.1 Study population*

Data were collected between 2013 and 2014 through a self-administered questionnaire, which was sent to randomly selected schools in the Helsinki metropolitan area of Finland. A total of 250 questionnaires were distributed, whereby 76 primary school teachers participated by completing the questionnaire, representing a 47% return rate. The questionnaire included information about demographics, years working in education, burnout, and perfectionism. Study participants provided

their written informed consent and the questionnaires were kept confidential. The study followed the ethical principles of the University of Helsinki.

## 2.2 Measures

### 2.2.1 Burnout

**Burnout** was assessed using the Finnish version of the Maslach Burnout Inventory General Survey (MBIGS) (Schaufeli *et al.*, 1996). It includes three subscales consisting of 16 items representing exhaustion (5 items, Cronbach's  $\alpha = 0.92$ ) cynicism (5 items, Cronbach's  $\alpha = 0.88$ ), and reduced efficacy (6 items, Cronbach's  $\alpha = 0.77$ ). All items were scored on a seven-point frequency rating scale ranging from 0 (never) to 6 (daily). Mean scores were obtained for each dimension of burnout (Stoeber & Rennert, 2008).

### 2.2.2 Perfectionism

**Perfectionism** was assessed using the Multidimensional Inventory on Perfectionism in Sports, adapted to teachers and the education context (Stoeber & Rennert, 2008). The perfectionism inventory includes three dimensions of perfectionism: striving for perfection (Cronbach's  $\alpha = 0.94$ ), characterized by statements such as “It is important to me to be perfect in everything I attempt; negative reactions to imperfection (Cronbach's  $\alpha = 0.91$ ) reflecting statements such as, “I feel extremely stressed if everything doesn’t go perfectly”; and perceived pressure from colleagues, students, and students’ parents to be perfect (Cronbach's  $\alpha = 0.97$ ). Participants were instructed to assess how they typically performed their job and what kinds of pressure they perceived from colleagues, students, and students’ parents. Participants responded using a six-point scale ranging from 1 (never) to 6 (always). Mean scores were obtained for each dimension of perfectionism, whereby higher values indicate higher levels of perfectionism.

### *2.3 Statistical analyses*

First, we calculated bivariate correlations between the study variables. Next, the associations between perfection and burnout and their dimensions were examined through a series of linear regression analyses controlling for age, sex, and years working. Analyses were conducted for each dimension of perfectionism separately (negative reactions to imperfection, striving for perfection, and perceived pressure from parents, students, and colleagues to perform perfectly). All analyses were performed using SPSS Statistics, version 21.0.

### *3. Results*

Our sample consisted of 76 primary school (grades 1 to 6) teachers (66 women), aged between 25 and 63 years (mean (M) = 43.95, standard deviation (SD) = 10.10). Both the gender (86.8% female) and age distribution (33% under 40, 34% aged 40–49, and 33% aged 50 or over) of the participants mimicked national demographic profiles among teachers in Finland (Finnish National Board of Education, 2013). Table 1 provides a summary of the descriptive statistics of our sample.

**TABLE 1**

Characteristics of the sample.

Measure	M/n	SD/%	Range
<b>Age</b>	43.95	10.10	25-63
<b>Gender</b>			
Men	10.00	13.16	
Women	66.00	86.84	
Years of teaching	14.20	10.10	0-36.50
<b>Perfectionism</b>			
Striving for perfectionism	3.36	1.22	1.00-5.00
Negative reactions to imperfection	2.11	0.94	1.00-5.00
<b>Perceived pressure to be perfect</b>			
from colleagues	2.06	0.95	1.00-4.71
from students	2.34	1.13	1.00-5.00
from students' parents	2.70	1.18	1.00-5.00
<b>Burnout</b>			
Exhaustion	1.68	1.39	0.00-5.80
Cynicism	1.20	1.41	0.00-5.40
Reduced professional efficacy	1.08	0.84	0.00-3.67
Total burnout	1.39	1.02	0.10-4.77

Table 2 provides the results of the bivariate correlations of the study variables. Striving for perfection correlated with negative reactions to imperfection ( $r = 0.64$ ,  $p < 0.001$ ), indicating that teachers who strive for perfection are likely to react negatively when they fall short of perfect results. Moreover, both striving for perfection and negative reactions to imperfection strongly correlated with perceived pressure from students, students' parents, and their colleagues to be perfect. Furthermore, we found inter-correlations for three sources of pressure to be perfect, indicating that teachers who perceived intense pressure to be perfect from their colleagues also perceived intense pressure from their students and students' parents. By comparison, age ( $r = -0.33$ ,  $p < 0.001$ ) and years of teaching ( $r = -0.32$ ,  $p < 0.001$ ) negatively correlated with negative reactions to imperfection, suggesting that younger teachers are prone to react more negatively to imperfection.

We also examined the bivariate relationships between three dimensions of perfectionism and its relationship to the dimensions of burnout. We found that negative reactions to imperfection were related to higher burnout ( $r = 0.61, p < 0.001$ ), higher levels of exhaustion ( $r = 0.59, p < 0.001$ ), higher degrees of cynicism ( $r = 0.48, p < 0.01$ ), and feelings of reduced professional efficacy ( $r = 0.34, p < 0.01$ ). Striving for perfection was related to higher burnout ( $r = 0.24, p < 0.05$ ) and higher levels of exhaustion ( $r = 0.25, p < 0.05$ ). Moreover, years of teaching correlated negatively with total burnout ( $r = -0.26, p < 0.05$ ) and exhaustion ( $r = -0.27, p < 0.01$ ). In addition, being older was related to lower rates of exhaustion ( $r = -0.26, p < 0.01$ ), implying that younger teachers are at a greater risk of experiencing exhaustion.

**TABLE 2**

Bivariate correlations between study variables.

	1	2	3	4	5	6	7	8	9	10
1 Age										
2 Years teaching	0.81***									
3 Striving for perfection	-0.18	-0.11								
4 Negative reactions to imperfection	-0.33***	-0.32***	0.64***							
5 Pressure from students	-0.34**	-0.29**	0.32**	0.39***						
6 Pressure from students' parents	-0.30**	-0.35**	0.29**	0.35**	0.77***					
7 Pressure from colleagues	-0.26*	-0.29**	0.36***	0.31**	0.75***	0.66***				
8 Exhaustion	-0.26*	-0.27*	0.25*	0.59***	0.22	0.22	0.20			
9 Cynicism	-0.19	-0.20	0.19	0.48***	0.37***	0.38***	0.30***	0.57***		
10 Reduced professional efficacy	-0.09	-0.09	0.12	0.34**	0.14	0.20	0.08	0.39***	0.43***	
11 Total burnout	-0.22	-0.26*	0.24*	0.61***	0.29**	0.31**	0.25*	0.90***	0.80***	0.64***

\*\*\*p &lt; 0.001, \*\*p &lt; 0.01, \*p &lt; 0.05

The results from the linear regression analyses appear in Table 3. Negative reactions to imperfection were associated with higher scores on burnout ( $\beta = 0.60, p < 0.001$ ), exhaustion ( $\beta = 0.56, p = 0.000$ ), and cynicism ( $\beta = 0.48, p = 0.000$ ) scores, but with lower professional efficacy scores ( $\beta = 0.38, p = 0.002$ ). By contrast, striving for perfection was not associated with burnout or any of its dimensions. Perceived pressure to be perfect from colleagues to be perfect was not associated with burnout ( $\beta = 0.13, p = 0.28$ ), exhaustion ( $\beta = 0.08, p = 0.51$ ), cynicism ( $\beta = 0.16, p = 0.19$ ), or reduced professional efficacy ( $\beta = 0.06, p = 0.66$ ). However, perceived pressure from students to be perfect was associated with a higher level of total burnout ( $\beta = 0.26, p = 0.04$ ) and exhaustion ( $\beta = 0.25, p = 0.05$ ), but not with cynicism ( $\beta = 0.22, p = 0.08$ ) or a reduced professional efficacy ( $\beta = 0.13, p = 0.31$ ). Perceived pressure from students' parents to be perfect was also associated with a higher level of total burnout ( $\beta = 0.24, p = 0.05$ ), but not with the dimensions of exhaustion ( $\beta = 0.23, p = 0.07$ ), cynicism ( $\beta = 0.20, p = 0.10$ ), or reduced professional efficacy ( $\beta = 0.14, p = 0.25$ ).

**TABLE 3**

Results from the linear regression analysis for perfection and the dimensions of burnout.

<i>Perfectionism</i>	<b>Total burnout</b>		<b>Exhaustion</b>		<b>Cynicism</b>		<b>Reduced professional efficacy</b>	
	b	p value	b	p value	b	p value	b	p value
Striving for perfection	0.18	0.134	0.20	0.105	0.12	0.315	0.96	0.436
Negative reactions to imperfection	0.60***	<0.001	0.56***	<0.001	0.48***	<0.001	0.38**	0.002
Perceived pressure to perform perfectly from								
Colleagues	0.13	0.276	0.16	0.193	0.08	0.510	0.06	0.658
Students	0.26*	0.037	0.22+	0.076	0.25*	0.042	0.13	0.311
Students' parents	0.24*	0.050	0.20+	0.095	0.225+	0.070	0.146	0.215

Note: Each dimension of perfectionism was analyzed separately controlling for gender, age, and years teaching.

\*\*\* $p < 0.001$ ; \* $p < 0.05$ ; + $p < 0.10$ .

#### *4. Discussion*

This study examined the association between adaptive and maladaptive aspects of perfectionism and the dimensions of burnout among primary school teachers. Our findings show that individual differences in perfectionism and professional age play a role in teacher burnout. Striving for perfection was not related to burnout or its various dimensions. However, negative reactions to imperfection were associated with higher levels of total burnout and all of its dimensions (exhaustion, cynicism, and a reduced professional efficacy).

##### *4.1 Maladaptive perfectionism*

This study's findings are partially consistent with those reported in previous research linking negative aspects of perfectionism to burnout among teachers and other professions (Chang, Chou, Liou, & Tu, 2016; Childs & Stoeber, 2012; Stoeber & Rennert, 2008). A previous study among secondary school teachers found that negative reactions to imperfection contributed to burnout and its dimensions (Stoeber & Rennert, 2008). However, one study among English teachers only linked perfectionism to cynicism and exhaustion due to the intervening impact of anxiety (Mahmoodi-shahrehabaki, 2017). Furthermore, the results here are not in line with previous findings on the perceived pressure one feels from students and colleagues (Stoeber & Rennert, 2008). Stoeber and Rennert (2008) found that pressure from students' parents was associated with burnout; however, perceived pressure from colleagues and students was not associated with symptoms of burnout. Here, we found that the perceived pressure from students and students' parents to perform perfectly associated with a higher level of total burnout, and the perceived pressure from students to perform perfectly also associated with a higher level of cynicism. Such differences could be partly due to the different kinds of pressure teachers feel in the work environment, such as work demands, students'

classroom behavior, and the age of the students. In previous studies, teachers' experiences of stress were associated with high demands (Hakanen *et al.*, 2006), time pressures, managing misbehaving students (Kokkinos, 2007), as well as with the cumulative exposure to problem behavior among pupils, and violent or threatening situations in schools (Ahola *et al.*, 2013; Ervasti *et al.*, 2012). Our study focused on primary school teachers, while other studies have examined experiences among secondary school teachers. Primary school teachers might feel more responsibility towards the upbringing and teaching of younger students. Furthermore, some evidence exists linking stress due to an effort–reward imbalance to burnout (Gluschkoff *et al.*, 2016), which might serve as a contributing factor among primary school teachers. However, these findings show the importance of differentiating between the sources of perceived pressure to be perfect.

In addition, previous studies have linked maladaptive perfectionism to emotion-focused coping (Chang, 2012). Thus, individuals with emotion-focused coping aim to avoid problems rather than actively solve them. This may lead to poor recovery strategies linked to higher rates of burnout (Gluschkoff *et al.*, 2016). As such, emotion-focused coping may increase concerns regarding making mistakes and perceived pressure from others, which often increases stress rather than supporting recovery and relaxation. Perfectionists tend to criticize themselves when everything is not perfect, potentially leading to inactive coping and an inability to solve problems. Instead, such individuals might not even attempt to complete a task because they fear failure (Flett, Greene, & Hewitt, 2004).

#### *4.2 Striving for perfectionism and burnout*

We found that striving for perfection was not associated with burnout or its dimensions, a finding consistent with previous studies (Chang, Chou, Liou, & Tu, 2016; Hill & Curran, 2015; Stoeber & Rennert, 2008). Thus, it seems that striving for perfection does not relate to burnout among

teachers. In their study, Stoeber and Rennert (2008) suggested that individuals who strive for perfection might look at potential stressors as challenges rather than threats, potentially leading them to use active coping skills. Striving for perfection is perceived as self-orientated perfectionism, where a person sets high standards for themselves and where being perfect is important (Hewit and Flett, 1991). However, individuals striving for perfection are not overly concerned with making mistakes, possibly serving as a protective factor vis-à-vis burnout. This most likely decreases rumination, self-blame, or perceived blame from others. Alternatively, this drives the person to work hard to achieve their goals.

#### *4.3 Limitations and strengths*

When interpreting the results from this study, we must consider several of its limitations. First, this study only examined the cross-sectional association between perfectionism and burnout. Future studies should also explore recovery-related factors and earlier signs of stress in these associations. Second, our study sample was small and limited to the Helsinki municipality only. In the future, replicating this study to include a wider demographic area in Finland and teachers working at different educational stages remain important.

This study also has several strengths. Burnout was measured with the most commonly used instrument—MBI-GS, a valid scale to screen for burnout and specifically intended for research purposes (Schutte, Toppinen, Kalimo, & Schaufeli, 2000; Taris, Schreurs, & Schaufeli, 1999). In our study, we examined total burnout as well as its various dimensions. Second, we used a multidimensional inventory to assess perfectionism, including the dimensions of adaptive and maladaptive perfectionism traits. Such questionnaires were previously used to assess perfectionistic traits among teachers (Stoeber & Rennert, 2008). Third, we successfully assessed the effects of professional age on burnout. This provided important information, whereby younger teachers

appear to carry a greater risk of experiencing exhaustion. Taken together, these results may be used to put into place preventive measures to support novice teachers when they begin their careers.

#### *4.4 Conclusions*

In conclusion, our results suggest that negative reactions to imperfection and perceived pressure from students and students' parents are associated with burnout and its various dimensions among primary school teachers. However, striving for perfection is not related to burnout. Rather, it may serve as a protective factor.

#### *4.5 Practical implications*

First, adaptive perfectionism—that is, striving for perfection—was not associated with burnout. Thus, adaptive perfectionism could represent a strength in the work environment. In previous studies, adaptive perfectionism has been linked to self-starting and innovative behavior as well as persistently good performance (Chang *et al.*, 2016). Knowledge of adaptive perfectionism can be useful when planning new teaching processes as well as in designing early support interventions for employee wellbeing. Teachers who strive for perfection may be involved in innovative projects and processes involving new developments. All employees benefit from knowledge of psychological recovery skills and improving their overall wellbeing.

This study found an inverse correlation between age and negative reactions to imperfection, suggesting that younger teachers react more negatively towards imperfection. As such, these results indicate that interventions should be developed to reduce the negative effects of perfectionism and should target younger teachers just beginning their careers in particular. In this case, management, curriculum planners, and older colleagues play important roles. Such knowledge can help

management develop introductory and mentoring programs to support younger teachers. Such programs could include information on strategies to handle negative feedback and imperfection, balancing between resources and their available time, setting clear and realistic work goals and schedules, and learning what is sufficient given the time and resources at hand. Management at specific work places could also design mentoring programs and create work counseling programs in group settings consisting of participants from a range of professional ages. Furthermore, such programs could also include information related to skills in psychological recovery strategies such as detachment from work (Gluschkoff et al., 2017) and teach active rather than emotion-focused coping skills.

Preventive measures are not always sufficient; therefore, planning treatment programs for individuals suffering from cumulative stress or burnout has proven beneficial. These interventions can be developed in cooperation with occupational healthcare services. In addition, such interventions should take personality characteristics into consideration to design treatment options, such as individual versus group treatment options as well as what kinds of treatment methods are useful.

Aspects of perfectionism and burnout could also be taken into consideration during basic education and in specialized training for teachers. Such educational and training programs could include courses in self-leadership skills, recovery strategies, and mindfulness-based self-compassion training. For instance, self-leadership skills have been linked to effective coping strategies and lower stress levels (Dolbier, Soderstrom, & Steinhardt, 2001), while self-leadership programs could include skills related to recovery strategies, work planning, setting realistic goals, limiting multitasking, and self-talk and improving overall wellbeing skills. Furthermore, previous studies found beneficial results when reducing stress and burnout through mindfulness programs (Flook, Goldberg, Pinger, Bonus, & Davidson, 2013; Roeser et al., 2013). In recent years, a growing body of research has focused on the potential benefit of mindfulness. As such, practicing mindfulness

may benefit teachers who score high on perfectionism vis-a-vis coaching them to develop self-compassion skills, as well focusing on the here and now rather than past or future events. This represents an important skill today, since many workplaces require constant learning and changes occur at a fast pace. Mindfulness programs could be directed towards self-compassion, since individuals with maladaptive perfectionism are often quite hard on themselves and may benefit from being more compassionate towards themselves.

Perceived pressure from students and students' parents may be relieved through self-compassion since a person with maladaptive perfectionism often focuses on the perceived pressure during regular discussions. Self-compassion, thus, can be discussed during one-on-one meetings with a manager and during peer discussions. Finding ways to deal with such expectations, setting realistic goals for students, and communicating these to students and students' parents may help individuals cope. Perceived pressure from colleagues did not associate with burnout. Yet, teachers could use more peer support, learn from each other, provide feedback, and offer support when needed.

Furthermore, the finding that striving for perfection is not related to burnout is important vis-à-vis supporting teachers who strive for excellence. In previous studies, healthy perfectionism associated with innovative behavior in the work place (Chang, Chou, Liou, & Tu, 2006). Such teachers could benefit from challenges and innovative development projects. In addition, these employees may represent dream workers, since they strive to perform well. In conclusion, individuals who strive towards perfectionism are not overly concerned with mistakes or perceived expectations from others, and as such should not be worried about their wellbeing. Rather, they use their drive to achieve their goals in their work and free time.

#### *4.6 Future research*

Many possible directions for further investigation result from the findings here. In the future, including recovery strategies into research that studies maladaptive and adaptive perfectionism and its links to burnout among teachers is important. This could better target intervention programs to teachers as well as support preventive care. Similarly, studying a larger sample and comparing professionals from different educational settings such primary, elementary, and high schools, as well as the university level, would prove insightful. Furthermore, additional research should take into consideration the different sources of perceived pressure and their association with stress and burnout.

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