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### The Big Five and Burnout among Teachers: the Moderating and Mediating Role of Self-Efficacy

**Abstract:** The aim of this study was to analyze the relationship between Big-Five personality traits, perceived self-efficacy (GSES) and dimensions of occupational burnout in accordance with Christina Maslach's three-factor burnout model (emotional burnout, depersonalization, perceived lack of own accomplishments). Data collected among 271 teachers (82% female) aged 20–68 confirmed findings from previous research that four personality traits (Neuroticism, Extraversion, Agreeableness, Conscientiousness) are correlated with burnout and that they are significant predictors for all dimensions of burnout. In addition, it was shown that GSES plays a moderating role as a buffer that protects people with high levels of neuroticism from a sense of lack of own accomplishments. It was also found that GSES plays a mediating role for the relationship between Extraversion, Conscientiousness and Neuroticism and perceived lack of own accomplishments and that it is a suppressor for the relationship of neuroticism with emotional exhaustion. The results are discussed in the context of personality theories and their possible applications.

**Keywords:** big five, burnout, teachers, self-efficacy

From a broader point of view, the concept of burnout connected with life dissatisfaction and workplace depression (c.f., Ahola & Hakonen, 2012; Hakonen & Schaufeli, 2012; Toker & Biron, 2012) as a basis for workers' disability raises important issues for practitioners, which have extensive implications for employees (including teachers), clients, employers and insurance providers (e.g., Hall, Johnson, Watt, Tsipa, & O'Connor, 2016). There is a need to better understand the risk factors, protective factors against the development of burnout, and various underlying mechanisms. Research and conceptual development that include the testing interplay between personality factors, self-related constructs (such as Self-Efficacy), and the burnout experience are needed for firm progress. Attempts to identify risk factors that enhance inclination to job burnout have been mostly limited by a tendency to focus on selected external/environmental than the internal/dispositional contributory factors to the syndrome (e.g., Chirkowska-Smolak, 2009). To get a better understanding of the process of burnout, the personality–

burnout relationship should receive more attention. The various personality dimensions may demonstrate an influence on perceptions of burnout through several theoretical mechanisms. Given the importance of employee burnout, we aimed to explore mechanisms through which personality is related to burnout among Polish teachers.

#### The specificity of the teachers' work

The teachers belong to the professional group most exposed to occupational burnout, and in Poland there are higher and higher rates of burnout in this population (Tucholska, 2008). Performing the teaching profession in the contemporary, dynamically changing and complex world (cf. the notion of VUCA World) is a big challenge and is burdened with high requirements, which makes teachers exposed to experiencing strong and long-lasting stress. On the one hand, teachers have to meet high requirements related to their professional role, i.e.: contact with other people, emotional involvement in work,

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continuous improvement of professional skills, as well as functioning in a stressful work environment and the need to constantly deal with difficult situations (Żłobicki, 1999). On the other hand, teachers are required to carry out many different tasks and perform many functions simultaneously, such as: model function, didactic function, instructional function and educational function. The model function is related to providing the students with a good example and establishing a constructive personal pattern for them. The didactic function consists in being an efficient educator who, in a comprehensive and clear way, provides students with reliable knowledge based on the latest scientific achievements. The instructional function is about being a skilled coach who can facilitate and improve the process of acquiring knowledge and basic skills. On the other hand, the educational function refers to being a kind of “a guide”, giving support in the field of discovering and stimulating the personal potential, supporting the developmental tasks, and shaping responsibility for the development of students (Gaś, 2001). The above-mentioned requirements related to the profession of teacher also include challenges associated with the dynamic development of civilization, social changes, rapid development and impact of mass media, spread of computer techniques, changes in social awareness and high expectations currently posed to institutional education, as well as the increase in the availability of stimulants among young people and the development of addictions (Żłobicki, 1999).

In addition, the teaching profession is characterized by indirect effects of work, and potential rewards are away over time, which can give rise to a lot of frustration. Other stressful factors of a teacher’s work in Poland include low pay and low social status. All these factors contribute to the fact that the teachers’ professional group is particularly exposed to the burnout syndrome.

It is also worth emphasizing that the burnout syndrome mostly affects those engaged in work and working in schools where high standards of work matter (Kirenko & Zubrzycka-Maciąg, 2011). According to some researchers, the greatest risk of occupational burnout occurs in teachers who believe in their own ideals and strive to make them happen (e.g. Pines, 2000). They are deeply involved in their work and carry it out with great passion, but in a situation where they do not see the expected results, they experience a strong disappointment.

### **Burnout among teachers and its symptoms**

According to the three-factor concept of professional burnout by Maslach (2000), professional burnout is defined as: “emotional exhaustion syndrome, depersonalization and decrease in performance level, which often occurs in people working in professions requiring very intense interpersonal contact with patients, clients or the public” (Zimbardo, 2005, p. 512). Nevertheless, burnout symptoms can occur among all occupational groups (Golembiewski, 1989), therefore Schaufeli, Leiter, Maslach and Jackson (1996; Maslach & Leiter, 2008) proposed a more universal concept of burnout. They modified descriptions of basic

dimensions (and scales to measure them) taking into account: 1) exhaustion covering emotional functioning and physical condition rather than emotional exhaustion; 2) cynicism understood as a distanced attitude towards work, as well as coldness and indifference towards the people or clients instead of depersonalization; 3) reduced professional efficiency instead of feeling the lack of personal accomplishments.

However, in relation to teachers and social professions, Maslach and Leiter (2008) propose to continue to take into account the previously introduced dimensions: emotional exhaustion, depersonalization and a sense of lack of personal accomplishments. The development of teachers’ occupational burnout, similar to those of assistance workers, includes three main phases that vary in severity and the type of symptoms (Maslach, 2000; Kirenko & Zubrzycka-Maciąg, 2011).

The first stage of professional burnout is associated with **emotional exhaustion**. It is a warning phase in which the teacher shows unwillingness and reduced interest in performing professional duties. As a result of exhausting the possibility of engaging in contacts with students, the teachers distance themselves from student affairs and loosens ties with them. At this stage, the following mental and somatic symptoms may occur: decline in activity, feeling bored, irritability, persistence of tension, constant fatigue, gastrointestinal disorders, headaches. The second phase is called **depersonalization** and occurs when the above-mentioned symptoms persist for a long time (Maslach, 2000). Depersonalization consists in indifference and lack of concern for student affairs, as well as dehumanization, labeling and instrumental treatment of them (Kirenko & Zubrzycka-Maciąg, 2011). It is associated with the increased need of mental distance in relation to students or other people in professional contacts. In this sense, depersonalization is a protection against the overload of strained mental and emotional resources. To increase the distance between them and students, the teachers use such techniques as: shortening time for close contact with students, use of tests instead of conversations in students, lack of willingness to conduct extra-curricular activities, unjust punishment and blaming students, etc. (Kirenko & Zubrzycka-Maciąg, 2011). The above-mentioned behaviors lead to diminish job meaning and job satisfaction, but first and foremost, they make it impossible for teachers to achieve professional successes, which in turn causes a feeling of lack of personal accomplishment.

The third phase is associated with the **further development of symptoms in teachers at the physical, mental and somatic levels**. It appears when they become chronic. Somatic symptoms are particularly noticeable here and take the form of diseases such as, for example, hypertension or stomach ulcers. On the psychic level, these teachers suffer from depression, a sense of loneliness and isolation from other people. Teachers affected by burnout are convinced that they have failed in professional life and have a lower self-esteem. They perceive themselves and their own accomplishments in a negative light, feel misunderstood by their superiors and lose the ability to

adapt to function in a demanding professional environment. This causes further increase of difficulties in solving problems in working with students. This phase of burnout may be manifested by aggressive and escapist escape and may even bring the decision of profession change.

Professional teachers' burnout is related to individual, organizational and socio-demographic dimensions of functioning (cf. Maslach et al., 2001; Tucholska, 2008). The organizational factors related to occupational burnout include among others: a high number of difficult and emotionally engaging contacts with clients (students, parents, etc.), unfavorable conditions related to organizational and administrative aspects of work, negative atmosphere at work, work specifics unfavorable to experience of successes (see Kirenko & Zubrzycka-Maciąg, 2011), overloading with the quantity and quality of duties and tasks posed to the employee (Watmough, 1983), as well as the lack of social support in the workplace (Pyżalski, 2010). Socio-demographic factors related positively to professional burnout among teachers are, for example, too many students per class (Russel et al., 1987), the size of the school and a high level of urban development (Abel & Stewell, 1999).

Many authors indicate that burnout is associated with occupational stress (e.g.: Sęk, 2000; Ogińska-Bulik, 2006; Wolicki, 2008). According to McMichael (1987), reactions to stressors are dependent on both personality and environmental properties. "Stress occurs when human abilities fail to meet the requirements of the working environment or when there are clear obstacles preventing satisfying strong needs or achieving certain values" (McMichael, 1987, p. 197). Maslach and Leiter (2004, 2008) also highlight that burnout is a result of the chronic stress caused by a person-job misfit.

The importance of the burnout model is that it clearly places the individual stress experience within a broader social context and involves the person's conception of both self and others. The job-induced character of burnout has been considered a key distinguishing characteristic of the syndrome (Schaufeli & Enzmann, 1998; Maslach et al., 2001; Shirom, 2005). Although not considered a nosological entity in the latest editions of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; APA, 2013) and the International Classification of Diseases (ICD-10; World Health Organization, 2010), job burnout is associated with a variety of physical, psychological and occupational problems, including adverse health outcomes, for instance, coronary heart disease (for a systematic review, see Salvagioni et al., 2017), and has elicited growing interest among the psychologists and the psychiatrists over the last decades.

While burnout has been assumed to result from a misfit between the resources and expectations of the individual on the one hand, and the demands and realities of her/his work on the other (Freudenberger, 1974, 1975; Schaufeli & Enzmann, 1998), burnout researchers have paid much more attention to the environmental than to the dispositional contributory factors to the syndrome (e.g., Anczewska, Świtaj, & Roszczyńska, 2005). Nevertheless,

burnout has been linked to dispositional contributors and constructs such as perfectionism and need for approval, ruminative processing, or pessimistic attributions (e.g., Bianchi & Schonfeld, 2016; Philp, Egan, & Kane, 2012). Recent advances in job burnout literature have shown that certain personality traits such as neuroticism, extraversion can be informative markers of risk of the syndrome (see Alarcon, Eschleman, & Bowling, 2009; Swider & Zimmerman, 2010). Furthermore, some findings underscore the importance of a self-related factors in job burnout (c.f., Alarcon et al., 2009; Shoji et al., 2015). Self-related constructs such as self-esteem and general Self-Efficacy feature prominently in cognitive models. However, few studies have simultaneously investigated the unique relationship between self-related constructs, personality traits, and the three dimensions of burnout, while also testing potential mediational and interactional effects.

### Personality and burnout

McCrae and Costa (1999, 2003) presented a proposal for an integrated model that includes two levels of personality components (dispositional traits and specific adaptation patterns) and their relationship to emotions and behavior. In their model, the relationships between traits and behavior are mediated by specific adaptation patterns. This model has been modified and developed by McAdams and Pals (2006), who introduced the third level of personality constructs (narrative self) and – which is crucial – allowed the possibility of reciprocal relations between all levels. This may suggest that the influence of one personality level (e.g. traits) on specific behavioral patterns may be dependent (moderated) by another level of personality structure, e.g. specific adaptation patterns (cf. also Caspi et al., 2005).

The presented study focuses on the analysis of occupational burnout – understood as a threat to the sense of well-being in the workplace (Schaufeli, Taris, & Van Rhenen, 2008). The following personality traits as predictors of changes in this area of functioning were adopted: five personality dimensions in the Big Five model (Costa & McCrae, 1985): Extraversion, Neuroticism, Conscientiousness, Openness to Experience and Agreeableness.

According Alarcon et al. (2009) such variables as emotional stability, extraversion, conscientiousness, agreeableness, self-esteem, Self-Efficacy, locus of control, positive affectivity, negative affectivity, optimism, proactive personality, and hardiness, are correlated to burnout. Moreover, they found that personality traits expressed in the Five-Factor Model are significant predictors of each of the burnout dimensions and they recommended that personality variables should be included as predictors in future research on burnout (Alarcon et al., 2009). Big-Five traits also moderate the relationship between negative experiences and burnout, suggesting that personality may help to protect against known risks of developing burnout (Bakker, van der Zee, Lewig, & Dollard, 2006). These data also indicate that employee personality is related to burnout and the role of

personality variables should be examined in future research on burnout.

It was decided to replicate the results of previous studies presented in the meta-analysis of Alarcon, Eschleman and Bowling (2009) – and confirm the direct relationships of personality traits (in the Big Five model) with the results on the scale of professional burnout (hypothesis H1). On the basis of this meta-analysis and description of traits by Costa and McCrae (1992), it should be expected that Neuroticism (general tendency to undergo negative emotions) will be positively correlated with occupational burnout; Extraversion (tendency to positive emotions and activity in social relations), Conscientiousness (the degree of organization of the individual) and Agreeableness (positive attitude towards people) will be negatively correlated with the dimensions of burnout; and in the case of Openness to Experience (measure of cognitive curiosity), we do not expect significant relationships.

According to the assumptions of the McAdams and Pals (2006) model, it can be expected that the interdependence of personality traits and the quality of functioning in the workplace (no risk of burnout) will be moderated by the second level of personality: adaptive behavior patterns. For the purposes of this study, as an example of such a pattern of adaptation, the level of generalized conviction about self-efficacy was adopted. This construct was introduced to psychology by Albert Bandura (1977, 1995a, 1995b), who assumed that if people believe in their potential to solve problems and achieve goals, then they are more motivated for such actions and are more likely to take them. People with a higher sense of effectiveness choose more ambitious goals and are more persistent in achieving them. In the previous studies, the importance of this construct in the context of burnout was well documented – as a variable directly correlated with burnout and predicting it (Alarcon et al., 2009), as a mediator between job stress and burnout (Schwarzer & Hallum, 2008) and as moderator relationships between job role stressors and burnout (Perrewe et al., 2002). Self-Efficacy belief is also related to all the Big-Five traits (e.g. Bono & Judge, 2003). It can therefore be expected that this pattern of adaptation will correlate with the Big-Five traits and negatively correlate with the dimensions of burnout, primarily with Perceived Lack of Personal Accomplishment (H2). We also expect it to be a moderator especially for the relationship between Neuroticism and the risk of burnout (H3). We assume that a high sense of self-efficacy in comparison to low Self-Efficacy belief will be more favorable adaptively – it will buffer the negative functions of Neuroticism on Perceived Lack of Personal Accomplishment. On the other hand, the low self-efficacy belief compared to high Self-Efficacy belief will intensify the influence of Neuroticism on the belief that there are no professional accomplishments.

Regardless of the moderating character of the generalized belief in self-efficacy, according to McCrae and Costa' (1999, 2003) and McAdams and Pals' models (2006), we also expect its mediation function. Assuming

that we can confirm the correlative relationship of personality traits with the three dimensions of occupational burnout (H1) and relations between Self-Efficacy and dimensions of burnout (H2), we expect that Self-Efficacy belief as characteristic adaptation built on the traits will at least in a partial sense explain the relationship between personality traits and burnout dimensions (H4). Based on empirical premises about the relationship between personality traits and occupational burnout (Alarcon et al., 2009; Bakker et al., 2006), we expect mediation to be observed especially for those traits that are most closely related to the risk of burnout (Neuroticism, Extraversion, Conscientiousness). We expect that controlling of the GSES variable in regression models will reduce the strength of the relationship between the independent variable (personality traits) and the dependent one (burnout).

Schwarzer i Hallum (2008) state that low level of Self-Efficacy is always a risk factor for the occurrence of burnout syndrome and its high level is adaptively preferred. However there some data indicating that higher job engagement in unfavorable job environment with many obstacles and small resources can increase Emotional Exhaustion (Basinska, 2016). Higher Self-Efficacy predisposes for choosing more ambitious goals and higher engagement, thus in adverse environment it can deepen the problems resulting from the adverse impact of available personality traits.

In this research we can examine the adaptive role of Self-Efficacy for burnout in direct relations and in more complex context: as a moderator of the relationships between Big-Five traits and burnout, as well as a mediator o these relationships.

## Method

### Participants and procedures

As the participants of the current study 271 teachers (82% female) were recruited in multiple schools in Poland (53.5% of the teachers were employed in middle schools, and 46.5% in high schools). Teachers ranged in age from 20 to 68 years ( $M=43.14$ ;  $SD=10.39$ ); 51.3% of them worked in villages and small towns, and 48.7% were employed in cities.

The subjects were recruited directly at the schools, whose headmasters provided written permission to conduct the study among their employees. Participation in the study was completely voluntary. Each of the respondents filled in a written consent of participation. Questionnaires were completed by teachers both at work and outside. The teachers did not receive any additional remuneration for their participation and were informed that the research is for scientific purposes only.

IBM SPSS 24 and R statistical software were used to analyze collected data, together with PROCESS macro (Hayes, 2017) and R packages: Psych (Revelle, 2017) and Rockchalk (Johnson, 2017).

### Measures

The personality traits of the subjects were determined using the NEO-FFI personality inventory, by Costa and

McCrae (1985) in the Polish adaptation (Zawadzki, Strelau, Szczepaniak, & Śliwińska, 1998). Using the 60-item scale with a 5-point response scale (from 1 = definitely don't agree to 5 = definitely agree), the intensity of five personality traits was determined: neuroticism, extraversion, openness to experience, agreeableness and conscientiousness.

Generalized Self-Efficacy Belief was measured using the standardized GSES scale (Schwarzer, Jerusalem, 1992), adapted to Polish conditions by Juczyński (2000). This questionnaire consists of 10 questions with 4-grade scales assigned (definitely no – rather no – rather yes – definitely yes).

The occupational burnout of the subjects was measured using the Maslach Burnout Inventory questionnaire (MBI, Maslach, Jackson, & Leitner, 1996) in the Polish adaptation of Pasikowski (2009). This tool consists of 22 items, which are assigned to one of three dimensions of professional burnout: emotional exhaustion, depersonalization, disturbed perception of own accomplishments. 7 – grade scale is assigned to each scale (from 0 – never to 6 – every day), on which the examined person determines the frequency of occurrence of particular feelings.

The reliability (Cronbach's  $\alpha$ ), descriptive statistics and intercorrelations of the measured variables are presented in Table 1.

## Results

### Intercorrelations between examined variables

The data in the Table 1 showed that all three dimensions of burnout (Emotional Exhaustion, Depersonalization, Lack of Personal Accomplishment) were positively correlated with each other. As it was expected (H1) they were also positively correlated with Neuroticism and negatively correlated with three Big-Five traits:

Extraversion, Agreeableness, and Conscientiousness. General Self-Efficacy (GSES) belief was significantly (negatively) correlated to Neuroticism – and positively to Extraversion and Conscientiousness. It correlated significantly only with one dimension of burnout: Lack of Personal Accomplishment (what partly confirms H2).

### GSES as the moderator for the personality traits and burnout relations

To check the hypothesis (H3) about the moderating role of Self-Efficacy for the relationship of personality traits with burnout dimensions, the moderation analysis using PROCESS macro (Hayes, 2017) and percentile bootstrap CI method (10000 bootstrap resamples, 95% confidence intervals) was conducted. As shown in the Figure 1, GSES is significantly buffering the relationship between Neuroticism and Lack of Personal Accomplishment at work. The interaction is probed by testing the conditional effects of Neuroticism at three levels of general Self-Efficacy: low = one SD below the mean; medium = at the mean; high = one SD above the mean.

Neuroticism is significantly and positively related to not noticing one's own accomplishments at all examined levels of GSES. However, as the moderator's value gets higher – the strength of this relationship decreases (at the low level of GSES the standardized beta coefficient between the independent and dependent variable is .43 ( $p < .001$ ); at the medium level:  $beta = .32$  ( $p < .001$ ); and at the high level of GSES:  $beta = .22$  ( $p = .005$ ). The  $R^2$  change due to interaction is significant;  $F(1, 215) = 4.09$ ;  $p = .04$  – indicating the effect of moderation beyond the main effects of independent and moderating variables (Aiken & West, 1991).

GSES was not identified as the significant moderator for the relationships of other Big-5 personality traits with MBI dimensions.

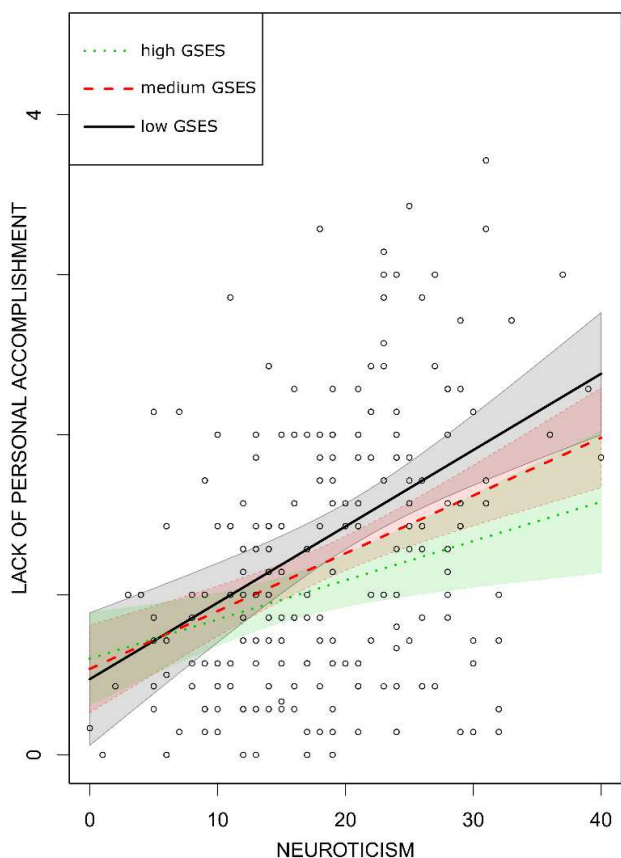
**Table 1. Descriptive statistics, reliability scores and intercorrelations of all collected variables**

	<i>M</i>	<i>SD</i>	<i>α</i>	NEU	EXT	OPE	AGR	CON	EE	DP	PLA
NEU	18.31	7.99	.87	1							
EXT	29.70	5.71	.76	-.433**	1						
OPE	27.93	5.08	.59	-.040	.168*	1					
AGR	32.94	5.23	.71	-.335**	.253**	.150*	1				
CON	35.16	6.29	.87	-.368**	.212**	-.094	.326**	1			
EE	1.96	1.16	.89	.494**	-.216**	.128	-.258**	-.261**	1		
DP	.83	.88	.75	.250**	-.156*	-.078	-.386**	-.230**	.492**	1	
PLA	1.27	.90	.84	.396**	-.378**	-.103	-.289**	-.388**	.370**	.335**	1
GSES	31.11	3.80	.85	-.374**	.236**	.089	.069	.295**	-.063	-.035	-.270**

Note. NEU = Neuroticism; EXT = Extraversion; OPE = Openness to Experience; AGR = Agreeableness; CON = Conscientiousness; EE = Emotional Exhaustion (MBI dimension); DP = Depersonalization (MBI dimension); PLA = Perceived Lack of Accomplishment; GSES = General Self Efficacy score.

\*  $p < .05$ ; \*\*  $p < .01$ .

**Figure 1. Scatterplot of the relationship between Neuroticism and Lack of Personal Accomplishment (burnout dimension), moderated by General Self-Efficacy level**



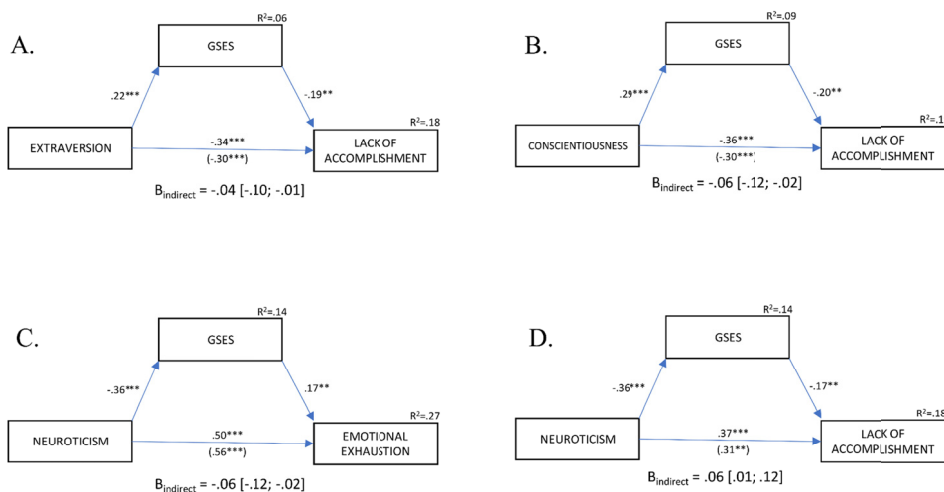
Note. Black regression line represents low general Self-Efficacy individuals (one SD below the mean); red line represents medium Self-Efficacy individuals (at the mean); green line represents high Self-Efficacy individuals (one SD above the mean). All regression lines include 95% confidence intervals.

**GSES as the mediator for the personality traits and burnout relations**

To verify the hypothesis (H4) that GSES can be treated as the mediator for the relationship of personality traits and burnout, a mediation analysis using PROCESS software (Hayes, 2017) was conducted. It is important to underline that such approach does not impose the causal relation of personality variables and burnout threat and it is only the examination of direct and indirect links between these two constructs. The percentile bootstrap CI method was applied – as described by Hayes and Scharkow (2013). Extraversion, Neuroticism and Conscientiousness traits were chosen to be analyzed as independent variables (because of their significant correlations with GSES, see: Table 1) and two dimensions of burnout (Emotional Exhaustion, Lack of Perceived Accomplishment) were treated as dependent variables – because the effects of GSES on Depersonalization after including a given Big-Five trait were not significant (similar to zero-order correlations).

Among all six of the analyzed models, in four of them the GSES variable was identified as the significant mediator for the relationship of personality traits and burnout dimensions (see Figure 2). Namely, general Self-Efficacy level mediates the impact of: 1) Extraversion on Lack of Accomplishment; 2) Conscientiousness on Lack of Accomplishment; 3) Neuroticism on Emotional Exhaustion; and 4) Neuroticism on Lack of Accomplishment. Bootstrapping ( $n = 10000$  bootstrap resamples, 95% confidence intervals) revealed the significant indirect effects in all of these models, while the direct effects keep being statistically significant before and after controlling GSES as the mediator. According to Baron and Kenny (1986) such outcome indicates the partial mediation, suggesting that GSES accounts for some, but not for all, of the relationship between personality traits and burnout threat.

**Figure 2. Standardized regression coefficients for the relationship between character traits and burnout as mediated by general Self-Efficacy score. The standardized regression coefficient between the analyzed trait and burnout, with controlling Self-Efficacy, is in parentheses.**



\*\*  $p < .01$ ; \*\*\*  $p < .001$ .

The specific example of mediation analysis is depicted in Figure 2c, where controlling the GSES puts up the direct relationship of Neuroticism and Emotional Exhaustion – it increases the predictive validity of Neuroticism by inclusion of GSES in the model (McKinnon, Krull, & Lockwood, 2000). The standardized regression coefficient of the relationship between independent and dependent variable increases from 0.50 to 0.56 after including GSES in the model, what meets the definition of suppression (Cohen & Cohen, 1983; Tzelgov & Henik, 1991). It is interesting that controlling Neuroticism also changed the sign and increased the value of standardized regression coefficient of the relationship between GSES and Emotional Exhaustion. Its predictive value increased from -.06 to +.17. Such results allow to infer about mutual suppression of Self-Efficacy and Neuroticism (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005).

## Discussion

### Correlational analyses – links between examined variables

As regards relations between Big-Five traits and burnout, the obtained results were fully consistent with the previous data (Alarcon et al., 2009; Bakker et al., 2006) and confirmed the hypothesis H1 stating that all dimensions of burnout are related to Neuroticism positively and negatively – to Extraversion, Agreeableness, and Conscientiousness. The hypothesis H2 was partly confirmed by the data. The Self-Efficacy in our research correlated with only three Big-Five traits (Neuroticism, Extraversion and Conscientiousness). The two others (Openness and Agreeableness) were very weakly related with GSES also in previous studies (Bono & Judge, 2003). It was related with only one dimension of burnout – Perceived Lack of Accomplishment – that was also much stronger related to Self-Efficacy than the other burnout dimensions in previous studies (Alarcon et al., 2009; Shoji et al., 2016). The last results indicate, that Self-Efficacy does not fulfil the key role for Emotional Exhaustion nor Depersonalization, but it is a crucial, direct factor for Perceived Lack of Accomplishment – its lower level is a risk factor and its higher level prevent from feeling of Lack of Personal Accomplishment.

### Self-Efficacy as a moderator of relationships between Big-Five and burnout

The hypothesis (H3) was confirmed in terms of the moderating role of Self-Efficacy for the relationship between Neuroticism and Perceived Lack of Personal Accomplishment. Among teachers with high Self-Efficacy positive relation between Neuroticism and Perceived Lack of Personal Accomplishment was much weaker than among teachers with low level of this self-belief. In other words, higher level of Self-Efficacy buffered negative functions of Neuroticism on Perceived Lack of Personal Accomplishment and lower level of this belief increased effect of Neuroticism on feeling of Lack of Accomplishment.

High level of Self-Efficacy as a moderator was more beneficial than its low level. This result is also partly consistent with finding gathered by Schwarzer and Hallum (2008), that low level of Self-Efficacy is a risk factor for the occurrence of burnout syndrome. However, this thesis has confirmation in obtained data among teachers only for one dimension of burnout – Perceived Lack of Personal Accomplishment. Although GSES development results from genetically conditioned traits, it is also shaped by the influence of experience, learning, and one can increase its level through appropriate interactions. Therefore, GSES can be shaped, increased and consequently it can provide protection from the negative impact of NEU or decrease its impact on the perception of lack of personal accomplishment.

### Self-Efficacy as mediator of relationships between Big-Five and burnout

The hypothesis H4 stating that general Self-Efficacy level mediates the impact of traits on burnout dimensions was confirmed in four out of six models designed in this order. The mediating function of Self-Efficacy was found in relationships between: 1) Extraversion and Lack of Accomplishment; 2) Conscientiousness and Lack of Accomplishment; 3) Neuroticism and Emotional Exhaustion; and 4) Neuroticism and Lack of Accomplishment. As regards Perceived Lack of Personal Accomplishment, the outcome indicates the partial mediation, that means that each analyzed trait (Neuroticism, Extraversion and Conscientiousness) influences this component of burnout directly and indirectly through Self-Efficacy. Each trait makes a foundation for developing Self-Efficacy, high Extraversion, Conscientiousness and Emotional Stability (reversed Neuroticism) facilitate its development, high Neuroticism hinder it. The high level of Self-Efficacy belief protects from feeling of Lack of Accomplishment, its low level is a risk factor for developing this component of burnout. These data once more confirm results presented by Schwarzer and Hallum (2008) indicating that low Self-Efficacy is a risk factor for burnout, but among teachers examined here, it only concerns Perceived Lack of Personal Accomplishment.

However, results obtained in the fourth model (Figure 2c) designed for Neuroticism and Emotional Exhaustion with Self-Efficacy as a mediator showed specific pattern. It occurred that simultaneous controlling Neuroticism and Self-Efficacy increased the standardized regression coefficients for the positive relationships between Neuroticism and Emotional Exhaustion as well as between Self-Efficacy and Emotional Exhaustion. Such results in mediation analysis can be called suppression (Cohen & Cohen, 1983; Tzelgov & Henik, 1991) or mutual suppression for both predictors, Self-Efficacy and Neuroticism (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005). This result means that higher Self-Efficacy like higher Neuroticism is related with higher Emotional Exhaustion. Inconsistently with results obtained by Schwarzer and Hallum (2008), our data showed that the high level of Self-Efficacy is a risk factor for developing this component of the burnout. We can see this relationship

only if we control both variables, Neuroticism and Self-Efficacy, because Self-Efficacy is related negatively to Neuroticism, which positive relations with Emotional Exhaustion are much stronger than relations with Self-Efficacy.

It seems worthy to notice that these results are a part of the new trend in research focusing on Self-Efficacy as a mediator of relationship between Big-Five and various dimensions of well-being. Data collected in various countries and cultures indicate that Self-Efficacy mediate relationships between the Big-Five traits and some Subjective Well-Being dimensions: Life Satisfaction (Zhang, 2016) and Subjective Happiness (Strobel, Tumasjan, & Sporrle, 2010) or depressive symptoms (Wang et al., 2014). Our data add a piece to that knowledge on Burnout as a special kind of well-being dimensions.

Lastly, we want to refer to integrative personality models offered by McCrae and Costa (1999, 2003) and McAdams and Pals (2006). All the results, except two findings, pertaining moderating function of Self-Efficacy in the relationships between Neuroticism and Perceived Lack of Personal Accomplishment and mutual suppression revealed for Self-Efficacy and Neuroticism regarding Emotional Exhaustion, are consistent with both models. Only the two mentioned exceptions are still consistent with the model proposed by McAdams and Pals (2006) assuming different relations and moderating effects of variables from various levels of personality. These results are contradictory to the assumptions of the model offered by McCrae and Costa (1999, 2003), in which Self-Efficacy can be a mediator but not a moderator in the relationships between traits and biographical elements (as burnout). These two examples of data call for richer model than that offered by McCrae and Costa (1999).

### Limitations

The research project, the results of which are presented in this article, has a number of limitations, including the fact that the research was carried out only on the sample of teachers from Polish schools. It can be assumed that Polish teachers, due to specific socio-demographic, economic and political conditions, may significantly differ in terms of exposure to risk factors that generate burnout syndrome from teachers from other countries.

Another limitation of the study presented in this article is the fact that it was implemented only among teachers. Therefore, the conclusion regarding the relationship between the personality factors discussed and the burnout may be limited to this professional group only. The specifics of the teaching profession discussed in the first part of the article can significantly prevent the results of these tests from being referenced to other professional groups that are characterized by different work specifics and where other specific factors that constitute a source of occupational burnout risk occur.

Cross-cutting nature is another big limitation of this study. Therefore, it is not possible to identify cause-and-effect relationships that occur between the variables

studied, and it is not possible to determine the influence of other factors involved in the mechanisms responsible for the formation and course of burnout. Measurements of all variables included in the study were made at the same time, which makes it impossible to capture the dynamics of relationships between individual personality traits, a sense of personal efficacy and professional burnout. An important limitation of this study is also related to the inability to determine daily fluctuations in the level of burnout in the subjects, and thus it is impossible to check to what extent the test results were affected by the psychophysiological state or mood of the subjects tested on the day of the study, and to what extent their burnout is stable in nature and remains steady over the long term. Therefore, it is difficult to assess the actual relationship between personality and burnout. On the other hand, it is worth emphasizing that the personality as such is relatively stable and remains stable over time. Nevertheless, it can be assumed that the inference from this study is strongly limited to a given moment in time.

Therefore, future studies should include the estimation of the range within which the relationships between personality factors and occupational burnout are stable and persist over time, and whether similar relationships occur in other professional groups, and how the relationships between the studied variables look like among teachers from other countries or geographical regions.

### Conclusions and further research suggestions

In the current study it was possible to confirm the significance of adaptive personality mechanisms (Self-Efficacy) as moderators and mediators for the relationship between Big-Five personality traits and job well-being indicator (burnout). GSES was found to be a buffering factor, especially beneficial for the individuals characterized by high level of Neuroticism (threatened by the increased risk of blindness to own personal accomplishment). Those findings open a new perspective for the further burnout research – as Self-Efficacy is a construct characterized by certain plasticity and possible to be trained (Eden & Aviram, 1993) in order to prevent burnout symptoms. Furthermore, personality researchers are also encouraged to plan new studies focused on other adaptive mechanisms – serving as moderators and mediators between personality traits and well-being indicators.

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