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An Explanatory Model of Burnout Onset in Information Technology (IT) Employees

¹Prisăcaru Adrian, ²Mănescu Elena

¹ Professor, Faculty of Psychology, Ecological University of Bucharest, Romania

¹ Associated Researcher, Institute of Philosophy and Psychology "C.R. Motru" of the Romanian Academy, Romania

² Master's Student, Faculty of Psychology, Ecological University of Bucharest, Romania

Corresponding Author: **Prisăcaru Adrian**

Abstract

A number of studies have shown that Burnout Syndrome is specific to people working in professional fields with a pronounced need for human interaction, but there are also studies that provide evidence that Burnout is also present in other professional fields, including Information Technology (IT). The present research provides further evidence for the scientific validation that IT employees can acquire the specific manifestations of Burnout Syndrome, taking into account the perspective of personality characteristics.

Beyond the specific job tasks and demands, the data explain that people with a high level of neuroticism, locus of control (externally oriented), and low levels of conscientiousness, extraversion and self-efficacy will more frequently show Burnout syndrome manifestations. It is also worth noting that females are more prone to Burnout than males, taking into account the findings on the role of personality characteristics.

Keywords: Burnout, Extraversion, Neuroticism, Openness to Experience, Locus of Control, Self-efficacy

1. Introduction

The authors of an article published in 2023 estimate that a significant number of studies that have dealt with burnout have started from the premise that it only occurs in professional staff working in healthcare, education, social work, etc., where interaction with people is a basic requirement. The same authors stated that the assumption ruled out that burnout could also be present in professions where human interaction is not prevalent and does not necessarily mean emotional involvement with others. Yet some researchers have also addressed this issue in people working in technical fields, in areas where high cognitive skills, awareness, memory and visual perception skills are required, such as aviation, industrial command and control etc. (Stărică, Apetrăchioaei & Stărică, 2023, p.426) ^[1].

Uriena, Ricob, Demeroutic & Bakker (2021, p.179) ^[2] appreciate: "when individuals believe they consider themselves members of a team, they will apply team attributes. to define themselves and will even shift their individual moods to the stereotypical team mood; therefore, when team burnout occurs, team members tend to adjust their cognitions, affect, arousal levels, and behaviors to the perceived level and state of the team, especially when their team identity is evident; this adjustment is the most adaptive behavior, as any attempt to resist or confront team norms will require excess energy unavailable in a team burnout".

Evans & Fischer (1993) ^[3] conducted the first major study in which the phenomenon of burnout was observed both in people working in fields where human interaction is prevalent and in people working in fields where human interaction is not prevalent, such as information technology (IT). Specific factors in this field that cause burnout include: working hours that exceed the standard norm, tight deadlines, budget constraints, additional tasks, high demands on creativity etc.

We consider that, as Salomo, Sutarto & Arianti appreciate, presence in the virtual environment has become commonplace, including in situations involving professional activities, but can generate stressful situations that require the mental apparatus to restore homeostasis, resilience and adaptation (Salomo, Sutarto & Arianti, 2023) ^[4].

The concept of "burnout" was first introduced into the lexicon by the American psychiatrist Herbert J. Freudenberger in a 1974 article on "Staff Burn-out". The author worked in a New York clinic for drug addicts whose staff consisted mainly of young volunteers. During this period he observed that many of the young volunteers involved in supporting drug users experienced a

gradual depletion of energy, a loss of motivation and commitment, which was accompanied by a wide range of mental and physical manifestations. To label this particular state of exhaustion, which usually appeared about a year after they began their work in the clinic, Freudenberger chose a word that was used colloquially to refer to the effects of chronic drug abuse: burnout (Freudenberger, 1974) ^[5].

In 1976, Christina Maslach, a social psychology researcher, began studying how social service employees cope with emotional pressures in the workplace. She noticed that the term burnout was used colloquially by California anti-poverty advocates to describe the process of gradual burnout, cynicism, i.e. a negative, unresponsive attitude toward other socially relevant participants, and loss of engagement with colleagues. Maslach and her colleagues decided to adopt this term because it was easily recognizable to the interviewees in their study of social service employees (Maslach, 1976 apud. Muheim, 2013, p. 39) ^[6].

In the 1980, work on burnout shifted towards empirical research using questionnaires and survey methodology, studying larger populations, and the first instrument for assessing burnout was developed (Maslach and Jackson, 1981 apud. Muheim, 2013, p. 40) ^[6]. Also during this period, the first theoretical and methodological contributions in the field of organizational-industrial psychology were made by C. Cherniss and Golembiewski, in which burnout was addressed as a form of workplace stress. In the 1990s, the concept of burnout was extended to occupations beyond social services and education such as computer scientists, armed forces and managers. Its study has also been improved with more sophisticated tools and longitudinal studies (Maslach *et al.*, 2001 apud. Muheim, 2013, p. 40) ^[6].

After 2000, research was extended to other professions that had not yet been investigated (e.g. athletes). Longitudinal studies also continued and more clearly operationalised definitions of Burnout began to be used, the main perspective on Burnout Syndrome was and still is work-related. In addition, current studies try to describe the differences between burnout and other concepts such as stress, depression, anxiety or chronic fatigue.

The World Health Organization has included occupational burnout syndrome in the International Classification of Diseases (ICD-10 and ICD-11), considering it a syndrome resulting from chronic stress at work. In ICD-11 the definition is detailed, with burnout considered *"a syndrome conceptualized as a result of chronic stress at work that has not been successfully managed, characterized by three dimensions: feelings of burnout; increased mental distance from work or feelings of negativity or cynicism related to work; and reduced job effectiveness"* (World Health Organization, 2019) ^[7].

The American Psychological Association has also defined burnout as *"a physical, emotional or mental exhaustion accompanied by decreased motivation, decreased performance and negative attitudes toward self and others. It is the result of maintaining high levels of stress and strain over a prolonged period of time, especially in the context of extreme and prolonged physical or mental exertion or overloaded workload"* (APA Dictionary of Psychology) ^[8].

In his work "Introduction to Work Psychology", Marian Popa defines the concept of Burnout from two perspectives: one describing the list of symptoms, i.e. the final state, and the other referring to the dynamic aspect of the process that

led to that state. From the point of view of the elements that define the Burnout state, the author mentions the following manifestations: *"emotional exhaustion (reduced capacity for emotional resistance in relation to events and people); depersonalisation (in this case, with a tendency to treat others more as tools than as people, cynicism, indifference); the feeling of non-fulfilment (dissatisfaction and dissatisfaction with oneself and the results obtained). People suffering from burnout syndrome are dissatisfied with achieving their goals and feel a decrease in self-esteem, despite the fact that they make a sustained effort"* (Popa, 2008, p.249) ^[9].

At the same time, in a study on "Relationships between personality variables and burnout: A meta-analysis", conducted by the Department of Psychology, Wright State University, Dayton, OH, USA, examined the relationship between some personality characteristics and the three dimensions of burnout assessed with the Maslach Burnout Inventory: emotional exhaustion, depersonalization and personal accomplishment. The data obtained from the study revealed significant relationships between burnout and emotional stability, extraversion, conscientiousness, agreeableness, self-efficacy, locus of control, positive affectivity, negative affectivity, optimism, proactive personality, and resilience (Alarcon, Eschleman & Bowling, 2009, p. 250) ^[10].

The relationship between some personality traits and burnout has been studied by several researchers. For example, Evans & Fischer (1993) ^[3] studied the link between personality traits specific to the Big Five Model and the likelihood of experiencing burnout in individuals who are self-employed. The results of the study revealed that some personality traits such as neuroticism, agreeableness and conscientiousness correlate significantly with burnout, and while neuroticism predicts burnout, agreeableness and conscientiousness act as protective personality traits.

The relationship between locus of control and burnout has also been studied by many researchers. For example, Ali Murat Sünbül (2003) ^[11] wanted to validate how teacher burnout correlates with different aspects of locus of control, job satisfaction and demographic characteristics such as age and gender. As a result of his study, he presented his findings in the article "An analysis of relations among locus of control, burnout and job satisfaction in Turkish high school teachers", from which we can note that out of 290 Turkish teachers who completed different instruments assessing burnout and some psychological characteristics, it resulted that all dimensions of burnout correlated either positively or negatively with different independent variables, including locus of control.

Another study by Norbert Schmitz, Willi Neumann & Roman Oppermann (2000) ^[12], published in the article "Stress, burnout and locus of control in German nurses", the authors found interlinking relationships between locus of control, job stress and burnout in nursing. The authors used a sample of 361 nurses from five hospitals in Germany who were administered 3 instruments: the Maslach Burnout Inventory, the Locus of Control Questionnaire, and a Work-Related Stress Inventory. The results statistically demonstrated that higher work-related stress and burnout correlated with nurses' external locus of control. Thus, the idea was supported that the perceived degree of control, specific to individuals with an inward locus of control orientation, is essential to enable nurses to cope with stress

and burnout.

Regarding the relationship between self-efficacy and burnout, some authors (Mayara da Mota Matos, John G. Sharp and Roberto Tadeu Iaochite, 2022, p.145) ^[13], highlight in the article "Self-efficacy beliefs as a predictor of quality of life and burnout among university lecturers", that self-efficacy correlates positively with quality of life and negatively with burnout. The study involved 1,709 lecturers from 78 universities in Brazil, most of whom had a doctoral degree, who were administered instruments to assess self-efficacy, burnout and quality of life.

2. Methodology

2.1 Objectives and assumptions

In this paper we aim to analyze the interlinking relationships that may exist between personality traits, self-efficacy, locus of control and specific manifestations of burnout in IT employees from various companies in Romania, considering three specific objectives:

- The first objective aims at highlighting that burnout-specific manifestations are influenced by the Big Five personality traits, namely extraversion, agreeableness, conscientiousness, neuroticism and openness to experience.
- The second objective is to study the influence of the variable related to self-efficacy manifested by IT employees and their locus of control on burnout-specific manifestations.
- The third objective aims to highlight the role of some psychological characteristics in predicting the occurrence of burnout-specific manifestations in IT employees.

To achieve the objectives, the study is guided by 4 working hypotheses:

Hypothesis 1: We assume that there is an interlinking relationship between some personality traits of IT employees and specific Burnout manifestations.

Hypothesis 2: We assume that there is an interlocking relationship between workplace locus of control and IT employees' self-efficacy in relation to specific manifestations of burnout.

Hypothesis 3: We assume that some psychological characteristics play a significant role in predicting the onset of burnout-specific manifestations in IT employees.

Hypothesis 4: We assume that there is a difference in burnout-specific manifestations depending on the gender of IT employees.

2.2 Participants

For the constitution of the research sample, the convenience sampling technique was used, which is a non-probability technique that does not take into account the requirements of indicating the probability of selection of cases, as a result, there is no guarantee that the sample is composed of cases that accurately describe the reference population mentioned above (Popa, 2016) ^[14].

At the same time, the technique involves the inclusion of accessible and available cases, based on volunteerism, and is the least rigorous but also the most common in research practice.

Thus, the research group consisted of 123 people employed in different corporations in Romania, within the information technology (IT) department, with the following

characteristics:

- Gender balanced, i.e. 63 women and 60 men;
- Heterogeneous in terms of age, with ages ranging from 24 to 63 years and an average of 44 years;
- Heterogeneous in terms of educational background, i.e. one person with secondary education (1%), 64 persons with bachelor's degree (52%), 55 persons with master's degree (45%) and 3 persons with doctoral degree (2%);
- Heterogeneous in terms of the professional field in which they work, i.e. all persons in the IT field.

The research was conducted online on Google Forms and the questionnaires were open for 1 week at the end of February 2023.

Respondents were asked for their consent to collect and process data for the purpose of scientific research, and all ethical rules were followed.

2.3 Measurement of variables

Four standardized psychological assessment instruments were used to collect the data needed to prove the hypotheses, as follows:

2.3.1 Big Five Personality Inventory-2 Short Form (BFI-2-S)

The Big Five Personality Inventory-2 (BFI-2), in its original form, was developed by Christopher J. Soto (Department of Psychology, Colby College) and Oliver P. John (Department of Psychology, University of California, Berkeley) and contains 60 items to assess hierarchically the Big Five model-specific personality dimensions and 15 specific traits. Subsequently, a new shorter version (BFI-2-S) was created that could be completed in up to 10 minutes (Soto and John, 2017) ^[15].

The Big Five-2 short form personality inventory used in this research was taken from (www.researchcentral). It has 30 items, 6 for each personality dimension, namely: Extraversion (with facets of sociability, assertiveness and energy level); Agreeableness (with facets of compassion, respect and trust); Conscientiousness (with facets of organisation, productivity and responsibility); Neuroticism (with facets of anxiety, depression and emotional volatility); Openness to experience (with facets of intellectual curiosity, aesthetic sensitivity and creative imagination).

The assessment was made on a 5-level Likert-type scale with the following response options: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree, with scores ranging from 6 to 30 for each personality trait.

2.3.2 Maslach Burnout Measurement Inventory (MBI)

The Maslach Burnout Measurement Inventory is a psychological assessment tool developed in its original form by Christina Maslach and Susan E. Jackson with the aim of assessing the level of burnout of individuals (Maslach and Leiter, 2021) ^[16].

The Maslach Burnout Measurement Inventory has been recognized as the leading instrument for measuring burnout and has been validated for over 35 years through extensive research and is considered the "gold standard" instrument (Williamson *et al.*, 2018) ^[17] in the field.

The inventory was taken from (www.researchcentral.ro), contains 16 items and measures 3 dimensions: Exhaustion (E) - contains 5 items measuring emotional exhaustion from work; Cynicism (C) - contains 5 items measuring indifference or aloof attitude to work; Job Inefficiency (PI) -

contains 6 items measuring level of feelings of competence and success in work.

For each of the 16 items the response is scored on a 7-step Likert-type scale, ranging from asymptomatic threshold to maximum symptomatology, with the following response options: (1) Never; (2) Several times a year or less frequently; (3) At most once a month; (4) Several times a month; (5) Once a week; (6) Several times a week; (7) Daily.

2.3.4 Self-efficacy scale

The scale was taken from the website (www.researchcentral.ro), was designed by a group of Romanian specialists by adapting the International Personality Item Set (IPIP-Ro) to measure self-efficacy at work and has 10 items.

The IPIP project was initiated by Lewis Goldberg in 1996 and was conceived as an international scientific collaboration project to enable the development of and free access to personality assessment instruments, thus facilitating the ongoing development of assessment scales with the help of the international scientific community (Goldberg, 1999 apud. Iliescu *et al.*, 2015)^[18].

The Self-Efficacy Scale items are rated on a 5-level Likert-type scale with the following response options: (1) Strongly Disagree; (2) Disagree; (3) Neutral; (4) Agree; (5) Strongly Agree, and the score on the scale can range from 10 to 70, with high scores indicating high self-efficacy at work.

2.3.5 Workplace Locus of Control Short Form Scale (WLCS)

The short version of the scale with 8 items was taken from the website (www.researchcentral.ro), but the original version developed by P. E. Spector has 16 items and was created to assess workplace control beliefs.

Locus of control has two dimensions, externality and internality, and refers to how employees believe they can control work events. High scorers are considered

externalists, they believe that external forces such as faith or luck determine events, and low scorers are considered internalists and believe they have more control over the work environment and events.

The rating is on a 6-level Likert-type scale with the following response options: (1) Strongly disagree; (2) Moderately disagree; (3) Slightly disagree; (4) Slightly agree; (5) Moderately agree; (6) Strongly agree, and the scale score can range from 8 to 48.

2.4 Procedure

The research was guided by the benchmarks of quantitative research, and the independent variables, dependent variables and statistical apparatus for data analysis were established. The research variables are translated into research hypotheses as follows:

- The dependent variables are the characteristics of burnout, namely burnout, cynicism and job inefficiency;
- The independent variables are represented by locus of control, self-efficacy and the Big Five model-specific personality traits, namely extraversion, agreeableness, conscientiousness, negative emotionality and openness to experience.

For statistical processing of the data, using S.P.S.S. version 18.00 software, the following were used: Correlation analysis and difference of statistical means.

In the preliminary data analysis stage, aimed at ensuring the correctness of data recording, checking marginal values, identifying missing data/values and analysing the normality of the distribution, no special situations were identified.

3. Findings and Discussion

To prove Hypothesis 1, the statistical technique called Pearson correlations was used and the results are shown in Table 1.

Table 1: Descriptive statistics and correlation coefficient values between "personality traits" and burnout variables (N=123)

	<i>M</i>	<i>SD</i>	<i>Exhaustion</i>	<i>Cynicism</i>	<i>Inefficiency Prof.</i>	<i>Total Burnout</i>
<i>Extraversion</i>	20.54	3.801	-.466**	-.443**	-.483**	-.493**
<i>Agreeability</i>	20.32	4.056	-.122	-.069	-.111	-.106
<i>Conscientiousness</i>	22.43	4.043	-.255**	-.237**	-.297**	-.280**
<i>Neuroticism</i>	16.19	4.201	.432**	.266**	.333**	.363**
<i>Openness</i>	20.63	3.835	.021	-.020	-.054	-.020
<i>Exhaustion</i>	15.08	5.624	-	.831**	.829**	.939**
<i>Cynicism</i>	15.15	6.061		-	.825**	.942**
<i>Inefficiency prof.</i>	16.16	6.236			-	.943**
<i>Total Burnout</i>	46.40	16.866				-

**Correlation is significant at the 0.01 level (bidirectional).

For the interpretation of the data, according to Colton (1974, p.167)^[19], the values of correlation coefficients have the following meanings: A correlation coefficient of -0.25 to 0.25 means a weak or zero correlation; a correlation coefficient of 0.25 to 0.50 (or -0.25 to -0.50) means a fair degree of association; a correlation coefficient of 0.50 to 0.75 (or -0.50 to -0.75) means a moderate to good correlation; a correlation coefficient greater than 0.75 (or less than -0.75) means a very good association or correlation.

From the data presented in Table 1 we can draw the following conclusions:

1. Statistically significant relationships between burnout and extraversion, burnout and conscientiousness, burnout and

neuroticism

- Between total burnout and extraversion the Pearson linear correlation coefficient has a negative sign (one variable increases and the other decreases) and the r-value = -.493** (p<.01), which shows the presence of a statistically significant relationship between the two variables, even if the association is moderate and the statistical link is highly significant .01 (99% confidence);
- We also capture moderate Pearson correlation coefficient values in the relationship between extraversion and burnout (r=-.466**), cynicism (r=-.443**) and professional inefficiency (r=-.483**), as dimensions of burnout;

- Between total burnout and conscientiousness the Pearson linear correlation coefficient has a negative sign (one variable increases and the other decreases) and the value $r=-.280^{**}$ ($p<.01$), which highlights the presence of a statistically significant relationship between the two variables, even if the association is low in magnitude and the statistical link is significant .01 (99% confidence);
- We also capture a low Pearson correlation coefficient value in the relationship between conscientiousness and job inefficiency $r=-.297^{**}$, conscientiousness and burnout ($r=-.255^{**}$), conscientiousness and cynicism ($r=-.237^{**}$) as dimensions of burnout;
- Between total burnout and neuroticism the Pearson linear correlation coefficient has the value $r=.363^{**}$ ($p<.01$), which shows the presence of a statistically significant relationship between the two variables, even if the association is moderate and the statistical relationship is highly significant .01 (99% confidence);
- We also capture moderate values of the Pearson correlation coefficient in the relationship between neuroticism and burnout ($r=.432^{**}$), neuroticism and cynicism ($r=.266^{**}$), neuroticism and job inefficiency ($r=.333^{**}$) as dimensions of burnout.

To further support the above data and conclusions, we present in Figure 1 the scatterplot of responses for burnout and extraversion and in Figure 2 the scatterplot of responses for burnout and neuroticism. We can see that the points have a concentration along a diagonal oriented from upper left to lower right (Figure 1), which means a negative correlation, and a diagonal oriented from lower left to upper right (Figure 2), which means a positive correlation. In terms of the magnitude of the relationship, this is shown by the way the points are grouped around the diagonal.

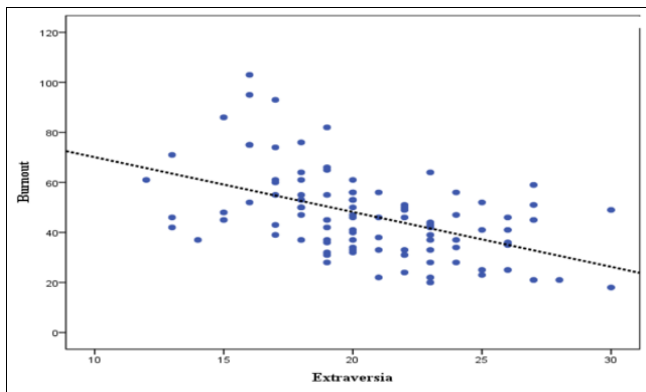


Fig 1: Scatterplot of responses for burnout and extraversion

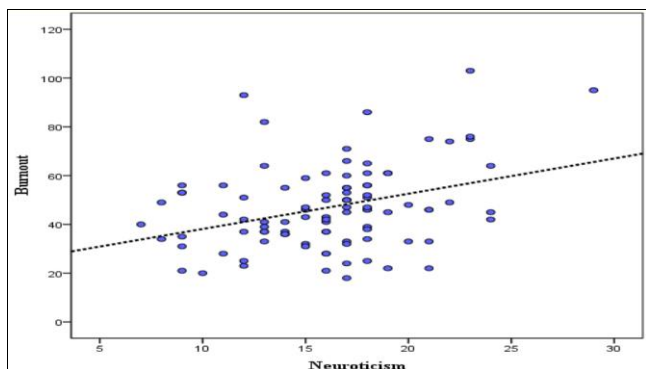


Fig 2: Scatter plot of responses for burnout and neuroticism

2. Statistically insignificant relationships between burnout and agreeableness, burnout and openness to experience

- The Pearson linear correlation coefficient between total burnout and agreeableness has a low negative value $r=-.106$, which indicates that there is no statistically significant relationship, the association between them being negligible;
- We also find low Pearson correlation coefficient values in the relationship between agreeableness and burnout ($r=-.122$), agreeableness and cynicism ($r=-.069$), agreeableness and job ineffectiveness ($r=-.111$), as dimensions of burnout, signalling a negligible association;
- The Pearson linear correlation coefficient between total burnout and openness to experience has a low value $r=.020$, which indicates that there is no statistically significant relationship, the association between them being negligible;
- We also find low Pearson correlation coefficient values in the relationship between openness to experience and burnout ($r=.021$), openness to experience and cynicism ($r=.020$), openness to experience and professional inefficiency ($r=-.054$), as dimensions of burnout, signalling a negligible association.

In Figure 3 we present the scatterplot of responses for burnout and agreeableness, and in Figure 4 the scatterplot of responses for burnout and openness to experience. We can see that the points have a very large dispersion along the diagonal, being suggestive and explainable for the data mentioned above.

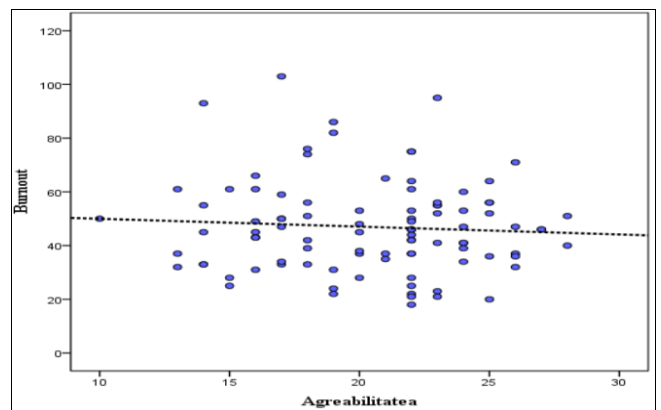


Fig 3: Scatterplot of responses for burnout and agreeableness

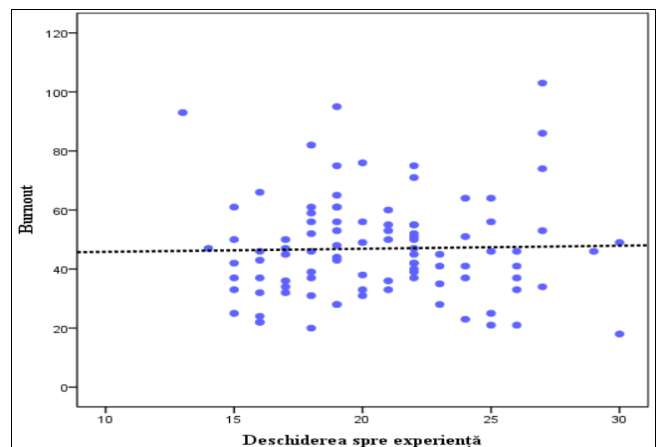


Fig 4: Scatterplot of responses for burnout and openness to experiences

Conclusion: The analysis of the data on the relationship between Burnout and some personality traits, namely extraversion, neuroticism and conscientiousness showed that it is statistically supported or that there is an interdependent relationship between them. Regarding the relationship between Burnout and other personality traits, namely openness to experience, as well as agreeableness, it is not

statistically supported or there is no statistically significant interdependence relationship. The data presented constitute relevant evidence for the demonstration of hypothesis 1. The statistical technique called Pearson correlations was used to prove Hypothesis 2 and the results obtained are presented in Table 2.

Table 2: Descriptive statistics and correlation coefficient values between self-efficacy, locus of control and burnout variables (N=123)

	<i>M</i>	<i>SD</i>	<i>Exhaustion</i>	<i>Cynicism</i>	<i>Inefficiency prof.</i>	<i>Total Burnout</i>
<i>Self-efficacy</i>	39.03	5.693	-.414**	-.450**	-.548**	-.503**
<i>Locus of control</i>	23.52	5.990	.426**	.401**	.406**	.437**
<i>Exhaustion</i>	15.08	5.624	-	.828**	.832**	.939**
<i>Cynicism</i>	15.15	6.061		-	.821**	.939**
<i>Inefficiency prof.</i>	16.16	6.236			-	.943**
<i>Total Burnout</i>	46.40	16.866				-

**Correlation is significant at the 0.01 level (bidirectional).

The data presented in Table 2 highlights:

- The Pearson linear correlation coefficient calculated for the total burnout variable and the self-efficacy variable is $r = -.503^{**}$ ($p < .01$), which means that there is a statistically significant relationship;
- Association is substantially negative, and the statistical relationship is highly significant .01 (99% confidence);
- Negative correlations indicate a relationship moving in different directions, i.e. as the value of the self-efficacy variable increases, the value of the burnout variable decreases and vice versa;
- Analyzing the Pearson correlation coefficient and at the level of the dimensions of the burnout variable, we observe that for all of them there is a statistically significant relationship in relation to self-efficacy, namely for professional inefficacy ($r = -.548^{**}$), for exhaustion ($r = -.414^{**}$), and for cynicism ($r = -.450^{**}$);
- The Pearson linear correlation coefficient calculated for the total burnout variable and the locus of control variable has the value $r = .437^{**}$ ($p < .01$), which shows a statistically significant relationship between the two variables;
- As regards the Pearson correlation coefficient between the locus of control and the dimensions of the Burnout variable, we observe that all of them have a statistically significant relationship, respectively with professional inefficiency ($r = .406^{**}$), with exhaustion ($r = .426^{**}$), and with cynicism ($r = .401^{**}$), showing the presence of a moderate association;
- All correlations are positive, which shows a relationship that moves along the same trajectory, i.e. as the value of one variable increases, the value of the other variable increases, and vice versa.

In Figure 5 we present the scatterplot of responses for burnout and self-efficacy, from which we can see that the points have a concentrated dispersion along the diagonal, providing significant evidence of the intercorrelation relationship between the two variables, and in Figure 6 we present the scatterplot of responses for burnout and locus of control, from which we can see that the points have a concentrated dispersion along the diagonal, reinforcing the conclusions about the intercorrelation relationship between the two variables.

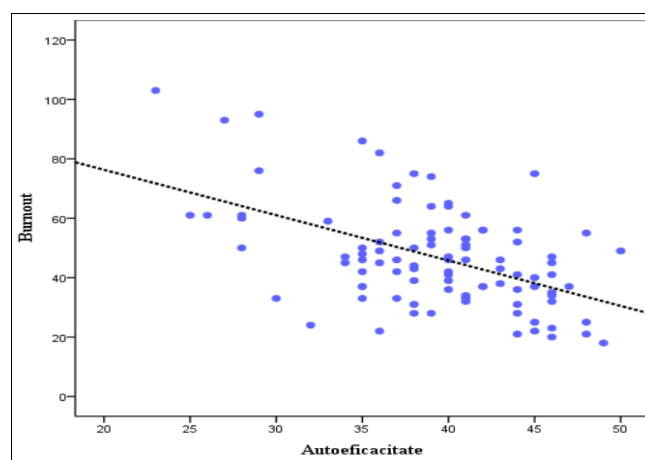


Fig 5: Scatterplot of responses for burnout and openness to experiences

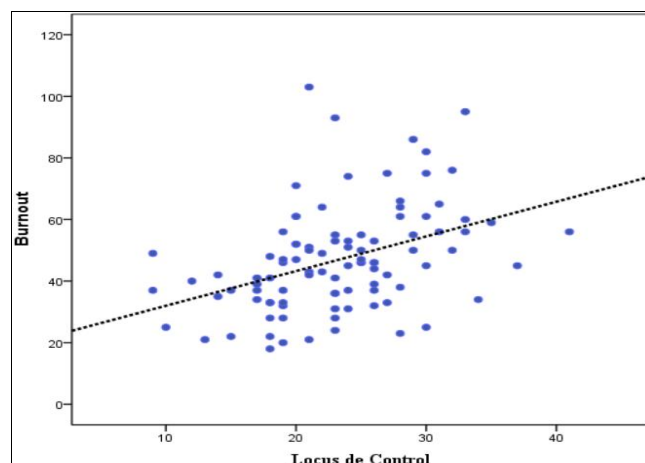


Fig 6: Scatter plot of responses for burnout and locus of control

Conclusion: The analysis of the data obtained on the relationship between burnout and self-efficacy, burnout and locus of control showed that hypothesis 2 is statistically supported.

The statistical technique called Simple Linear Regression was used to prove Hypothesis No. 3 and the results obtained are shown in Table 3.

Table 3: Regression coefficient values for the direct relationship between total burnout variable and some personality characteristics (N=123)

	B	Std. Error	Beta	t	Sig.
<i>Dependent variable: Burnout Total</i>					
Constant	88.643	17.511		5.062	.000
Self-efficacy	-.959	.298	-.321	-3.215	.002
Locus of control	.661	.255	.236	2.588	.011
Extraversion	-.128	.444	-.254	-2.539	.013
Conscientiousness	.085	.376	.020	.226	.822
Neuroticism	.113	.402	.027	.281	.780

a. Dependent Variable: Burnout Total

Taking into account the values of the regression coefficients mentioned in Table 3, we can conclude that each personality characteristic explains and predicts the onset of Burnout in different proportions. For example, neuroticism explains 11.3% of the variation in Burnout, conscientiousness 8.5% and locus of control 66.1%, but we also have extraversion which contributes negatively with -12.8%.

Conclusion: The data mentioned in Table 3 and the interpretation presented above allow us to state that hypothesis 3 is statistically supported.

To prove Hypothesis No. 4, the statistical procedure for testing the significance of the difference between the means of two independent samples, i.e. Independent-Samples Test, for two sublots consisting of female and male individuals was used and the results obtained are shown in Table No. 4 and Table No. 5.

Table 4: Descriptive statistics for burnout variables (N=123)

Variable	Genul	N	M	SD	Standard error of the mean
Exhaustion	Female	63	15.21	5.765	.726
	Male	60	14.95	5.519	.712
Cynicism	Female	63	14.97	6.106	.769
	Male	60	15.35	6.059	.782
Inefficiency prof.	Female	63	16.13	7.047	.888
	Male	60	16.20	5.313	.686
Total Burnout	Female	63	46.30	17.733	2.234
	Male	60	46.50	16.053	2.072

Table 5: Values of differences in statistical means (Independent Samples Test) on burnout for the two sublots (for N=123)

Variables	t calculated	df	Sig. (2-tailed)	Diff. Mean	Diff. Error Std.	95% Confidence interval of differences	
						Minimum	Maximum
Exhaustion	0.252	121	0.802	0.256	1.018	-1.760	2.273
Cynicism	-0.348	121	0.729	-0.382	1.097	-2.554	1.791
Inefficiency prof.	-0.065	121	0.949	-0.073	1.130	-2.309	2.163
Total Burnout	-0.065	121	0.948	-0.198	3.055	-6.246	5.850

From the data presented in Table 4 we can see that the statistical averages obtained by females are slightly higher than those of males, thus:

- for female persons: $M_{Exhaustion} = 15.21$, $M_{Cynicism} = 14.97$, $M_{Inefficiency} = 16.13$, $M_{Total Burnout} = 46.30$;
- for males persons: $M_{Exhaustion} = 14.95$, $M_{Cynicism} = 15.35$, $M_{Inefficiency} = 16.20$, $M_{Total Burnout} = 46.50$.

From the data presented in Table 5, we can draw the following conclusions about the dimensions of burnout:

- On the burnout variable, the difference between means is 0.256, corresponding to a calculated $t = 0.252$ and a significance threshold Sig. (2-tailed) = 0.802;
- For the cynicism variable, the difference between means is -0.382, corresponding to a calculated $t = -0.348$ and a significance threshold Sig. (2-tailed) = 0.729;
- On the variable professional inefficiency, the difference between means is 0.073, corresponding to a calculated $t = 0.065$ and a significance threshold Sig. (2-tailed) = 0.948;
- For the variable Total Burnout, the difference between means is -0.198, corresponding to a calculated $t = -0.065$ and a significance threshold Sig. (2-tailed) = 0.948;
- Although the values of the calculated difference between the statistical means is not large, it can be concluded that female persons are more prone to burnout than male persons.

Conclusion: Following the analysis of the results of the significance test between the statistical means obtained by the two subgroups of people, i.e. female and male gender, it can be seen that there is a difference in favour of the female gender, thus showing that hypothesis 4 is statistically supported.

4. Conclusions

In the present study the results showed that the research hypotheses are statistically supported and some personality characteristics, namely extraversion, neuroticism, conscientiousness, self-efficacy and locus of control are in an interlinked relationship with burnout, which can be appreciated that the onset of burnout is influenced by them. The negative correlation between the conscientiousness variable and the specific manifestations of Burnout highlights and explains that the presence of emotional, cognitive, physical exhaustion, cynicism and feelings of professional inefficiency are closely related to the low level of conscientiousness, as well as the fact that a high level of conscientiousness can be an explanation for the avoidance of Burnout.

At the same time, it can be seen that conscientious people are often effective in managing tasks, are able to prioritise their work appropriately, plan their time effectively, manage their priorities and take a proactive approach to challenges. As a result, these individuals are less likely to feel overwhelmed by tasks and experience high levels of emotional exhaustion associated with burnout.

The negative correlation between extraversion and Burnout-specific manifestations highlights and explains that extraverted individuals tend to have a larger social circle, engage in positive social interactions, have developed skills in establishing and maintaining relationships, feel energized by social interactions, and the emotional support these characteristics provide can be an important resource in combating stress and Burnout.

Extroverts also have characteristics such as optimism, resilience, energy, a higher level of enthusiasm for what they do, and this positive energy and enthusiasm can counteract the exhaustion and demotivation associated with burnout, and they are able to recover more quickly from negative experiences.

We can conclude with regard to the conscientiousness and extraversion variables that their higher level of development will lead to a lower level of burnout, and vice versa, or that they may be protective factors against burnout.

The positive correlation between the neuroticism variable and burnout-specific manifestations shows that people with obvious and pronounced neurotic characteristics tend to have a higher emotional reactivity and experience more frequently negative emotions, anxiety and distress. At the same time, they may tend to be more rigid in their thinking and have more difficulty adapting to stressful situations, which can lead to difficulties in effectively managing stressors in the workplace and increase the risk of burnout.

Thus, a high level of neuroticism may be an important factor in the presence and onset of Burnout.

The negative correlation between the variable self-efficacy and Burnout-specific manifestations shows that people with high self-efficacy at work will have a lower risk and a lower level of Burnout-specific manifestations and vice versa, i.e. lower self-efficacy at work implies a higher risk of Burnout-specific symptoms.

This explains why employees who perceive themselves as more capable of coping with the challenges posed by various contexts in the work environment and who have more confidence in their own strengths, are able to deal with situations that arise more detachedly, have a lower level of burnout and a lower risk of Burnout symptoms.

When self-efficacy levels are lower, people feel that they cannot cope with the demands of the job, put much more effort into tasks, have a low perception of their own skills and competences, and this can lead to increased stress, burnout and the risk of overt burnout symptoms.

Regarding the relationship between locus of control and burnout, the data presented demonstrate a moderate positive association between the two variables. When the value of the locus of control level increases, which means that people are characterized as having an external locus of control orientation, it also leads to an increase in the value of the burnout level. Similarly, a decrease in the value of the locus of control level, which indicates that people are oriented towards the internal locus of control, leads to a decrease in the value of the burnout level.

This highlights that externalists may have a distorted belief about their environment, perceive that they have more control over the resources they need to accomplish daily tasks and events, feel a sense of power and influence over their work environment, feel able to cope and adapt to challenges and changes, which can increase the risk of burnout.

Internalists often develop effective coping skills and resilience in the face of stress, tend to take proactive steps to manage stress and solve their problems, rather than feeling overwhelmed or powerless, and this helps them to cope better with demands and pressures at work. People characterised as having an internal locus of control orientation may also seek more autonomy and involvement in resolving situations at work, engage in activities that provide opportunities to use their skills and achieve personal goals, which can increase job satisfaction and reduce the risk of Burnout.

Regarding the relationship between the variables openness to experience, agreeableness and burnout, no statistically significant relationships were found in this research.

In conclusion, the present research provides evidence for the

scientific validation that IT employees with high levels of neuroticism, locus of control (have externalistic orientation), as well as low levels of conscientiousness, extraversion and self-efficacy will more frequently exhibit Burnout syndrome-specific manifestations.

In another vein, we also note that research has shown that females are more prone to burnout than males, taking into account findings on the role of personality characteristics.

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