

PREVALENCE OF BURNOUT IN ADMINISTRATIVE AND INDUSTRIAL SECTORS

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Abstract

Burnout is one of the most common psychological conditions that modern society is increasingly facing with, as it influences health status and can mediate the relationship between workload and mental disorders.

The aim of this study was to investigate the prevalence of burnout with its dimensions among the specified groups of workers.

A self-administered questionnaire was completed by a sample of three groups of workers to assess burnout with its three dimensions (Maslach Burnout Inventory–General Survey). Pearson correlation coefficient and Spearman rank correlation coefficient were used to determine the relationship between numerical variables with normal/not normal frequency distribution.

The total burnout score was 2.55 ± 1.08 , which corresponded to a moderate degree of this dimension. Of the total sample 18.1% were with a severe degree of burnout while 68.9% were with moderate. Significantly the worst was the situation in the industrial respondents, 25% were severely and 69.3% were moderately burned out, followed by the private and public groups.

Our study indicated a high prevalence of burnout, especially in the industrial sectors. The use of accurate results could prove vital in the early detection and management of affected individuals, especially in high-risk professions. Burnout prevention and burnout reduction interventions should be made to highlight the increasing need for the development and deployment of mental health institutions and professionals around the country, in the efforts to pay more attention to mental health.

Key words: burnout, prevalence, occupational groups

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Introduction. Burnout is one of the most common psychological conditions that the modern society is increasingly facing with. It is a result of a chronic stress and is defined as a three-dimensional syndrome of exhaustion, cynicism, and diminished professional efficacy, as well as detachment from work due to prolonged exposure to work environment stressors [1]. Instead of representing a mental disorder, burnout is considered a psychological construct that can be coded as a condition that influences health status [2]. Research has found that discrepancies between the expectations/resources of the worker and the job demands as well as the high workload, lack of social support, and dysfunctional coping mechanisms, increase the risk of burnout [3,4].

Work-related stress can affect employee satisfaction, work productivity and mental and physical health. It can also increase levels of absenteeism and affect family roles and functions. Epidemiological studies have found a high prevalence of burnout syndrome and related mental illnesses among different profiles of employees. Burnout rates in society range from 2.4 to 72%. High staff turnover, increased absenteeism and reduced productivity associated with burnout, cause increased financial costs [5]. The negative effects of burnout can increase significantly before someone recognizes or addresses the problem, and unresolved burnout can increase the chance of developing clinical illness, depression, or other serious conditions [6].

The past years of research have established the complexity of the construct and placed the individual experience of stress within the broader organizational context of people's attitudes toward their occupational engagement. Recently, work on burnout has expanded internationally and led to new conceptual models. A focus on engagement, the positive antithesis of burnout, promises to yield new perspectives for interventions to alleviate burnout. Burnout's societal focus, the syndrome's solid research base, and its specific connections to the workplace make a distinct and valuable contribution to human health and well-being.

By conducting the present study and analyzing the prevalence of burnout in public, private administration, and industrial workers, we aim to provide more clarifications concerning this condition. The objectives of the study were to investigate the magnitude of the burnout dimensions among the specified groups of workers.

In addition, valuable information will be provided as to whether burnout should be included in the diagnostic criteria for depression and other mental conditions, or should be integrated as a separate diagnosing entity.

The use of accurate results could prove vital in the early detection and management of affected individuals, especially in high-risk professions.

Material and methods. This was a cross-sectional analytical study, carried out over a period of 3 months in the Institute of Occupational Health of the Republic of North Macedonia-Skopje, WHO Collaborating Center, supported by the Department of Psychiatry, Medical Faculty of the Sofia University "St. Kliment

Ohridski", Republic of Bulgaria. All participants were introduced to the study and given a consent form, and a MBI-GS questionnaire to complete. The Ethical Committee of the Institute of Occupational Health of the Republic of North Macedonia, Skopje, gave approval for performing the study and publishing the results obtained.

The research covered a total of 248 respondents divided into three groups: private, public administration and industrial workers.

Burnout was measured with the Maslach Burnout Inventory-General Survey (MBI-GS) [7]. The MBI-GS consists of 16 items that form the three subscales: exhaustion (five items, Cronbach's $\alpha = 0.88$), cynicism (five items, $\alpha = 0.83$), and professional efficacy (six items, $\alpha = 0.8$). The items were scored on a 7-point frequency rating scale ranging from 0 (never) to 6 (daily). The total MBI-GS score with 3 degrees was for: exhaustion (low = 0–9; medium = 10–14; high ≥ 15); cynicism (low = 0–6; medium = 7–12; high ≥ 13); and lack of professional efficacy (low ≥ 29 ; medium = 24–28; high = 0–23). High scores on exhaustion and cynicism and low scores on the lack of professional efficacy are indicative of burnout. The items of professional efficacy were reversed (lack of professional efficacy). To assess the level of burnout, a weighted sum score of the dimensional sum scores was calculated [8]. Coefficients were formed by weighting each dimension so that the scores corresponded to the original response scale ($0.4 \times \text{exhaustion} + 0.3 \times \text{cynicism} + 0.3 \times \text{lack of professional efficacy}$) [9]. Burnout was categorized as follows: no burnout, moderate and severe.

All collected data were logged and keyed in Microsoft Excel 2010 and statistically processed using SPSS version 22.0 for Windows (SPSS, Chicago, IL, USA). Pearson Chi-square test, Yates corrected, Fischer exact test and Fisher Freeman Halton exact test were used to determine the association between certain dichotomous features. Pearson correlation coefficient and Spearman rank correlation coefficient were used to determine the relationship between numerical variables with normal/not normal frequency distribution. The study considered any variable with a P -value less than 0.05 as statistically significant.

Results. Of the total 248 employed individuals we analyzed, 79 (32%) were private administration, 81 (33%) public administration and 88 (35%) industrial workers.

For the whole sample, the total burnout score was 2.55 ± 1.08 , which corresponded to a moderate degree of this dimension (Fig. 1). The industrial respondents were most affected 2.81 ± 1.03 , compared to private and public administration 2.46 ± 1.09 and 2.36 ± 1.08 , respectively, with a significant difference between the groups ($P = 0.047$).

The whole sample indicated a low degree of exhaustion 7.37 ± 7.36 . The highest average exhaustion score was observed among industrial workers 9.73 ± 8.02 , followed by public 8.83 ± 7.79 and private administration 7.37 ± 7.36 , with no significant differences between the groups.

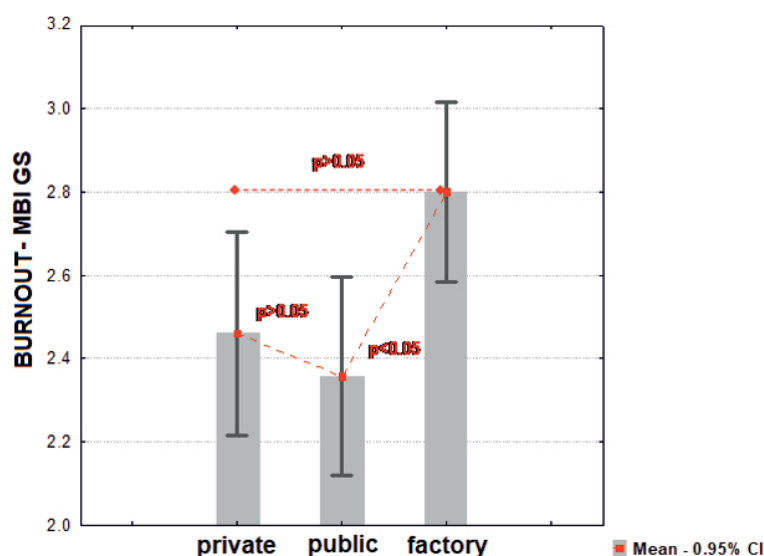


Fig. 1. MBI-GS weighted value of burnout by groups

The cynicism in the total group was represented by a medium grade 9.35 ± 5.76 , the highest in the industrial workers 9.35 ± 5.76 , followed by the public 9.12 ± 5.35 and the private group 8.10 ± 5.24 , with no significant differences between the groups.

The analysis found a low degree of lack of professional efficacy in all respondents 29.23 ± 7.69 but there was a significant difference between the three groups individually ($P = 0.0006$). The industrial workers (29.2 ± 7.69) were in the most favourable position, followed by private (27.67 ± 9.79) and public employees (22.09 ± 1.63).

Table 1 shows the quantitative and categorical burnout dimensions and indicates the highest exhaustion and cynicism in the industrial group and the largest association with lack of professional efficacy in public workers.

Of the total sample 18.1% were with a severe degree of burnout while 68.9% were with moderate. Significantly the worst was the situation in the industrial respondents, 25% were severely and 69.3% were moderately burned out, followed by the private and public groups. The degree of burnout was significantly associated with the type of institution ($P = 0.0213$).

Discussion. This study aims to analyze the prevalence and importance of burnout among workers. The results of the burnout showed that 18% were severely affected, and it is most pronounced in the industrial group, both in quantity (2.81 ± 1.03) and as a share distribution (25% high burnout), which significantly differs from private and public employees. Also, the industrial workers were related with the highest levels of exhaustion and cynicism, although the differences, compared to other employees, are statistically insignificant.

T a b l e 1

Prevalence of degrees of the MBI-GS dimensions by groups

MBI-GS dimensions	Groups				<i>P</i>
	Private <i>N</i> (%)	Public <i>N</i> (%)	Factory <i>N</i> (%)	Total <i>N</i> (%)	
Exhaustion-degrees					
Low	56 (70.89)	50 (61.73)	49 (56.68)	155 (62.50)	Pearson Chi-square: 4.766; df = 4; <i>P</i> = 0.3121
Medium	10 (12.66)	10 (12.35)	14 (15.91)	34 (13.71)	
High	13 (16.46)	21 (25.93)	25 (28.41)	59 (23.79)	
Cynicism-degrees					
Low	55(69.62)	53 (65.43)	56 (63.64)	164 (66.13)	Pearson Chi-square: 2.058; df = 4; <i>P</i> = 0.7251
Medium	15 (18.99)	14 (17.28)	15 (17.05)	44 (17.74)	
High	9 (11.39)	14 (17.28)	17 (19.32)	40 (16.13)	
Lack of professional efficacy-degrees					
Low	48 (60.76)	31 (38.27)	60 (68.18)	139 (56.05)	Pearson Chi-square: 25.361; df = 4; <i>P</i> = 0.00004**
Medium	16 (20.25)	11 (13.58)	6 (6.82)	33 (12.31)	
High	15 (18.99)	39 (48.15)	22 (25.00)	76 (30.65)	
Burnout-degrees					
None	10 (12.66)	17 (20.99)	5 (5.68)	32 (12.90)	Pearson Chi-square: 11.517; df = 4; <i>P</i> =0.0213*
Moderate	57 (72.15)	53 (65.43)	61 (69.32)	171 (68.95)	
Severe	12 (15.19)	11 (13.58)	22 (25.00)	45 (18.15)	

Significant **P* < 0.05 ***P* < 0.001

The research hypothesis in the present study proposes that manufacturing workers belong to a special professional group whose mental health is closely linked to the working environment, modernization, and progress in the industry. They are exposed to long periods of heavy, repetitive, physical work, but still with relatively low income. Also, their long-term exposure to unaffordable occupational conditions like high temperature, dust, noise, disregard for break time, and proper neglect of eating habits makes them more tired, stressed, and susceptible to the development of somatic and mental illnesses, as well as experiencing burnout. Similar findings confirmed our assumptions to a much greater extent: factory workers and miners in China experienced occupational burnout (86%) as a result of risk factors like sex, education, professional title, work schedule, monthly income, hypertension, age, working years, asbestos dust, benzene, etc. [10]. Also, if a person's life balance is low, it will increase the work fatigue of employees [11]. Besides the difficult working conditions, they may be exposed to low social support

and reduced social contacts related to irregular working hours and night shifts. Respectively, when workers can no longer use their internal and social resources to alleviate the physical burden of work challenges, their psychological balance will be disturbed, resulting in emotional exhaustion and psychological health problems. That is confirmed by findings that indicate the mediating role of social support in the negative effects of burnout, especially the emotional exhaustion which was found as the best single predictor of general health [12]. The literature showed that factory workers performing functions that are directly related to manufacturing, experience significantly higher levels of exhaustion/cynicism compared to employees performing other functions. These are less satisfied with subordinate or supervisor relationships and report higher levels of exhaustion/cynicism compared to those who are more satisfied with these relationships. The same study found that exhaustion/cynicism is the only burnout dimension that is related to turnover [13].

The third dimension, the lack of professional efficiency, turned out to be quite influential in our groups with a significant difference between them. Our study pointed out that the industrial group was with a low level of lack of professional efficiency, followed by private and public employees. This can be explained by the fact that our industry workers have serial work on machines in production, related to the fulfillment of norms for which it is necessary to provide the appropriate resources and materials from the organization. Perhaps meeting the appropriate norms/goals gives a sense of high productivity and professional efficiency. Our results are in a certain contradiction with a study [14] which shows that exhaustion or cynicism interferes with professional efficacy. However, in other job contexts, inefficacy appears to develop in parallel with the other two burnout aspects, rather than sequentially. The lack of efficacy seems to arise more clearly from a lack of relevant resources, whereas exhaustion and cynicism emerge from the presence of work overload and social conflict. It seems that professional efficacy has a more direct impact on burnout.

The level of burnout in the administration groups is lower, despite similar values of exhaustion and cynicism and a significantly higher lack of professional satisfaction, compared to the industrial group. Perhaps, they have higher job dissatisfaction due to more expectations related to higher job motivation, a more sophisticated working environment, and more intellectual opportunities, which, however, are unlikely to be realized, while in production, professional satisfaction is associated with less expectation.

But, despite the fact that burnout is the least manifested in the public work, there, the changes in the subscale of professional efficiency are significantly greater, so it can be expected that in a pronounced burnout, this area is most sensitive in this professional group, as well as, perhaps low job satisfaction is not necessarily a manifestation of the burnout syndrome, but rather a condition for its development if it lasts long enough. The literature showed that when work cannot meet personal

needs and expectations, stress can be experienced, resulting in a decrease in job satisfaction, occupational exhaustion, and mental illness [15], so it is not clear whether job satisfaction is a burnout condition or a burnout result, because the lowest job satisfaction is in the public administration.

Our results are consistent with other research that emphasizes the importance of regular health screening in the work population allowing contact with individuals suffering from symptoms of burnout but that is not aware of the disease or do not have the volition to seek medical treatment. So, timely recognition and treatment are required. Considered together, the subscales of MBI-GS provide a three-dimensional perspective of burnout and a distinct perspective on people's relationship to their work, obtaining specific information on these three components permits a greater focus for costly organizational development initiatives, by facilitating the development of strategies confronting the organization.

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