Predictability of big five traits in high school teacher burnout. detailed study through the disillusionment dimension

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ABSTRACT

This research aimed to investigate the theme of burnout syndrome in high school teachers. In particular, the objective was to verify if the five personality traits can be considered predictors of the four dimensions of burnout. The sample consisted of 171 teachers, 49 males and 122 females. For the burnout measurement, the Link Burnout Questionnaire (LBQ) was used, and for the personality measure, the Big Five Questionnaire (BFQ) was used. As predictive factors for the development of the negative polarity of Psychophysical Exhaustion, the results identify both Energy and Emotional Stability. For Relational Deterioration, the same traits emerge due to the dimension of Professional Inefficiency. For the LBM's Disillusion dimension, there was no corresponding predictive BFM trait, but by reducing the statistical error via analysis of regression with fixed effects, Agreeableness and Emotional Stability were predictive. The research confirms the relationship between personality and burnout, but future studies should both analyse the influence exerted by the contextual factors on the onset of the syndrome and deepen the research on the mental models.

Key words: burnout, personality, big five, link burnout questionnaire (lbq), teachers

INTRODUCTION

Burnout is a chronic stress syndrome that arises from numerous, ineffective attempts by people to work situations [1-4], and its symptoms show a behavioural pathology for professionals who perform activities with a high degree of interpersonal contact [5-7]. The multidimensional burnout construct conceived by Maslach [8] consists of three key elements: emotional exhaustion, depersonalization (cynicism) and a reduction of professional effectiveness. The first dimension involves a deterioration of physical and emotional resources in the person; the second causes

a relational separation from the users; and the third creates a perception of incapacity and uselessness in carrying out one's work [4,6,9,10]. Burnout is included in the ICD-10, sector XXI, "Factors influencing the state of health that involve the use of health services", item Z73, "Problems related to difficulties in orienting one's way of life" [11]. Edelwich and Brodsky [12], Meier [13] and Pines and Aronson [14] initially discussed burnout as a process of disillusionment that is triggered by an excessive idealization of the profession and the image of oneself linked to one's work. When the initial expectations collide with organizational reality, a deep sense of disappointment arises that may contribute to the development of burnout. Starting from a reflection on the limits of the Maslach Burnout Inventory (MBI) and the need to enhance the concept of disillusionment, Santinello [15] reworked the MBI by creating a new measurement tool, the Link Burnout Questionnaire (LBQ). In this tool, the Disillusion dimension not only fits well with the three already present in the burnout construct but has also obtained a sufficient degree of independence to justify a separate detection. Through the LBQ, the author emphasizes the possibility of offering a model that would be able to describe the phenomenon of burnout more completely [15]. Furthermore, the Disillusion dimension may prove useful in exploring the relationship between individual and context. To date, there have been numerous studies on aspects that may contribute to the onset of the syndrome; many of these have examined burnout from a contextual perspective, giving particular emphasis to organizational variables able to affect the development of the syndrome [16]. However, there are several authors who have identified a possible answer from personality [2,15,17]. For example, Cattel discussed personality, i.e., a cognitive-behavioural model that is stable over times and situations [18]. The Big Five represents the most widely used model in the study of personality, describing the latter in five traits: extroversion, openness, agreeableness, conscientiousness and neuroticism [10,19,20]. Studies that found a correlation between personality traits and burnout aimed to determine which of the traits might be predictors of the syndrome [1,21,22].

The literature has consistently identified teaching as a career with a high level of stress [3,23,24,25]; understanding how to help teachers develop strategies to deal with stressful situations and properly carry out their profession is thus of crucial importance [26]. The causes of psychosocial discomfort for teachers derive from the interaction of individual, social and organizational factors, which contribute to increasing the gap between the requests coming from the environment and the resources available to face them [27]. On the basis of this context, the present work aimed to investigate the influence of the five personality traits from the Big Five model on the emergence of burnout in high school teachers. In particular, the objective was to verify whether the five personality traits (extroversion, openness, amiability, conscientiousness and neuroticism)

can be considered predictors of the four dimensions of burnout (psychophysical exhaustion, relational deterioration, professional dissatisfaction and disillusionment).

METHOD

The questionnaires were administered according to a collective and individual data collection method within various higher education institutions of the city of Salerno, obtaining a sample of 171 teachers, with 49 males (28.7%) and 122 females (71.3%). The administration took place after signing the data releases.

To evaluate the link between the variables, we used the statistical technique of linear correlation (Pearson coefficient), which allowed us to establish not only the relationship between variables but also their intensity [28]. In the next phase, the ANOVA statistical technique was used to exclude the possibility that the relationship between the variables was due to chance. To establish the ability of personality to predict the onset of burnout, linear regression was applied, assigning the dimensions of burnout as dependent variables and the five personality traits as independent variables. Finally, if needed, we used regression with fixed effects to reduce statistical errors. These operations were possible with the help of the Statistical Package for Social Science v20 software (SPSS) [29].

Tools

For the burnout measurement, the Link Burnout Questionnaire (LBQ) was used, and for the personality, the Big Five Questionnaire (BFQ) was used.

LBQ - Link Burnout Questionnaire

The LBQ [15] is a self-report questionnaire that proposes new burnout indicators and provides specific application standards for 8 professions: nurses, doctors, educators, social workers, volunteers, teachers, administrative and technical hospital staff. To establish the validity of the instrument, the MBI was used, obtaining consistent correlation coefficients.

The LBQ consists of 24 items structured on six-point Likert scales (each with three items with positive polarity and three with negative polarity, ranging from "never" to "every day"), divided into four dimensions: a) Psycho-physical exhaustion: the feeling of being tired and under pressure; the exhaustion of psychophysical resources (α .77); b) Deterioration of the relationship: when the respondent's helping relationships with clients become alienated. (α .69); c) Professional ineffectiveness: when professional problems become incomprehensible situations

(α .68); and d) Disillusionment: what had been a passion has become a meaningless routine (α .85). The raw scores are transformed into points to establish the severity level: between 1 and 2 indicates an absence of burnout; between 3 and 7 indicates the potential for developing burnout; and between 8 and 9 indicates that burnout is in progress.

BFQ -Big Five Questionnaire

The B FQ [30] is an Italian standardized psychometric tool derived directly from the NEO Personality Inventory (NEO-PI) of Costa and McCrae; we also used the latter for correlation analysis to establish the validity of the BFQ.

The questionnaire consists of 132 items on five-point Likert scales that provide the degree of agreement with each item. The 5 personality traits are as follows: 1) Energy (E): this dimension evaluates the quality and intensity of interpersonal relationships, the level of activity, the need for stimulation, and the ability to feel joy. High scores in this scale refer to active, sociable, and talkative behaviour. This is called Extroversion in the Costa and McCrae model (α .81); 2) Agreeableness (A): this evaluates the quality of interpersonal orientations in an uninterrupted series of thoughts, feelings and actions,

ranging from compassion to antagonism; corresponds to Pleasantness in the Costa and McCrae model (α .73); 3) Conscience (C): this evaluates the degree of organization and perseverance of an individual; corresponds to the Conscience of Costa and McCrae (α .81); 4) Emotional stability (S): this evaluates the presence of a restless, nervous and more or less unstable emotional state as well as the ability to control emotions and behaviours in conflict situations; it corresponds to the trait of Neuroticism in Costa and McCrae. (α .90); 5) Mental openness (M): evaluates the proactivity and openness towards spontaneous and novel experiences and the pleasure of exploring what is unfamiliar; essentially, it is the attitude towards novelties. It corresponds to the openness to experience of Costa and McCrae (α .75).

RESULTS

Table 1 shows the average scores obtained by the participants. It is noted that the sample falls within the medium risk of the onset of burnout.

The data in table 2 show the correlations between the BFQ and LBQ. The variables are all inversely related to each other.

In order, the personality traits that are most significant

TABLE 1. Descriptive analysis, by gender, of the LBQ

	Obs	EP Media (SD)	DR Media (SD)	IP Media (SD)	D Media (SD)
F	122	5,25 (2,129)	5,79 (1,895)	4,26 (1,665)	5,19 (1,534)
M	49	5,31 (1,828)	6,35 (1,888)	4,47 (1,26)	5,51 (1,157)
TOT	171	5,26 (2,042)	5,95 (1,904)	4,32 (1,559)	5,28 (1,44)

Note. EP = Psychophysical Exhaustion; DR = Relational Deterioration; Professional ineffectiveness; D = Disillusionment.

TABLE 2. Correlations between LBQ and BFQ

LBQ			BFQ				
	OBS		E	A	C	S	M
EP	171	Pearson r	-.295**	-.223**	-.198**	-.404**	-.170*
		Sig. (two-tailed)	.000	.003	.009	.000	.027
DR	171	Pearson r	-.327**	-.265**	-.179*	-.338**	-.388**
		Sig. (two-tailed)	.000	.000	.019	.000	.000
IP	171	Pearson r	-.306**	-.176*	-.201**	-.350**	-.343**
		Sig. (two-tailed)	.000	.021	.008	.000	.000
D	171	Pearson r	-.296**	-.345**	-.258**	-.295**	-.335**
		Sig. (two-tailed)	.000	.000	.001	.000	.000

Note. EP = Psychophysical Exhaustion; DR = Relational Deterioration; Professional ineffectiveness; D = Disillusionment; E = Energy; A = Agreeableness; C = Conscientiousness; S = Emotional stability; M = Mental openness. * The correlation is significant at 0.05 level (two-tailed); ** Correlation is significant at 0.01 (two-tailed).

for the dimension of Psychophysical Exhaustion (EP) are Energy (E) (r -295; p Value .000) and Emotional Stability (S) (r =, -.404; p Value .000). This result indicates that in subjects who tend to be more extraverted, the positive pole corresponds to the Psychophysical Exhaustion (EP) dimension of the LBM based on a strong negative correlation. The size of Relational Deterioration (DR) is negatively correlated with all 5 dimensions of the BFM, with a lower significance for the (C) (r = - 179; P Value .019); the other traits all have the same significance (p Value .000). Regarding the dimension of Professional ineffectiveness (IP), the most significant correlational traits are those of Energy (E) (r = -306; P Value .000), Emotional Stability (S) (r = -350; p Value .000) and of the Mental Opening (M) (r = -343; P Value .000). The last dimension, Disillusion (D), is less significant the section of Consciousness (C) (R = - 258; P Value .001). The one-way ANOVA showed that the links between the variables are not due to a specific case (P Value), which allows the linear regressions to be applied to establish which traits are predictors for the onset of each of the four dimensions of burnout (table 3).

The results show that both Energy (E) (p Value .018) and Emotional Stability (S) (p value .000) are predictive factors in the development of the negative polarity of Psychophysical Exhaustion (EP).

For Relational Deterioration, the predictors are Emotional Stability (p Value .008 (p) and Mental Opening (p Value .005). The same traits are predictors for the dimension of the Professional Ineffectiveness. (S = p Value .001; M = p Value .023). In this first analysis, for the Disillusion dimension, there was no predictor trait. Therefore, the statistical error was reduced with fixed-effects regression (Table 4), which showed, with a 95% confidence interval, that Agreeableness (p Value .015) and Emotional Stability (p Value .046) are predictors.

DISCUSSION

The scientific literature includes many investigations into the relationship between the Big Five and burnout in teachers, often noting how personality can influence the development of the syndrome [25]. Linear regression has shown precisely this type of link between personality and burnout; the predictive influence that only some features have compared to others, on certain burnout dimensions, is in line with the theoretical model proposed by McCrae and Costa [31], which foresees different levels of the traits and of their relative influence as predictors of the syndrome.

The results indicate that the traits of Energy and Emotional Stability influence the dimension of psychophysical

TABLE 3. Linear regression for personality traits and the size of Psychophysical Exhaustion, Relational Deterioration, Professional Ineffectiveness and Disillusionment

PSYCHOPHYSICAL EXHAUSTION				
	CNS		CS	T	P Value
Predictors	T	SE	BETA		
	11.991	1.131		10.604	.000
E	-.046	.019	-.205	-2.391	.018
A	-.003	.019	-.011	-.133	.895
C	-.018	.017	-.088	-1.063	.289
S	-.084	.018	-.367	-4.748	.000
M	.023	.019	.109	1.221	.224

RELATIONAL DETERIORATION				
	CNS		CS	T	P Value
Predictors	T	SE	BETA		
	12.210	1.050		11.625	.000
E	-.034	.018	-.165	-1.937	.054
A	-.003	.018	-.014	-.167	.868
C	.012	.016	.060	.725	.470
S	-.045	.017	-.208	-2.702	.008
M	-.051	.018	-.254	-2.858	.005

PROFESSIONAL INEFFECTIVENESS				
	CNS		CS	T	P Value
Predictors	T	SE	BETA		
	9.338	.868		10.757	.000
E	-.029	.015	-.169	-1.962	.051
A	.018	.014	.103	1.219	.224
C	-.002	.013	-.013	-.158	.874
S	-.047	.014	-.269	-3.469	.001
M	-.034	.015	-.206	-2.289	.023

DISILLUSIONMENT				
	CNS		CS	T	P Value
Predictors	T	SE	BETA		
	10.031	.808		12.414	.000
E	-.014	.014	-.088	-1.014	.312
A	-.026	.013	-.164	-1.925	.056
C	-.011	.012	-.075	-.894	.373
S	-.024	.013	-.148	-1.891	.060
M	-.019	.014	-.127	-1.404	.162

E = Energy; A = Agreeableness; C = Conscientiousness; S = Emotional stability; M = Mental opening; CSN = Non-standardized coefficients; CS = Standardized coefficients.

TABLE 4. Analysis of the fixed-effects model for the effects of personality traits on Disillusion

Parameter	Stima	Error std	GL	t	p Value	CI 95%
Interception	10.243.651	.789694	151.574	12.972	.000	8683423; 11803879
E	-.015093	.013041	168.281	-1.157	.249	-.040839;.010653
A	-.031991	.013019	169.529	-2.457	.015	-.057692;-.006291
C	-.008981	.011902	168.921	-.755	.452	-.032476;.014515
S	-.024233	.012077	168.163	-2.007	.046	-.048076;-.000391
M	-.018880	.012937	167.510	-1.459	.146	-.044421;.006661

E = Energy; A = Agreeableness; C = Conscientiousness; S = Emotional stability; M = Mental openness; GL = Degree of Freedom; CI = Confidence Interval.

exhaustion, which increases according to the degree to which the subject is introverted and neurotic [25]; [32]. Thus, those who get low scores in these traits are more susceptible to burnout due to the degree of Psychophysical Exhaustion. People at risk of psychophysical exhaustion are those described in terms of low dynamism, poor activity and loquacity, having very little physical energy available, and tending to be anxious, irritable and decidedly introverted. Research on personality factors has also highlighted the role played by stress coping strategies; more dynamic and energetic subjects are able to implement more functional strategies to cope with psychophysical exhaustion [33]. Keeping with the dimension of relational deterioration, cynicism (depersonalization in Maslach's model) is affected by the traits of Emotional Stability and Mental Openness; these traits are applicable particularly to those anxious and irritable subjects who consider themselves to be poorly understood and intrigued by new experiences, presenting themselves as refractory towards cultures and customs different from their own [34]. Sartori and Rappagliosi [35] write that schools change frequently in many ways, not just with respect to programs, standards or technologies. The changes involve the teachers, who work in the school every day. It is essential that teachers can respond dynamically to this evolutionary process. Curiosity, extraversion, openness and exploration of what is unknown thus become crucial characteristics that are capable of protecting from burnout. Furthermore, these elements can represent ways in which a teacher could learn to build a solid social network, representing a further factor of protection from a deteriorating relationship.

The results of this research indicate that the traits of Emotional Stability and Mental openness are again predictive, as they are for the dimension of professional effectiveness. Compared to these results, we might consider that the professional Ineffectiveness of a teacher is not given by purely individual factors. In accordance with this perspective, some studies [16; 36] have tried to extend the theoretical framework of the concept of burnout from the individual worker to the organizational structure in which the worker operates. From this point of view, we can see how the syndrome is mediated by a complex work context, which is distinguished by continuous reforms and the problems of precariousness, poor career prospects, excessive workload, limited teaching resources, a lack of clarity in regulations, and a lack of lesson organization, schedules and meetings. All these elements together suggest how organizational factors have a considerable influence on the development of burnout [16]; [3]. In our opinion, Disillusion makes the relationship between individual and context more evident. This dimension [15] requires further investigation because linear regression showed no predictive trait of the onset of the syndrome [3]. For this dimension, we resorted to the use of fixed-effects regression to ensure a greater homogeneity of the variables and obtain the traits of Emotional Stability and Agreeableness as predictive. Disillusionment has, so far, been a little-explored dimension, as most research has employed the Maslach Burnout Inventory to measure burnout. Only Murdaca, Oliva and Nuzzacci [36] used the Link Burnout Questionnaire. The aim of this research was to analyse the influences exerted by individual and contextual variables with respect to the onset of burnout in curriculum and support teachers. It has emerged that teachers, regardless of their position, display a profound disillusionment with their work because it is too routine and unable to arouse their interest.

However, we believe that Disillusionment proves to be a relevant dimension as part of a complete picture of the syndrome. The data show that the trait of neuroticism (emotional stability) plays a fundamental role in the development of disillusionment, a process that concerns the idealization of the profession: the teachers idealize not only the organizational context in which they operate, thinking of it as dynamic, motivating and creative, but also, and above all, their profession, in terms of the educational-training mission, whose crucial importance is recognized on a social level. We understand that when these expectations clash with the organizational reality in which the teachers work, they may be disappointed. Low scores in the neurotic trait predict a high tendency in people to interpret events in a threatening manner and

to experience anxiety, fear and an inability to problem-solve. Neuroticism results in inflexibility in dealing with different situations because anxiety interferes with the selection of optimal coping strategies [37]. To this end, it appears relevant to value the dimension of Disillusionment in the study of burnout because it offers the possibility of observing the phenomenon from a different perspective, no longer only individual but also contextual. In analysing the relationship between individual and context, this dimension emphasizes the organizational variables and the role they play in the development of the syndrome. In this regard, the DSM-5 [38] introduced the recognition of the importance of contextual and cultural factors in the onset and management of a mental disorder; however, burnout is recognized in the classification system of the ICD-10 and not in that of the DSM-5. In our opinion, the dimensions of burnout, even if it refers to an individual clinical category, relate to a contextual dynamic and to a cultural process that is ongoing within an organizational setting. These aspects can only be matched with the fall of the idealization of the subject's work, thus confirming Chermis's [39] assertion that the origin of burnout is a reaction to a state of tension and dissatisfaction linked to one's work.

Finally, the personality trait that seems to be the one with the greatest predictive power for the LBM dimensions is Emotional Stability, according to the scientific literature [25]. However, we cannot fail to recognize that this aspect once again calls for relational and, therefore, contextual dynamics, such as the management of various forms of conflict.

CONCLUSIONS

The work presented here confirms the relationship between personality and burnout, but it is not free from limitations; among these, the first is the limited number and national distribution of the participants. Second, the theoretical nature of the traits that develop in the absence of a dynamic perspective of the mind and the mental models forms a rigid vision of the mind that does not allow for its future development. Beyond these limitations, it is important to understand more deeply which personality traits favour the ailment of the teacher, in this case, burnout.

Burnout affects the psychophysical health of the teacher, the relationship that the teacher establishes with her students and the entire educational-training process. In conclusion, future studies should orientate towards two research paths: the first concerns the analysis of the role played by contextual factors in the onset of burnout, which are often neglected in favour of the exploration of individual factors [16; 40; 41; 42; 43]. The second orientation is represented by the study of mental models [44; 45; 46]; recent research on stress considers it a failure to realize shared meanings that contribute to a subject's state of tension, which in turn induces pathologies and stress syndromes, especially for teachers.

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