



Causes of Stress in Healthcare Workers in Hospital Institutions

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SUMMARY

Introduction: Stress in healthcare workers in the hospital is a series of harmful physiological and psychological reactions to situations in which certain job requirements are not in line with its capabilities.

Aim: The purpose of this study was to identify the presence of stress in health care workers in the hospital conditions of the Clinical Center of Montenegro in Podgorica.

Material and Methods: A descriptive research method was chosen. The sample consisted of persons of both sexes. 113 randomly selected respondents participated in the research, the target group is respondents employed at the Clinical Center of Montenegro, the Institute of Pediatrics, of which 27% are doctors and 73% nurses-technicians, of different education. An anonymous survey questionnaire compiled for the purposes of this research was used as a research instrument. It includes the working population of nurses and doctors, aged 20 to 65.

Results: Measuring stress levels in health workers 27 variables were identified as potential causes of stress. Respondents point out „inadequate personal income” (68.14%) as the major cause of stress. More than a half of the respondents (50.44 %), point out that the biggest cause of stress is „Work overload”. In third place is „Misinformation of patients from the media and other sources” (46.02%). As with previous considerations, it is evident that different causes of stress are treated differently in relation to the organizational unit in which the employee performs work duties.

Conclusion: The biggest causes of stress, and therefore psychosomatic illnesses, are fear, worry and guilt. Lack of time, work pressures, deadlines, high expectations, but also many other factors can affect the occurrence of stress. Precisely for the above reasons, and having in mind the nature of work, this research sought to contribute to measuring how certain stressors can affect employees in a health care institution.

Keywords: Health Workers, Stress at Work, Quality of Life, Working Ability, Health

INTRODUCTION

Today's society expects us to engage in a fight with others and with ourselves without a break, and that requires a certain psychophysical tension. The experience a threat to our own integrity is a condition called stress.

It includes: sufferings, troubles, sorrows, etc. [1-3]. Occupational burnout is a state of mental and physical exhaustion. A complex phenomenon of professional burnout is fatigue where the attitude towards work is reciprocal

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to the experience of fatigue. This phenomenon has always been known to employees, and today it is increasingly the subject of research. The most important components of burnout syndrome are the feeling of emotional and physical exhaustion, reduced personal job satisfaction [4], and when the medical staff is involved, the attitude towards patients is changed. Occupational burnout syndrome is an integral part of providing health care to patients [3,5,6,7]. Nursing is, by its very nature, a profession exposed to high levels of stress. A nurse faces real suffering, pain and death on a daily basis, unlike any other profession. Many nursing interventions are not thankful and spiritual. Many are, by normal standards, uncomfortable, or even degrading [8]. At work, the source of stress is usually the work environment, and it is caused by an imbalance between demands and the ability to satisfy them. The amount of stress increases as the demands of the workplace increase, and the amount of decision-making decreases, whereby stress at work is not the result of only one factor, but is the sum of increased demands and low levels of decision-making [9]. Small amount of stress is associated with low work performance, as well as high amount of stress that has the same outcome and can cause a number of additional diseases. Excessive and prolonged stress causes burnout, and is characterized by mental, physical or psychophysical exhaustion [10]. In the European Union, workplace stress is the second most common work-related problem affecting 28% of workers. This stress is the cause of more than a quarter of absences from work due to work-related health problems lasting two weeks and longer. In an effort to shed light on the phenomenon of psychological stress in the work environment, a number of models have been developed that differ in their complexity. As a rule, they can be classified into two groups with a more detailed analysis. A narrower model defines stress as a result of inadequate work environment requirements that are at odds with employee capabilities. The second category includes models that use a broader approach and promote stress at work as an expression of the general imbalance between the characteristics of the work situation and the individual characteristics of workers [11]. Reactions to severe stress and adjustment disorders include disorders that can be identified not only by symptomatology, but also by the fact that they are preceded by

surviving stress. The disorders classified here always occur as a consequence of severe acute or chronic stress, which is considered to be the primary causative factor, without the existence of which the corresponding disorders would not have occurred. The category of reactions to severe stress and adjustment disorders include disorders that can be understood as responses to severe stress. Acute stress response involves a variety of symptoms, from an initial state of „shock”, followed by a degree of narrowing of consciousness and disorientation, through agitation and excessive activity, to anxiety, depression and withdrawal. Symptoms occur shortly after stress (from minutes to minutes hours) and also disappear after a short time (several days). Manifestations of adjustment disorders vary and include depressed mood, anxiety, worry, discouragement, helplessness, and decreased efficiency in daily activities [12].

AIM

The purpose of this study was to identify the presence of stress in health care workers in the hospital conditions of the Clinical Center of Montenegro in Podgorica. For this reason, we have set the following goals:

- Determine if there was a difference in the experience, perception and type of stressors among nurses and doctors;
- Identify which cause has contributed to greater satisfaction and stress reduction in health professionals;
- Determine whether there are differences whether there are differences in the experience, perception and type of stressors among younger and older health professionals;
- Identify ways to overcome stress in health professionals.

MATERIAL AND METHODS

Quantitative method of work was applied. The data needed for the theoretical part were collected using professional and scientific articles as well as books. We came to scientific research articles by searching the following databases: PubMed (MEDLINE), ScienceDirect, As a research method we used an anonymous questionnaire compiled for the purposes of this research. In this paper, we used the methods of descriptive statistics in terms of calculating various statistical indicators and graphical representations.

Instrument description

An anonymous survey questionnaire compiled for the purposes of our research was used as a research instrument. The first part of the questionnaire contains general data related to the socio-demographic characteristics of respondents (gender, age, length of education, occupation, professional degree, job, length of total employment, length of employment in the current job, working hours). The second part of the questionnaire includes questions related to stressors in the workplace. This method of data collection was applied for the reason that it adequately corresponds to the target group and according to the estimated duration of the interview of 10 minutes.

Sample entry

The sample consists of 113 randomly selected respondents. The target group is respondents employed in hospital conditions, doctors and nurses of various educational profiles. Respondents will be explained the purpose of the test and the method to be used. The research was conducted in 2019 in Podgorica, Montenegro.

Data collection process

Data for each respondent were collected through a survey. Respondents were introduced to the aim of the research and the associated details that emphasize the anonymity of responses and respect for privacy, and the results will be used to produce a master's thesis, while respecting ethical principles. The completed questionnaires were placed in envelopes handed over to the examiner personally in order to ensure the anonymity of the research.

Participation in the research was voluntary and anonymous, and health professionals were literate and oral through informed research. The Notice of Health Respondents on Workplace Stress Research contains basic information on research, purpose, procedure, confidentiality, law, and volunteering. The obtained data were analyzed and the mean values of continuous variations were expressed by the median and range for variables that are not normally distributed. Statistical analysis was done with the SPSS software package for Windows.

Ethical aspects in research

The research was conducted with the consent of the Clinical Center of Montenegro from 2019 no.03/01-23643, their Ethics Committee and respondents. We requested and obtained the consent of all respondents, which described in detail the purpose and goal of the research, emphasizing the anonymity of research participants, as well as respect for the code of ethics. The questionnaire was distributed together with the written informed consent of the respondents.

RESULTS

113 respondents participated in this research, 27% of which were PhD holders, and 73% were nurses of different levels of education (Figure 1). According to the obtained data, the largest proportion of respondents were nurses with secondary education - SSS (76%). Only 5% of respondents were graduate nurses or masters of nursing. From the aspect of the time period of performing the activity, we asked the respondents how they are engaged in the workplace they cover. In the analysis of measuring

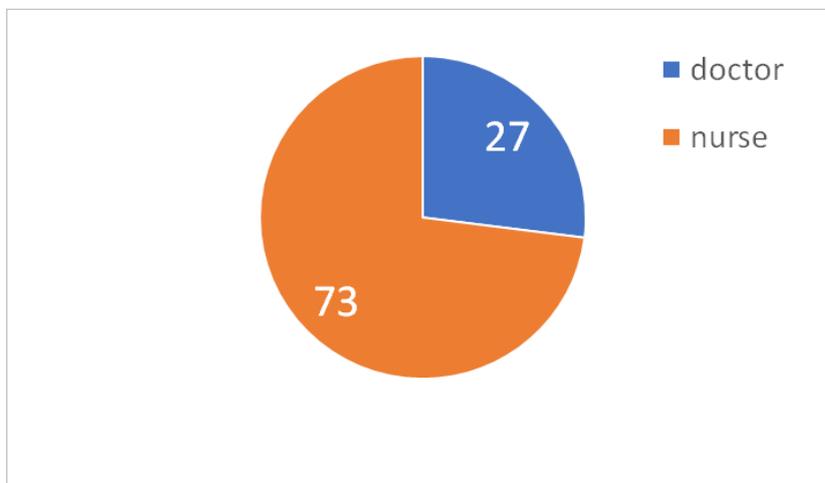


Figure 1. Structure of respondents by occupation

stress levels in health workers, 27 variables that are potential causes of stress were identified. The following table will show the distribution of responses according to the analyzed variables at the overall level. As can be seen in Table 1, each of the listed variables significantly affects the stress at work experienced by health workers. In addition, there are those variants that have almost no or no great impact on stress in the workplace. The following table will highlight ten variants at the overall level that contribute to significant workplace stress. As in (Table 2). can be seen among the biggest causes of stress in the first place, respondents point out „Inadequate personal income” (68.14%). More than half of them, 50.44%, point out that the biggest example of stress is „work overload”. In third place is „Misinformation of patients by the media and other sources” (46.02%). Further on, this pa-

per considered how the causes of stress affect employed health workers depending on their gender and age. It was noticed that the youngest health workers aged 21-25, as well as the oldest health workers over the age of 66, state the most causes of stress, assigning the highest average grades for the above. Thus, the total average score for all 27 causes observed in this analysis is the highest among the youngest employees (3.98), while in the second place with an average score of 3.50 are the oldest employees, aged 66 and over. The overall average score at the level of the entire survey is 3.17. As with the previous considerations, it is evident that different causes of stress are treated differently in relation to the organizational unit in which the employee performs work duties. Both at the overall level and at the level of individual organizational units, the first three causes are always treated as the main causes. However,

Table 1. Distribution of stressors' responses according to the assigned value expressed in %

Data source: Survey questionnaire for health workers, 2019

Stressors	1	2	3	4	5
Work overload	6.19%	3.54%	20.35%	19.47%	50.44%
Poor work organization	10.62%	13.27%	25.66%	25.66%	24.78%
Overtime	33.63%	10.62%	22.12%	15.04%	17.70%
Shift work	41.59%	4.42%	9.73%	13.27%	30.97%
Night shift	34.51%	1.77%	12.39%	9.73%	39.82%
On duty	53.98%	5.31%	4.42%	10.62%	24.78%
Pressure of deadlines for tasks	12.39%	8.85%	23.01%	18.58%	35.40%
Time limit for examination of patients	24.78%	9.73%	19.47%	15.04%	30.09%
Introduction of new technologies	23.89%	13.27%	28.32%	13.27%	19.47%
Presentation of new information from the profession	24.78%	15.93%	21.24%	15.93%	18.58%
Lack of proper education	15.04%	13.27%	24.78%	10.62%	35.40%
Unavailability of professional literature	23.01%	17.70%	17.70%	12.39%	27.43%
Limited financial resources for work	10.62%	7.08%	18.58%	15.04%	47.79%
Inadequate workspace	15.04%	11.50%	19.47%	16.81%	36.28%
Inadequate personal income	6.19%	7.96%	10.62%	6.19%	68.14%
Poor communication and conflict with superiors	30.97%	15.93%	23.01%	11.50%	17.70%
Poor communication and conflict with colleagues	37.17%	23.89%	10.62%	14.16%	13.27%
Little chance of advancement	23.89%	13.27%	19.47%	15.04%	27.43%
Burden of administrative work	17.70%	9.73%	16.81%	14.16%	39.82%
Insufficient number of employees	9.73%	9.73%	19.47%	18.58%	41.59%
Everyday unforeseen and unplanned situations	10.62%	12.39%	23.01%	16.81%	36.28%
Conflicts with other associates	38.94%	20.35%	19.47%	7.08%	12.39%
Poor communication with the patient or family members	38.94%	17.70%	19.47%	10.62%	11.50%
Exposure to inappropriate public criticism, threats of lawsuits	28.32%	11.50%	14.16%	7.08%	36.28%
Impossibility to separate professional and private life	31.86%	13.27%	17.70%	18.58%	17.70%
Misinformation of patients by the media and other sources	16.81%	10.62%	15.04%	10.62%	46.02%

Stressors	1	2	3	4	5
Work overload	6.19%	3.54%	20.35%	19.47%	50.44%
Night shift	34.51%	1.77%	12.39%	9.73%	39.82%
Limited financial resources for work	10.62%	7.08%	18.58%	15.04%	47.79%
Inadequate workspace	15.04%	11.50%	19.47%	16.81%	36.28%
Inadequate personal income	6.19%	7.96%	10.62%	6.19%	68.14%
Burden of administrative work	17.70%	9.73%	16.81%	14.16%	39.82%
Insufficient number of employees	9.73%	9.73%	19.47%	18.58%	41.59%
Everyday unforeseen and unplanned situations	10.62%	12.39%	23.01%	16.81%	36.28%
Exposure to inappropriate public criticism, threats of lawsuits	28.32%	11.50%	14.16%	7.08%	36.28%
Misinformation of patients by the media and other sources	16.81%	10.62%	15.04%	10.62%	46.02%

Table 2. Top 10 biggest stressors expressed in %

an interesting fact is that the employees of the Ambulance state and highly evaluate the time period for the examination of patients among the main causes of stress. The employees working in the Hospital as an organizational unit are almost identical in relation to the total average grades in the observation part in the sequential sense, with the total average grade of the Hospital's health workers being 0.07 lower than the overall average grade. On the other hand, the employees of the Clinic assign a higher average rating to stressors compared to the overall average rating of 1.63% and 0.05 in numerical value. It is important to point out that the causes of stress differ significantly between groups of respondents. Thus, employees who work 24 hours a day, in addition to work overload and dissatisfaction with personal income, also consider their duty as a high-risk and high cause of stress, assigning it an average score of 4.21, which is 70.71% higher than the overall average score for the entire sample. Interesting data refers to employees who work in the afternoon shift who point out that their work space is inadequate. Lack of professional literature and poor organization of work are major causes of stress, so their average grades differ significantly from the overall average grades of the entire number of respondents. Employees who work in two shifts, in particular, state that their deadlines for work, shift and night work are among the 10 biggest causes of stress. However, the overall average rating of these health workers is 3.78% lower than the overall average rating. The lowest grades, which could indicate that these employees have the least stress at work, are with employees engaged in the morning shift who also have 24 duty and/or standby and employ-

ees who work only in the afternoon shift. Their overall average scores are 17.11% and 24.26% lower compared to the overall average score of the entire sample (Table 3).

DISCUSSION

The major causes of stress, and thus psychosomatic illnesses, are fear, worry and guilt. [13,14]. Today's way of life can be called accelerated, to say the least. Lack of time for yourself and family, pressures at work, deadlines, high expectations, but also many other factors can affect the occurrence of stress. For these reasons, given the nature of the work, this research should contribute in order to measure how certain stressors can affect employees in health care institutions. In the initial phase of the research, 27 potential causes of stress were identified, which were further observed in relation to certain categories such as gender, age, job and similar. As already pointed out, the total level of stress was rated with an average score of 3.17, which compared to other research in the field, indicate that stress occurs significantly more often. The most common causes of stress are: inadequate personal income, work overload, limited financial resources for work, insufficient number of employees, misinformation of patients by the media and other sources, deadlines for tasks, daily unforeseen and unplanned situations, administrative workload, inadequate work space and poor work organization. These reasons vary depending on the nature of the job, the organizational unit to which the employees belong, the age of the employees and the like. Having in mind the above, it should be pointed out that finding ways to manage stress

Table 3. Average assessment of stressors in relation to working hours

Data source: Survey questionnaire for health workers, 2019

Stressors	24 hour duty	Morning work and preparatory work	Morning work	Afternoon work	Work all day	Grand Total
Inadequate personal income	4.07	3.67	4.26	5.00	4.38	4.23
Work overload	4.17	3.67	4.00	1.00	4.15	4.04
Limited financial resources for work	3.66	2.67	4.17	4.00	3.46	3.83
Insufficient number of employees	3.79	3.67	3.81	3.00	3.54	3.73
Misinformation of patients by the media and other sources	4.03	2.67	3.75	3.00	2.88	3.59
Pressure of deadlines for tasks	3.38	3.33	3.48	3.00	4.00	3.57
Everyday unforeseen and unplanned situations	3.48	4.00	3.70	1.00	3.42	3.56
Burden of administrative work	3.72	2.00	3.87	3.00	2.69	3.50
Inadequate workspace	3.45	3.00	3.55	4.00	3.42	3.48
Poor work organization	3.14	2.67	3.64	4.00	3.30	3.41
Lack of proper education	3.10	2.67	3.60	3.00	3.35	3.38
Night shift	3.71	3.33	2.53	1.00	4.04	3.19
Time limit for examination of patients	3.34	1.67	3.26	1.00	3.00	3.16
Exposure to inappropriate public criticism, threats of lawsuits	3.46	1.67	3.28	1.00	2.58	3.12
Little chance of advancement	2.59	1.67	3.32	3.00	3.35	3.09
Unavailability of professional literature	2.75	2.67	3.21	4.00	3.00	3.04
Introduction of new technologies	2.79	1.67	3.13	1.00	2.81	2.91
Shift work	2.72	2.67	2.47	1.00	3.93	2.88
Presenting new information from the profession	2.42	2.00	3.17	3.00	2.81	2.87
Impossibility to separate professional and private life	3.52	2.33	2.83	3.00	1.85	2.77
Overtime	3.31	4.33	2.36	1.00	2.69	2.72
Poor communication and conflict with superiors	2.38	2.67	2.92	1.00	2.62	2.69
On duty	4.21	3.67	1.98	1.00	1.42	2.46
Poor communication and conflict with colleagues	2.17	2.00	2.60	3.00	2.35	2.42
Poor communication with the patient or family members	2.34	1.67	2.62	1.00	2.04	2.37
Conflicts with other associates	2.24	1.67	2.52	1.00	2.15	2.32
Average rating	3.23	2.68	3.23	2.31	3.05	3.17

in the workplace requires preventive action on factors that cause adverse reactions, especially in activities such as those analyzed in this paper. Comparing the results of similar research on this topic, we found in the magazine Engrami the results of the Special Hospital for Psychiatric Diseases „Dr Laza Lazarevic” in Belgrade, RS Serbia, where they indicate that most respondents have a pronounced presence of stress at work. The analysis of the re-

sults obtained by the questionnaire for self-assessment of stress levels showed that 53.33% of respondents perceive a high level of stress at work, and 46.67% deny stress exposure. 51% of respondents showed a high level of job fulfillment, 39% a medium level, and 9% a low level of job fulfillment. No statistically significant differences were found in terms of self-assessment of stress exposure. On the whole, among the employees of SBPB „Dr Laza Lazarevic”,

there was a medium level of emotional exhaustion and depersonalization, as well as a moderately high level of job fulfillment. Data from the literature indicate that emotional exhaustion and depersonalization are a direct consequence of dealing with so-called „helping occupations” and their development in addition to internal (primarily personality structures), influences and external factors (undefined organizational structure, unclear rules of advancement, inadequate working conditions, interpersonal relationships), which can be seen in the respondents in KCCG. The aim of many studies is to determine the level of exposure of doctors and nurses to occupational stress, as well as the degree of risk of developing „burnout syndrome”. [3,8,15,16,17,18,19]. In the study of Vićentić and Jovanović, there were 30 general practitioners and 30 nurses. It was found that the daily encounter of doctors and nurses with illness, pain, sorrow, suffering and human misery requires a balance of many aspects of the complex nursing and doctoral role and that coping with stressful situations is of particular importance in fulfilling professional obligations [10-23]. It is traditionally known that general practitioners and nurses are on the first line of contact with the patient. Patients first turn to them for all their health problems, they usually expect too much, which is unrealistic, as is the case at the Institute for Children’s Diseases KCCG [3]. The greatest motivation for those who have chosen the medical profession in the first place is the desire to help other people. Objectively, it takes a lot of mental resilience and self-sacrifice to deal with the many stressors of the profession, in order for gratification to follow. This suggests that in our country programs of informing and education of high school students for the selection of the future faculty, i.e. profession are insufficient, which could be a recommendation for all those who plan to pursue this profession in Montenegro. In general, all the results obtained in the research do not deviate significantly from the data from the world literature and are in line with expectations. Stansfeld and Candy state that the respondents in their study, who are older, have a longer total length of service in the current job suffer significantly more from decreasing work efficiency. Numerous studies conducted in the population of nurses have shown the association of certain diseases with stress at work such as national exhaustion, physical exhaus-

tion and lower back pain [14,24,25]. Research Bukumirović et al. [26] was conducted as a cross-sectional study, during May-June 2017 and February-March 2018 at the Emergency Center of the Clinical Center of Serbia. The Serbian version of the Maslach Burnout Inventory-Human Services Survey (MBI) [27] was used to subjectively assess health perceptions. In the assessment of the degree of combustion of MBI-HSS in the Serbian language, a total of 76 respondents filled out a questionnaire, the most represented (most representative) is the category of 35-44 years of age with 40.8% of respondents. Respondents most often live in the community (52.6%), and 48.7% have children. 75% of respondents show a low degree of depersonalization. A significant negative correlation was found between years of service and depersonalization. Both sexes (50.0% of respondents) showed a high degree of lack of personal achievement, with slightly more female respondents 55.3% than male 44.7%. A high degree of emotional exhaustion is present in 85.5% and there is no significant difference between the sexes. A significant difference in emotional exhaustion was observed in respondents without children in terms of high emotional exhaustion [28]. Investigation included conflict styles and the research was conducted on a sample of 159 doctors and nurses as a cross-sectional study. Healthcare professionals most often use a conflicting style of adjustment. There is no significant difference in the conflicting styles of managerial and non-managerial staff, but there is a difference between doctors and nurses in the way conflicts are resolved. Nurses use the avoidance and adjustment style more [29].

CONCLUSION

Based on the results of this research, we can conclude that the sex and age of nurses/technicians do not affect the occurrence of burnout syndrome. Also, nurses/technicians with a longer length of service show a low level of personal success (achievement). A significant negative correlation was found between years of service and depersonalization. Both sexes (50.0% of respondents) showed a high degree of lack of personal achievement, with slightly more female respondents (55.3%) than male (44.7%). A high degree of emotional exhaustion is present in 85.5% and there is no significant difference between the sexes. A

significant difference in emotional exhaustion was observed in children without children in terms of high emotional exhaustion. Respondents with less work experience have a higher degree of depersonalization and respondents without children have a higher degree of emotional exhaustion. The duration of the conflict leads to a situation of fear, demotivation for work, increased pessimism and can lead to affect or cumulative accumulation of negative thoughts, which can sometimes be fatal. This is how we recognize a situation we call stress.

CONFLICT OF INTEREST

All authors declare no conflict of interest.

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Uzročnici stresa kod zdravstvenih radnika u hospitalnim ustanovama

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KRATAK SADRŽAJ

Uvod: Stres kod zdravstvenih radnika izaziva niz štetnih fizioloških i psiholoških reakcija na situacije u kojima određeni zahtevi na poslu nisu uvek u skladu sa njihovim mogućnostima.

Cilj: Cilj ovog istraživanja bila je da se utvrdi prisustvo stresa kod zdravstvenih radnika u bolničkim uslovima Kliničkog centra Crne Gore u Podgorici.

Materijal i metode: Izabrana je deskriptivna istraživačka metoda. Uzorak ispitanika se sastojao od osoba oba pola. U istraživanju je učestvovalo 113 ispitanika slučajno odabranih, ciljna grupa su ispitanici zaposleni u Kliničkom centru Crne Gore, Institut za bolesti dece, Od toga broja je 27% doktora/doktorica, a 73% medicinskih sestara-tehničara, različitog obrazovnog profila. Kao instrument istraživanja upotrijebljen je anonimni anketni upitnik sastavljen za potrebe ovog istraživanja. Obuhvata radno aktivnu populaciju medicinskih sestara i doktora, životne dobi 20 do 65 godina.

Rezultati: U analizi merenja nivoa stresa kod zdravstvenih radnika identifikovano je 27 varijabli koje su potencijalni uzročnici stresa. Među najveće uzročnike stresa na prvom mestu, ispitanici ističu „Neadekvatna lična primanja” (68.14%). Više od polovine ispitanika, njih 50.44% ističe da je najveći uzročnik stresa „Preopterećenost poslom”. Na trećem mestu se nalazi „Pogrešno informisanje bolesnika od strane medija i drugih izvora” (46.02%). Kao i kod prethodnih razmatranja evidentno je da se različiti uzročnici stresa različito tretiraju u odnosu na organizacionu jedinicu u kojoj zaposleni obavlja radne obaveze.

Zaključak: Najveći uzročnici stresa a time i psihosomatskih bolesti su strah, briga i osjećaj krivice. Nedostatak vremena, pritisci na poslu, rokovi, prevelika očekivanja ali i brojni drugi faktori mogu uticati na pojavu stresa. Baš iz navedenih razloga a imajući u vidu prirodu posla, ovim istraživanjem se želio dati doprinos u cilju da se izmeri na koji način pojedini uzročnici stresa mogu uticati na zaposlene u zdravstvenoj instituciji.

Ključne reči: zdravstveni radnici, stres na radu, kvalitet života, radna sposobnost, zdravlje

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