

BURNOUT EFFECT IMPACT OVER MEDICAL STAFF DURING ACTUAL COVID-19 PANDEMIC CONTEXT

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Abstract: Stress and burnout are considered modern epidemics and their importance for physical health and work capacity was recognized worldwide. Working environment has a very well-known impact, either positive, or negative, over employees' health. Adverse working conditions may lead to professional burnout, a syndrome generated from chronic stress at the working place, which is characterized by overwhelming exhaustion, negative attitude or lack of commitment. This process can lead to undesirable consequences for the employees, their families, but also in the working environment and organizations.

Keywords: Burnout, Covid-19, medical staff.

INTRODUCTION

The term of „burnout” was first used with a clinical meaning in 1974 by Herbert Freudenberger, a German psychologist, born in the United States of America. Freudenberger (1974) defined burnout as a mental and physical state of exhaustion caused by anyone's professional life and together with his colleague Gail North, he created a list of exhaustion phases. 40 years later, burnout is still conceptualized as affecting in a unique way people with emotionally demanding professional roles (Eisenstein, L., 2018).

The burnout concept was continuously developed by academic scientist and social psychologist, Christina Maslach, who later created the most utilized questionnaire for burnout evaluation, publishing the first version of Maslach Inventory of burnout measurement together with her colleague, Susan Jackson in 1981. This inventory later became „the golden standard” for exhaustion measurement. During the last 30 years were published thousands of books and articles that indicate the huge interest for this phenomenon, becoming a sort of „epidemics” with impact at the individual level, but also organizational and social. Several detailed reviews, books and special editions of international

magazines were also published to describe the burnout phenomenon (Schaufeli W., 2017).

LITERATURE REVIEW

The burnout term was never unanimously defined by all scientists. Terms like “burnout syndrome”, “exhaustion due to work pressure”, “professional exhaustion syndrome” or “psychological fatigue”, all of them were used to describe the same concept. At the beginning the professionals concentrated especially on the practical side, forcing the term conceptualization in a certain direction (Maslach & Schaufeli, 1993; Moreno-Jiménez B., 1998), and by doing so it made rather difficult the establishment of a precise definition for the term burnout.

Sturgess and Poulsen (1983) define the syndrome as a progressive loss of idealism, energy and purpose, experienced by individuals in auxiliary professions as a result of their work. Etzion (1987) affirms that burnout emerges from continuous maladjustments rarely recognized, usually mixed through individual and environmental characteristics. These maladjustments are the source of a slowly and hidden psychological erosion process. And this erosion process may continue

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for a long period of time without being detected.

Leiter affirms in his study (1991), that the subjects suffering from the burnout syndrome don't have a fix schedule, have low salaries, high working standards requests and carry out their activity in an unfavorable environment.

Exhaustion is one of the most reported and thoroughly analyzed of the three aspects of burnout. The strong identification of exhaustion and burnout determined some of the specialists to sustain that the other two sides of the syndrome are accidental or useless (Shirom A., 1989). However, the fact that exhaustion is a necessary criteria for burnout doesn't mean that it is sufficient. If we should consider exhaustion out of context and concentrate merely on the individual exhaustion component, the phenomenon would be completely out of sight. Even though exhaustion reflects stress, burnout dimension, it fails to surprise the critical aspects of individuals' relationship with their work. Exhaustion is not something experimented, but rather requires specific actions to emotionally and cognitively distance from own work, probably as a way of dealing with work overload.

If people work too much and get involved in too many activities, they will start to reduce from what they are doing, but the risk is that detachment may lead to idealism loss for some and dehumanization for others. (Maslach C., 2006).

The dimension of burnout depersonalization corresponds to the coping term and is manifested through negative attitude towards others, registering an increase of irritability and loss of motivation. Through de-personification, the individual tries to stop the exhaustion of emotional energy by treating others as objects or numbers rather than human beings (Kahili S., 1988). Ashforth and Lee (1990) argued that de-personification is a form of defensive behavior, defined as reactive and protective actions meant to avoid an unwanted request or to reduce a perceived threat. Therefore, it was stated that de-personification is associated with psychological tension and with escape as a method of coping. De-personification may lead eventually to stigma and abuse, the term robotics seems more adequate and may have been chosen as more appropriate for the subject of our interests. (Manzano G., 1998).

Burnout is rather a process than a spiritual state of mind. Every process describes symptoms and signs in an individual context, interpersonal, organizational or social (Fischer & Boer, 2011).

Maslach and Leiter (2005) also identified two groups of factors that dominate the persona before the

burnout. The first group

The first group contains situational predictors that include six antecedents: workload, control, reward, social network, fairness of jobs and values. The second group includes individual antecedents like age, gender, marital status and experience. On the other hand, Cordes and Dougherty (1997) classified the factors related to exhaustion in three groups: position and role characteristics, organizational characteristics and personal characteristics.

In addition, in a recent study related to eye movement (Bianchi *et al.*, 2015), exhaustion and depression proved to provide for similar attentional and behavioral changes. These changes consisted in increased concentration on "dysphoric stimuli" and decreased concentration on "positive stimuli". Burnout and depression were interchangeable in their capacity to predict these changes. Another recent study demonstrated that the association between allostatic loading, that represents a biological item of cumulative chronic stress impact on the human body and burnout, was no longer representative when depression was controlled statistically (Hintsu *et al.*, 2016).

Eventually, in the longitudinally studies that embrace person-oriented approaches (Aloha *et al.*, 2014), was demonstrated that exhaustion and depression symptoms are inseparable, increasing or decreasing together in time. Also, it was demonstrated that "burnout could be used as equivalent of depressive symptoms in professional life" (Aloha *et al.*, 2014, p. 35).

Therefore, even if some scientists suggested that burnout is irreducible to depression (Maslach *et al.*, 2001; Iacovides *et al.*, 2003), this hypothesis became less and less credible while research developed.

Burnout is considered an immeasurable issue in professional world (WHO, 2008). It is one of the most frequent diseases among Europeans and Americans together with diabetics and cardiovascular diseases (Akerstedt T., 2004). The syndrome was considered a very relevant social problem and is studied in many countries, because it is related to high organizational costs, turnover of personnel, absenteeism, lack of productivity and quality issues, the appearance of severe psychological and physical problems that may determine employees to become totally incapable of working.

According to burnout theories however, it is considered that burnout leads to poor health and physiological diseases (Maslach *et al.*, 1996). Burnout effects can be physiologically mediated by affecting the

immune system (Mohren *et al.*, 2003) or by altering the healthy behavior, like alcohol consumption (Ahola *et al.*, 2006c) or poor sleep (Sonnenschein, M., 2007).

As a chronic stress syndrome, exhaustion may compromise physiological health by increasing the allostatic loading, which will affect the cognitive, autonomous and neuroendocrine functionality. Allostasis refers to active process through which the human body responds to everyday events and maintains homeostasis. Allostatic overloading refers to a process in which allostasis is chronically increased or deregulated (McEwen B., 2008). Allostatic overloading represents a chronic situation of “usage” that leads to physical disorders, and eventually, to diseases. However the mechanisms that consists in the basis of the relationship between burnout and physical health are unclear. It was difficult to establish a relationship between burnout and allostatic loading (Langelaan *et al.*, 2007). It is also possible to reverse this process, so that chronic diseases increase burnout (Donders, N., 2007).

Indirect proofs regarding the relationship between burnout and health were discovered. From a physiological point of view, burnout proved to be associated to several cardiovascular risk factors, like metabolic syndrome, a change in the level of stress hormones, low-grade inflammations, damage to the immune system and blood clots (Melamed S., 2006). In general, the burnout can be seen as a phase of the process of deteriorating health (Shirom *et al.*, 2005).

RESEARCH METHODOLOGY

Research purpose

This research was conducted with the purpose to discover the impact of burnout effect over medical staff from state or private environment, considering that work exhaustion and stress represent a major and recent problem.

Research objectives

The main objective of the research was the discovery of different levels of burnout among medical staff from state or private environment.

The second objective has the purpose to identify the personality differences between the two activity areas, from Big Five facets point of view and whether these influence the increase of the burnout level.

The third objective has the purpose to identify the level of dysfunctional attitudes and unconditional

acceptance of own self in the two samples present in the research.

Research hypothesis

The present research hypothesis are the following:

H1 – It is presumed that in the state environment the medical staff has an increased level of emotional exhaustion compared to the employees from the private environment in the actual Covi-19 pandemic context

H2 – It is presumed that the extraversion score is higher among private environment medical staff *versus* medical staff from the public sector during Covid-19 pandemic context

H3 – It is presumed that there is a high level of autonomy among private environment medical staff *versus* medical staff from the budgetary environment in the Covid-19 pandemic context

H4 – It is presumed that there is a significant difference between control localization among state environment medical staff and those hired in the private sector in Covid-19 pandemic context

H5 – It is presumed that there is a significant difference regarding the unconditional acceptance score of the own self among medial staff from state environment and those hired in the private sector during Covid-19 pandemic context.

Research participants

The study was performed on a sample of 186 medical staff from Constanta County, Constanta City, with age between 22 and 53 years old, from which 93 are working for the state and 93 are working in the private sector.

Instruments used

In order to collect the data and demonstrate the hypothesis, the research instruments used were six standardized tests, respectively: Oldenburg Burnout Inventory (OLBI), Localizing Control Scale WLCS of Spector, Maslach Evaluation Questionnaire of Burnout Syndrome (MBI), Questionnaire of unconditional acceptance of own self (USAQ), Dysfunctional Attitude Scale (DAS – Forma A) and Big Five Personality Test (FFPI).

Hypothesis validation

H1 – It is presumed that state environment medical staff has a higher level of emotional exhaustion *versus* those from the private sector in the current pandemic context.

Considering the data from the table, the hypothesis is confirmed, observing that there is a considerable difference, at a significance threshold of 0.043 related to emotional exhaustion dimension, the medical staff working in the state environment having an increased level of emotional exhaustion compared to those working in the private environment.

Emotional exhaustion usually appears after a stressful period of time. Different things may contribute to humans' emotional exhaustion, depending on a person's tolerance to stress and other factors from their life at that moment. Emotional exhaustion is provoking physical effects and also emotional ones, which in turn may affect the behavior of a human being. The symptoms may cumulate in time with a repeated stressful state of mind, even though it is possible that early warnings are not detected by people.

Emotional exhaustion is the basis of exhaustion. While the emotional resources are consumed in the effort of dealing with difficult situations, such as overwhelming requests, conflicts or lack of support at the working place or at home, the feeling of well-being and the capacity of taking care of your own and of the others are diminished.

Table 1. Mann Whitney U Test. Emotional exhaustion - OLB

Mann-Whitney U	692,500
Wolcoxon W	1638,500
Z	-2,021
Asymp. Sig. (2 -tailed)	,043

a. Grouping Variable Sector – Activitate.

Table 2. Mann-Whitney U Test.

Mann-Whitney U	586,000
Wolcoxon W	1532,000
Z	-2,928
Asymp. Sig. (2 -tailed)	,003

a. Grouping Variable Sector – Activitate.

Table 3. T Test for Independent Samples.

		Levenes Test Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig (2-tailed)	Mean Difference	95% Confidence Interval of the Difference Std. Error Difference	Lower	Upper
Autonomie	Equal variances assumed	,254	,616	-1,016	84	,313	-1,860	1,832	-5,503	1,782
	Equal variances not assumed			-1,016	83,287	,313	-1,860	1,832	-5,503	1,782

H2 – It is presumed that the extraversion score is higher among medical staff from private environment *versus* medical staff from the public sector in the Covid-19 pandemic context.

According to the table data, the hypothesis is confirmed, observing that there is a significant difference in the extraversion dimension, at a significant threshold of 0.003.

The extraversion dimension can be a prediction indicator of performance in working environments where inter-human relationships are important, such as retail and managerial domains (Zhao & Seibert, 2006). Also, extraversion can be strongly associated with factors that overcome evident performance (Matthews & Campbell, 2009). Positive emotionality feature of extraversion is present also in the working environment, by example, through satisfied associates at the working environment and with resistance to stress and burnout.

The extraversion can be the most important in the working environment for the leading positions, such as managers, but not in the case of professional performance of doctors, also because the openness towards experience is related to the training competence. By example, the managers that get a high score related to the dimension of extraversion are probably more suitable for the social and inter-personal requests of the contextual activities, respectively to encourage positive working relations, subordinates' interactions and public relations.

Herzberg (2003) sustains that extravert individuals are more vigorous in approaching life. Even more, this personality feature is associated with being talkative, starting conversations, being enthusiast and bold in actions (Barrick & Mount, 1991).

Opposite, medical staff from the state environment obtained a smaller level in the extraversion dimension *versus* the employees from the private

Table 4. T Test for Independent Samples.

		Levenes Test Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig (2-tiled)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower Upper	
Scor WLC	Equal variances assumed	5,752	,019	-2,555	84	,012	-4,558	1,784	-8,105	-1,011
	Equal variances not assumed			-2,555	77,604	,013	-4,558	1,784	-8,110	-1,007

Table 5. Mann-Whitney U Test.

Mann-Whitney U	120,500
Wolcoxon W	1066,500
Z	-6,955
Asymp. Sig. (2 -tailed)	,000

sector, because they have the tendency to avoid social interactions as a consequence of the occupational cultural influences. Actually, the majority are described by characteristics such as introversion, skepticism, cynicism and lack of confidence in strangers.

H3 – It is presumed that there is a high level of autonomy in the medical staff from the private sector *versus* the medical staff from the budgeted sector in the Covid-19 pandemic context.

Considering the statistic calculation, the hypothesis is confirmed, there is a significant difference at the autonomy dimension between medical staff from the private environment and budgeted sector, at a significance threshold of 0.313, which means that employees from the private environment register a high autonomy level.

Human beings wish to make own decisions, to follow their own objectives and come with their own ideas. When they are autonomous, human beings approve their own feelings and actions at the highest reflection order (Ryan & Deci, 2004). All individuals will strive naturally to fulfill this need, as long as their environment is facilitating and supporting this effort.

This means that the individual is continuously involved in an interaction with his environment and that the need of autonomy is present in all individuals, regardless of background and culture (Chen et al., 2015). Autonomy, defined as “the extent to which the position is offering substantial freedom, independence and discretion to the individual in the planning of work and in the determination of the procedures that need

to be used to achieve this” (Hackman & Oldham, 1980, p. 79). In the first place, development is usually started by the existence of a too high or too low autonomy, as it can be seen in many carrier progress models. (Hall, D., 1986). Similarly, the reviews from the specialized literature indicate the fact that development can be utilized to obtain improved discretion and control in the future, or to deal with the current levels of responsibility of the job (Noe *et al.*, 1997).

On the other hand, medical staff from state sector register lower scores at the autonomy dimension, because there are stressful factors that are the root cause of the problems that decrease motivation and lead to frustration, no satisfaction at the working place and reduced commitment, through which is strongly connected to organizational cynicism. In this respect, it is important that each organization finds better solutions to reduce this phenomenon that can stop organizational success.

H4 – It is presumed that there is a significant difference related to control localization in the Covid-19 pandemic context between medical staff from the state sector and those working in the private sector.

Considering the statistic calculation, the hypothesis is confirmed, there is a significant difference regarding control localization between employees from the private sector and doctors, at a significance threshold of .013, the results are leading to the conclusion that control localization of employees from private environment is external and internal for the ones in the state sector.

Control locus is referring to the extent in which individuals think they can control the events that are affecting them. People with a high internal control locus think that events emerge primarily from their own behavior and actions. Those with a high external control locus think that faith or causality are primarily

determining the events. Those with a high internal control locus have a better control of their behavior than those with an external locus and are more predicted to try to influence other people and to consider that their efforts will be successful. They are also, more active in searching for information and knowledge regarding their situation than the external ones.

Also, other specialized studies make the connection between burnout and the control locus. Glass and McKnight (1996) analyzed 32 studies related to control locus role in burnout, therefore in average, they found correlations between 0.2 and 0.4, claiming that an external control locus, in general, doesn't have a significant contribution to burnout. More likely, a higher lack of control specific to the working environment, such as lack of autonomy and lack of involvement in making organizational decisions, contributes in the association of the constructs.

Internal control locus may be psychologically unhealthy and instable. An internal orientation, usually has to be suitable with competence, self-efficacy and opportunity, so that the person can successfully experiment the feeling of personal control and responsibility. Persons with a high internal orientation that are lacking competence, self-efficacy and opportunity may become neurotics, anxious and depressed. In other words, they must have a realistic feeling of their influential circle in order to experiment success.

Control locus has an important place in human beings life, influencing both physiological health and psychological one in an important extent.

H5 – It is presumed that there is a significant difference related to the score of unconditional acceptance of the own persona among medical staff from the state sector and those hired in the private sector during Covid-19 pandemic context.

According to the table data, the hypothesis is confirmed, noticing that there is a significant difference between medical staff from the state sector and those in the private sector considering the unconditional acceptance of their own self, at a significance threshold of 0.000.

Perfectionism can generate a constant quantity of stress both at the working place as in the personal, family life. Living in a circle of stress with no release, may allow helpless or desperate feelings gain roots, and people with a job exposed to a high level of stress, such as doctors case, make them be more susceptible to burnout.

Perfectionism at the working place can make

impossible self-compassion or the acceptance of certain failures. This aspect can determine human beings to work or compete more than it is recommended, for a longer period of time. If perfectionism is not well controlled, a person may get to the point of burnout. It may be more difficult to come back from a burnout condition than from a fatigue condition (Curran & Hill, 2015).

The person constantly preoccupied with self-evaluation, rather than in self-acceptance, may need special attention in order to compensate the personal perceived deficit. One of the most simple and natural methods to diminish self-evaluation and replacement of this with acceptance is to gradually become aware of own thoughts and emotions (Langer E., 1989).

Opposite, employees form private environment pursuit achievements not to demonstrate their value to others but to feel the joy of being part of something significant. Their self-acceptance is not related to what other people think of themselves. They are released from this tyranny, choosing to concentrate on what they want to achieve without the pressure of validation from others and they are not immobilized by mistakes and counters. Self-acceptance means recognizing both humanity and talent, using at the maximum talent and strong points, without reluctance or excuses, embracing the call for the profession they are following.

DISCUSSION

The culture of overload and over commitment at the working place, together the phenomenon of personal identity loss as a consequence of personal success, lead to one of the important issues of our days, respectively to the burnout syndrome. Burnout is extremely complex and deeply rooted both in individual psychology and in organizational climate, still is also connected with our society on a wide scale. That is way we say that it is a multi-dimensional issue and will not be solved only by treating persons, social change being also necessary (Delcea C., Siserman C., 2021).

Even though burnout state of mind could be normalized enough in our current life style, the majority of people living it sooner or later during carrier phase, it doesn't mean it is less dangerous. To reach a burnout state of mind means that internal systems of a person are collapsing, body and mind cannot maintain rhythm and an alert state is generated in order to slow down and interfere with a change in the life style (Delcea C., Chirilă V.I., Săucea A. M., 2021).

The current study fulfilled its objectives, and all six hypothesis were confirmed. Related to one of

the three dimensions of burnout, respectively the emotional exhaustion, it was found that medical staff from budgeted sector register a higher level *versus* employees from private environment. This is caused by the fact that the nature of their work and of the physical factors of stress and environment they have one of the most stressful occupations.

By taking into consideration the dysfunctional attitudes, compared to professions from private environment analyzed in this research, the conclusion is that doctors work represents a profession full of stressful factors, which implicitly is leading to a high level of dysfunctional attitudes, being an important predictable of burnout (Delcea C., Muller-Fabian A., Radu C.C., Perju-Dumbravă D., 2019).

From the personality super factors, medical staff from state environment obtained a lower level of extraversion dimension *versus* employees from the private environment, because they have the tendency to avoid social interactions as a consequence of the occupational cultural influences. Extraverts have the tendency to be more ambitious than introverts and are more proactive in searching for a job and in the development of an efficient social networking (Matthews & Campbell, 2009). Barrick *et al.* (2013) describes extraverts as being motivated by their status, searching for positions that give meaning to the duty, power and status, but also feedback from others. Research related to stress suggest that extraverts deal more actively and efficiently with the stress factors and have the tendency to evaluate events in their lives more positive (Carver & Connor-Smith, 2010, Radu C.C., Chirilă V. I., Săucea, A.M., Delcea C., Dumbravă D. P., 2020). Extraverts' higher social commitment and superior capacity of dealing with emotions may confer also health benefits (Matthews & Campbell, 2009).

Related to autonomy dimension, medical staff from budgeted sector register lower scores *versus* those from the private sector, because there are stressful factors that are the root cause of the issues that decrease motivation and bring frustration, lack of satisfaction at the working place and also decreased commitment.

Despite positive influences of autonomy at the working place, it is also understood that, autonomy is perceived as being something problematic for certain employees that do not prefer an autonomy working place. This is generated by the fact that autonomy is becoming a difficult task to solve, because it involves an increased trust and responsibility over individuals (Langfred C., 2004). But in the majority of research studies, autonomy at the working place contributes to

a higher level of accountability and responsibility for behavior and conduct, which leads to performance improvement and employees commitment (Marchese & Ryan, 2001, Rus M., Siserman C., Delcea C., 2019), and also to an increased motivation and self-esteem.

After the analysis of control locus, the results indicate the fact that the employees from the private environment have an external control locus, which means that they do not have control over their own lives and everything is due to external factors from their environment. Medical staff from budgeted sector have an internal focus, having an attitude of personal responsibility and they believe that their choices and their behavior influence the results that they experiment in all the faces of their work and life. They consider that their actions have a direct influence over their results and accept responsibility, as well as the merit, for the way the things are happening.

In conclusion, at the dimension of the unconditional acceptance of their own persona, the medical staff from budgeted system obtained a decreased level, determined by the events and the stress factors. Compared to the employees from the private environment, their self-acceptance is not connected with what other people think about them and is not focused on what they want to achieve without the permission of the validation from other people. Self-acceptance is crucial for the mental health. The absence of the ability of a person to unconditionally accept him/herself may lead to a variety of emotional difficulties, inclusively uncontrolled rage and depression (Carson & Langer, 2006, Rus M., Sandu L. M., Tănase T., Boumediene S., Delcea C., 2020).

Conflict of interest

The authors declare that they have no conflict of interest.

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