



Faculty of
Psychology and
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"Ovidius" University
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BLACK SEA JOURNAL OF PSYCHOLOGY



www.bspsychology.ro



9 772068 464001



The relationship between stress and burnout in nurses in residential centers

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Abstract: The present research paper analyzes the existing link between occupational stress and burnout syndrome in nurses in residential centers. In the first chapter we presented theoretical notions about stress and burnout. The second chapter deals with the research part. We used a sample of 60 people, 40 women and 20 men, with an average work experience of 20 years, working 12-24, 12-48 hours. The purpose of the research is to determine the relationship between stress and burnout in nurses working in residential centers in Techirghiol city. The research was conducted between February and March 2024. The research method was correlative and comparative. Two tools have been applied to collect data. Your stress levels were assessed using the "How stressed are you? ", and the level of burnout with the help of the test "Maslach Burnout Measurement Inventory". The questionnaire data were processed using the SPSS program using the parametric method (Pearson correlation coefficient; T-test) and nonparametric method (U Mann Whitney). When determining the relationship between stress and burnout, a significant correlation resulted. When comparing stress levels by gender, there was a significant difference, and comparing burnout levels resulted in an insignificant difference. Analyzing the research results, we can conclude that stress and burnout are directly proportional. As stress is greater, the manifestation of burnout is more obvious and stress is higher in women than in men, while in the case of burnout there was no difference. So stress at work can eventually generate Burnout Syndrome. Applying techniques to manage stressful feelings and emotions can help and efficiency at work will not suffer. The paper is concluded with the bibliographic sources that were the basis for the elaboration of the entire approach and which contributed significantly to the achievement of the scientific foundation in the conduct of research.

Keywords: stress, burnout, nurses, residential centers, exhaustion, fatigue, anxiety.



1. Theoretical data

In contemporary society, stress and burnout are increasingly common phenomena. The objective of this paper is to reveal to what extent burnout is related to stress, focusing on nurses working in residential centers. Health care, especially in residential centers, is a stressful field, characterized by exposure to a wide range of situations, both medical (acute, chronic, neuro-psychic) and social. Stressors are represented by high workload, night shifts, physical fatigue, the need to cope emotionally, nurses having direct contact with physical suffering, difficult behavior of residents as well as lack of families, which would represent a real support for patients.

Certainly, stress has a strong influence on the individual, especially if we stop on his attitude towards the tasks he has to perform. Burnout syndrome is defined as directly related to the occupational area and is associated with situations in which the individual fails to manage stress.

1.1. Stress

Stress is one of the modern "diseases of civilization." According to the definition given to stress in biology, it is a phenomenon that can lead to changes in an organism, regulating or producing disorders of body processes. In psychology, the term stress is used to evoke the multiple difficulties that the individual struggles to cope with (stressful life events, also called vital events) and the means available to manage these problems (adjustment strategies), (Doron, R., 2006, p.750)

Baban says stress is a state of emotional and physical tension that occurs when an individual has to cope with a situation or task perceived by him as difficult or challenging (1998). When a person makes efforts to adapt to demanding events in his life, when his well-being is threatened, when he believes that these events exceed his resources, stress occurs (Turliuc, N., Măirean, C., 2014).

According to Matta (2012), stress affects the body as well as the brain. One of the first signs of stress is physiological in nature, such as an increase in blood pressure and heart rate. Physiological manifestations of stress are reactions to possible threats perceived by the individual or real. (2012)

At work, stress can be defined as a change in a person's physical, mental, emotional state or manifestations as a result of permanent pressure exerted on them in order to work in ways that are not compatible with real or perceived abilities, resources and time. So, we can say that stress at work has a negative mental and physical result and that can lead to fatigue, depression, nervousness, anxiety and various organic ailments. In addition, stress brings quite large disturbances in terms of productivity, competitiveness, creativity.

According to Parasuraman and Alutto (1984), the causes of stress at work can be grouped into three main categories: contextual, personal, and role-related causes.

Stress can be both additive and cumulative, by cumulation leading to the state of crisis, when symptoms are felt. Symptoms can manifest themselves mentally and physically. Psychologically it manifests itself through: decreased concentration, anxiety, irritability, frustration and hatred. The first impairment is physical in nature. Physical symptoms can be: headache, back pain, muscle hypertonia, insomnia, hypertension. Untreated symptoms can lead to illness and sometimes even death. In today's society, women have more tasks and responsibilities and as such are subject to higher stress than men. The contemporary woman must succeed in all areas both professionally, family and socially despite psychological pressures.



If at first stress factors negatively affect only the individual, over time, the consequences are also reflected at the institution level. The entire human species carries out common activities and promotes the same type of relationships at both macro and micro-social levels, with slight differences. General stressors are felt the same by any social actor. (https://ibn.idsi.md/sites/default/files/imag_file/237-244_1.pdf)

1.2. Burnout-ul

The main consequences of the appearance of the syndrome called "burnout" are represented by: lack of energy accompanied by a feeling of exhaustion, detachment from professional activities, negative feelings about work, reduced professional efficiency. Burnout is not a condition permanently present in the case of the individual subjected to stress. The syndrome begins gradually, with the appearance of somewhat minor signals, but can lead to seizures that are difficult to manage. By changing working conditions, burnout can be eliminated. This syndrome is widespread among nurses. The recovery activity being quite difficult indirectly affects the quality of organizational activity, as nurses suffering from burnout, manifest involuntary, indifference at work and inability to perform performance. There is a clear relationship between stress and the way of integration into the socio-professional environment. Stress occurs early and can be the main starting point for burnout. American psychologists Herbert J. Freudenberger and Gail North introduced the term burnout for the first time in 1974 in their paper "Burnout: The High Cost of High Achievement". Herbert Freudenberger in his definition of burnout emphasized the disappearance of motivation in case of lack of a desired result of the activity carried out.

According to Maslach, burnout is a syndrome of emotional exhaustion that is preceded by physical exhaustion and consists of low self-esteem accompanied by a negative attitude towards work. Maslach equally discusses the negative effects on an individual's physical and emotional health.

Maslach and Jackson (1981) would also highlight the trend toward dehumanization as a direct result of a lack of interest in meeting customer needs. Maslach discusses the negative effects on an individual's physical and emotional health. Greenberg (1998) states that burnout is a form of professional stress that manifests itself "as a state of extreme and specific tension, which occurs due to long-term occupational stress, with negative psychological, psychophysiological and behavioral manifestations" (<https://www.psyconsultancy.ro/sindromul-burnout/>).

Burnout occurs predominantly in those professions where interpersonal contacts occur. It is due to individual traits. When the individual cannot meet the proposed goals, he is disappointed in relation to idealized self-images and loss of self-confidence and tendencies to depersonalization may occur.

Speaking about symptoms, burnout presents 5 categories:

1. Emotional symptoms are the first to appear and are: irritability, anxiety, depression and detachment, guilt;
2. Physical symptoms: fatigue, sleep disturbance, somatic problems and susceptibility to viruses;
3. Behavioral symptoms: aggression, insensitivity, substance abuse, pessimism;
4. Indiscipline at work: absenteeism, delays, abuse of breaks, resignation;
5. Difficulties in interpersonal relationships: withdrawal, lack of involvement, inability to communicate, dehumanization, robotic.



(https://anmcs.gov.ro/web/wp-content/uploads/2021/04/Prezentare-Poroch-Vladimir_burnout_ANMCS_aprilie-2021_Public_FINAL.pdf)

Burnout syndrome cannot be identified with the manifestations of depression, especially from the point of view of the causes that lead to these two syndromes. (Herdea & Brînză, 2018)

Patterns of burnout:

Nonspecific models: (Zlate, 2006) Heightened stress occurs as a result of the individual's interaction with the environment. When the individual believes that the interaction exceeds his resources, he will try to cope with the situation by developing those strategies that include self-control, detachment, seeking social support, running away or avoiding, positive reappraisal.

Specific models: The process model (Cherniss, 1980). Burnout is a process that occurs over time, being a form of adaptation to sources of stress. Stress results from the imbalance created between the resources of the individual and the demands of the activity. The imbalance between reality and the ideal representation of the situation leads to emotional tension. The decrease in emotional tension (Crumpei, 2014) is achieved through changes in behavior and attitude.

Phasic model (Golembiewski, Munzenrider, Carter, 1983). The first phase is emotional exhaustion. Burnout begins with depersonalization, followed by decreased personal achievements, and ends with emotional exhaustion.

Professional secondment is functional and adaptive. When the individual makes an effort to cope with demands beyond their adaptive possibilities, detachment becomes depersonalization with an effect on performance. Over time, there is a decrease in personal achievements, which manifests itself in emotional exhaustion. These circular phases aim to adapt to stressful situations, protecting the psyche of the individual.

The three-dimensional model (Maslach and Jackson, 1981). This model is a structural model because it describes the dimensions of burnout. The three-dimensional model describes the process and its evolution over time.

Professional burnout is a complex phenomenon with a multifactorial etiology that can have a significant impact on the physical and mental health of the individual (Maslach, Schaufeli & Leiter, 2001).

Although burnout syndrome occurs in both women and men, a Gallup study (2020) shows that at work women are likely to suffer from burnout in a proportion of 34% compared to 26% for men. This is because women are more conscientious, work harder, are more resilient and support their colleagues more than men.



2. Research methodology

2.1. Objectives of the work

The main objective of the paper is to establish the relationship between stress and burnout in nurses in residential centers. Another goal is to establish differences between women and men, nurses, in terms of stress levels and burnout.

2.2. Research hypotheses:

1. It is assumed that there is a significant correlation between stress and burnout in nurses working in residential centers;
2. It is assumed that there are significant differences between women and men, nurses, in terms of stress levels;
3. It is assumed that there are significant differences between women and men, nurses, in terms of burnout levels.

2.3. Group of participants

The sample consists of 60 subjects, 40 women and 20 men, aged 22-63, with high school, higher education either completed or ongoing, with an average work experience of 20 years, both from urban and rural areas. All participants were informed about the purpose of the research and at the same time assured of the confidentiality of the information.

2.4. Applied instruments

To analyze the correlation between stress and burnout, we chose two tools. First questionnaire to measure stress levels "How stressed are you?" and second, Maslach's Burnout Measurement Inventory".

The test "How stressed are you?" measures the level of occupational stress. This test consists of 32 items with answers ranging from 1-4. (1-Never; 2 - Sometimes; 3 - Often and 4 - Always).

- between 23-46 points: dominate stress very well, but strive to achieve an optimal balance between negative and positive stress;
- between 46-67 points you have an acceptable stress level, but certain aspects need to be improved;
- Between 68-92 points the stress level is very high, find ways to reduce it.

"Maslach's Burnout Measurement Inventory evaluates the level of professional burnout. This inventory contains 25 items, structured on 3 dimensions: emotional exhaustion (9 items), depersonalization (6 items), reduction of personal achievements (10 items), with answers ranging from 1-5 (1 – very rare, 2 – rare, 3 – sometimes, 4 – frequently, 5 – very frequently). Each size has 3 levels of burnout (low, medium, and high). Items 7, 8, 10, 13, 19, 20, 21 and 23 are scored inversely (1 corresponds to 5; 5 corresponds to 1; 2 corresponds to 4; 4 corresponds to 2; 3 corresponds to 3)



3. Data analysis and interpretation

3.1. Verification of hypothesis 1: It is assumed that there is a significant correlation between stress and burnout in nurses working in residential centers.

To verify the hypothesis, a correlation was made between the first test "How stressed are you?" and the Maslach Burnout Measurement Inventory"

We checked the normality of the two tests, to know which correlation method we will use, parametric or nonparametric.

Table 1. The Test of normality between stress and burnout

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Scor T_stres	.086	60	.200*	.971	60	.170
Scor T_burnout	.086	60	.200*	.958	60	.039

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Following the Sig obtained, greater than 0.05, in the stress and burnout surveyor, the method used will be parametric.

Table 2. The corelation between stress and burnout

	Correlations	Scor T_stres	Scor T_burnout
		Pearson Correlation	1
Scor T_stres	Sig. (2-tailed)		.000
	N	60	60
Scor T_burnout	Pearson Correlation	.906**	1
	Sig. (2-tailed)	.000	
	N	60	60

** . Correlation is significant at the 0.01 level (2-tailed).

In the case of stress and burnout, the Pearson correlation coefficient obtained is .906**. The significance of the result Sig. (2-tailed).000 at a threshold of 0.01 indicates that there is a significant correlation between stress and burnout.

It follows from this correlation that stress and burnout are directly proportional. As stress increases, the trend is for burnout to increase among nurses as well.

A large proportion of nurses surveyed showed signs of occupational stress, depression, apathy, anxiety. In their case, emotional exhaustion, depersonalization and decreased performance are evident. Most nurses declared the presence of chronic fatigue, indifference to colleagues, lack of confidence in future successes presenting an attitude of blazarism. The stronger the depression, apathy, anxiety, and fatigue, the more obvious the manifestations of burnout, resulting from the participants' responses.

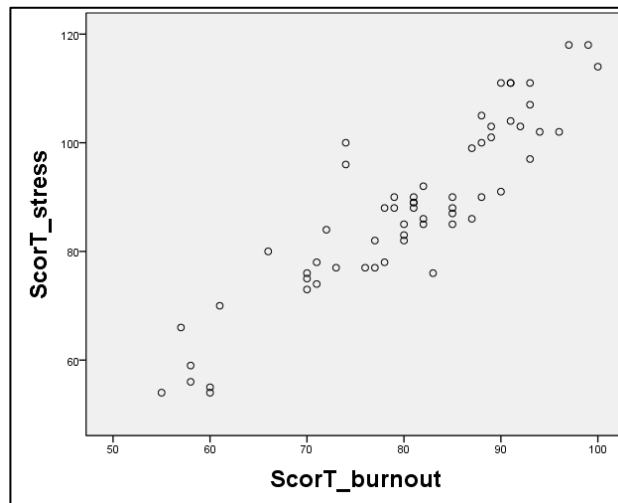


Figure 2. The cloud of dots between stress and burnout

The point cloud illustrates the relationship between stress and burnout. On the horizontal axis burnout is represented and on the vertical axis is represented stress. The orientation of the dots is oblique to the upper right corner, indicating a significant-positive correlation.

3.2. Verification of hypothesis 2

It is assumed that there are significant differences between women and men, nurses, in terms of stress levels.

To verify the hypothesis, a comparison was made between women and men, who were given the test "How stressed are you?".

We checked the normality of the stress test to know which comparison method we would use, parametric or nonparametric.

Table 3. The test of normality between women and men in the terms of stress levels

		Tests of Normality					
gen		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
ScorT_stres	feminin	.113	40	.200*	.962	40	.202
	masculin	.169	20	.134	.891	20	.028

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Following the obtained Sig, both in women and men is above 0.05, the method used will be parametric.



Table 4. The results of the Independent Sample Test

		Independent Samples Test								
		Levene's Test for Equality of Variances			t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower		Upper
ScorT_stres	Equal variances assumed	1.688	.199	3.194	58	.002	12.900	4.039	4.815	20.985
	Equal variances not assumed			3.443	46.546	.001	12.900	3.746	5.361	20.439

The sig value obtained in the Levene test is .199, that is, it is greater than 0.05, so it is valid, both normality and homogeneity have been checked. On the T-test, we obtained the sig. values. 002 and .001, which shows that there is a significant difference between women and men in terms of stress.

3.3. Verification of hypothesis 3:

It is assumed that there are significant differences between women and men, nurses, in terms of burnout levels.

Table 5. The test of normality between women and men in the terms of burnout levels

		Tests of Normality					
gender		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
ScorT_burnout	female	.117	40	.181	.958	40	.141
	male	.205	20	.028	.923	Tests of Normality	

Kolmogorov-Smirnova

Following the Sig obtained in women (.181) p is greater than 0.05, and in men (.028) p is less than 0.05, the method used will be nonparametric.

Table 6. The results of the Mann-Whitney U Test

Test Statistics ^a	
	ScorT_burnout
Mann-Whitney U	288.000
Wilcoxon W	498.000
Z	-1.758
Asymp. Sig. (2-tailed)	.079

a. Grouping Variable: gen



The value obtained for the Mann-Whitney U statistics suggests that there is no significant difference between women and men in terms of burnout, since the associated p-value .079 is greater than 0.05. Therefore, the hypothesis of our work is not confirmed.

Results and discussion

Regarding the result of the first hypothesis issued in the research, it is confirmed that there is a significant correlation (Pearson Coefficient 0.906**; sig .000) between stress and burnout, from which it follows that high stress is associated with an equally high burnout in nurses in residential centers. After analyzing the results, we noticed that the hypothesis that a high level of stress among nurses is associated with considerable emotional exhaustion, in addition to physical burnout. They are no longer able to cope with daily pressures at work, which leads to an increase in the number of sick days and also in the number of employees who resign.

Greenberg's (1998) statement that "burnout is a form of professional stress that manifests itself as a state of extreme and specific tension, which occurs due to long-term occupational stress, with negative psychological, psychophysiological and behavioral manifestations" is confirmed. ([https://www.psyconsultancy.ro/sindromul-burnout/.](https://www.psyconsultancy.ro/sindromul-burnout/))

As regards the outcome of the second hypothesis, it is confirmed that there are significant differences in stress for nurses by gender (women's sig .002; men's sig .001). Although the literature does not specifically refer to differences in stress levels by gender, the latest research shows that stress levels in women are lower than in men. This is due to the position of women in modern society, which has more and more responsibilities professionally and socially.

According to the result of the third hypothesis, it is not confirmed that there are significant differences in terms of burnout between nurses who function as in residential centers according to gender (sig. 079). And yet, studies prove that even in the case of burnout, women are more likely to suffer from this syndrome (Gallup-2021 studies: 34% women vs. 26% men). In recent years the situation has worsened. If in 2020, 32% of McKinsey surveyed workers said they faced burnout at work, in 2021 the percentage increased by 10% (42%)

Conclusions

The research reflects the existence of a significant correlation between stress and burnout in nurses within DGASPC, highlighting the importance of workplace impact on employees. In conclusion, the research results suggest that The main reasons that lead to increased stress and burnout in nurses who have as patients residents of placement centers are: environment subject to emotional pressure, lack of collaboration with caregivers, workload, responsibilities and assumed capacities. Most of the time they lead to the feeling of overwhelm and eventually to emotional exhaustion, professional exhaustion.

The more the stressors that lead to burnout are identified and accepted in a timely manner, the more successful the intervention can be. Applying techniques to manage stressful feelings and emotions, applying a work schedule that respects rest time, can help the worker, and efficiency at work will not suffer.

These findings can also help employers manage working hours and organise work better. The result of these measures will lead to the reduction of stress at work and consequently the risk of burnout will be minimized, and efficiency at work will not suffer, the routine of activities in



residential centers will not suffer. In addition, the financial costs related to medically motivated absenteeism from work, those related to the treatment provided to employees affected by occupational stress and burnout syndrome would decrease the budget of institutions and employees, no longer being greatly affected.

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**BLACKSEA JOURNAL
OF PSYCHOLOGY**

eISSN: 2068-4649; Print ISSN: 2068-1186

The "Black Sea" Journal of Psychology

Vol. 15, Issue 1, 83-93, Spring, 2024

ISSN: 2068-4649

www.bspsychology.ro