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Gender differences in stress intensity and coping strategies among students, future emergency relief specialists

Rodne razlike u intenzitetu stresa i mehanizama za kontrolu stresa kod studenata, budućih stručnjaka za pomoć u hitnim slučajevima

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Abstract

Background/Aim. Assisting students face high academic demands which, together with interpersonal, intrapersonal and professional requirements, can be a significant source of stress. The aim of the study was to examine the intensity and frequency of the source of stress, coping strategies and identify gender differences among students, future assisting professionals. Methods. An observational, cross-sectional study was conducted amongst the students of the University of the Belgrade Faculty of Security (Serbia) who, after graduation, will acquire the title of a security manager responsible for human resources in the civil sector. The data were collected in the period October-November 2018. The authorized questionnaire SSM-30 by Jović (Stress scale for the young -30) was used, which enables students to assess the stress situations intensity on a scale from 1 (minimum) to 10 (maximum intensity). The SSM-30 questionnaire is a combination of the standard Life Events Scale - Holmes Rashe Life Events Scale, also known as the Social Readjustment Rating Scale and life events characteristic for the student population. The questionnaire also included the sample demographic characteristics - gender, and a year of study. The SSM-30 scale includes a list of stressful events and stress

Apstrakt

Uvod/Cilj. Pred studente koji studiraju se obučavaju za helper profesije postavljeni su visoki akademski zahtevi koji uz interpersonalne, intrapersonalne i profesionalne zahteve mogu predstavljati značajan izvor stresa. Cilj istraživanja je bio da se ispita intenzitet i učestalost izvora stresa, mehanizmi prevladavanja stresa i utvrde rodne razlike kod profesionalaca. studenata, budućih helper Metode. Sprovedena je opservaciona studija preseka među studentima Fakulteta bezbednosti Univerziteta u Beogradu (Srbija) koji završetkom studija stiču naziv menadžera bezbednosti, odgovornih za ljudske resurse u civilnom sektoru. Podaci su prikupljeni u periodu oktobar-novembar 2018. Korišćen je autorizovani upitnik Skala stresa kod coping mechanisms shown in the results. Results. The most common sources of stress in both genders were social and academic ones: death in the family, critical illness in the family, an accident of a person they care about, unwanted pregnancy, lies from close people, disagreement with parents, loss of a study year, crisis, uncertainty after graduation and partner's infidelity. The most frequently used mechanisms for controlling and overcoming stress were mostly social: talking with friends, listening to music, family support, frequent walks, socializing and going out, using the Internet, frequent sleep, intense physical activity, crying and relaxation. Statistically significant differences between the genders were confirmed - female students demonstrated self-worth of higher intensity during the majority of stressful situations, as they use different stress coping mechanisms from their male students. Conclusion. The results obtained with regard to the assessment of stressors and the use of specific mechanisms for coping point to the need of additional education of students in this field in order to be more focused and open for free professional help, when necessary.

Key words:

sex factors; stress, psychological; students; surveys and questionnaires.

mladih-30 (SSM-30) po Joviću, koji omogućava da studenti ocene intenzitet stresnih situacija na skali od 1 (minimalni) do 10 (maksimalni intenzitet). Upitnik SSM-30 je kombinacija Standardne skale životnih događaja – *Holmes Rashe Life Events Scale*, takođe poznate i kao *Social Readjusment Rating Scale* i životnih događaja karakterističnih za studentsku populaciju. Upitnik je uključivao i demografske karakteristike uzorka – pol i godinu studiranja. Skala SSM-30 obuhvata listu stresnih događaja i mehanizme za prevladavanje stresa koji su prikazani u rezultatima. **Rezultati**. Najčešće navođeni izvori stresa kod oba pola bili su socijalni i akademski: smrt u porodici, teža bolest u porodici, nesreća kod osobe koju volim, neželjena trudnoća, laž od strane bliskih osoba, neslaganje sa roditeljima, gubitak godine studija, besparica, ekonomska kriza, neizvesnost

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nakon završetka studija i neverstvo partnera. Najčešće korišćeni mehanizmi kontrole i prevladavanja stresa su bili uglavnom socijalni: razgovor sa prijateljima, slušanje muzike, podrška porodice, česte šetnje, druženje i izlasci, upotreba interneta, a često i dugo spavanje, intenzivna fizička aktivnost, plakanje i relaksacija. Dokazane su statistički značajne razlike između polova sa većim intenzitetom samovrednovanja većine stresnih sutuacija kod studentkinja koje koriste drugačije mehanizme odbrane od

Introduction

Young people's development during the transition period to adulthood is accompanied by numerous emotions and involves adaptation to many new life situations, and young people who have decided to study are exposed to particular challenges. Complex academic and living conditions create such an atmosphere that in this period students are often exposed to numerous sources of stress, so that studying can have both positive and extremely negative impact and consequences on students' mental health if it is not managed well ¹⁻³. The stress that students experience during the study was defined by Lazarus and Folkman, viewed as part of the student experience as "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her wellbeing"⁴. Previous studies in the area of stress sources in students identified the following stressors: interpersonal stress, intrapersonal stressors and academic stressors 5-7. It was found that the stress symptoms are expressed through a series of somatic symptoms, such as energy loss, high blood pressure, appetite and sleep disorders ^{8–12}, then hormone disorder ¹³, high prevalence of musculoskeletal pain, where shoulder pain is the most common one ¹⁴. When these disorders take hold, the individual becomes disorganized, disoriented, and therefore less able to deal with everyday challenges, resulting in stress-related health problems 15, 16.

Studies confirm high exposure to stress of students trained for assisting professions, future members of professional services (medicine, nursing, social work, dentistry, law, psychology, law enforcement, educational institutions) where responsibility for clients' health, life and safety is expected ^{17–19}. The existence of gender differences in stress perception, assessment of its intensity and control mechanisms have been confirmed in previous studies, while higher levels of perceived stress and post-traumatic stress symptoms have been found in female students compared to male students, but also generally in the female part of the population compared to men ^{5, 15, 20, 21}.

Given that increased student exposure to stress can damage their mental and physical health and affect their capacity to adequately meet the needs of users, in their future nursing professional practice ^{22, 23}, it was interesting to examine stress intensity among non-medical students educated for assisting profession in our population, which is rarely described in the available literature.

studenata muškog pola. **Zaključak**. Dobijeni rezultati u vezi procene stresora i korišćenja specičnih mehanizama za suočavanje sa stresom, ukazuju na potrebu dodatne edukacije studenata u ovoj oblasti, kako bi bili više usmereni i slobodnije tražili stručnu profesionalnu pomoć kada je ona neophodna.

Ključne reči:

pol, faktor; stres, psihološki; studenti; ankete i upitnici.

The aim of the study was to examine the intensity and frequency of the source of stress, the mechanisms for coping and to identify gender differences among students, future assisting professionals.

Methods

An observational, cross-sectional study was conducted amongst the students of the University of Belgrade, Security Faculty, Serbia who, at the end of the study, will acquire the title of a security manager responsible for human resources in the civil sector. The data were collected in the period October-November 2018.

Nature and purpose of the examination were explained to the students who completed questionnaires in the classrooms immediately after the end of classes. Out of a total of 923 students, 831 students completed the questionnaires. The study protocol was approved by the Ethics Commission of the Faculty of Security and before testing, all subjects signed an informed consent.

The authorized questionnaire Stress scale for the young -30 [Skala stresa kod mladih-30 (SSM-30) in Serbian] by Jović was used, which enables students to assess the stress situations intensity on a scale from 1 (minimum) to 10 (maximum intensity). The SSM-30 questionnaire is a combination of the standard Life Events Scale - Holmes Rashe Life Events Scale, also known as the Social Readjustment Rating Scale – PRS²¹ of life events which students pointed out in previous research by the same author as stressful and specific to their population. The questionnaire also included the sample demographic characteristics - gender, and a year of study. SSM-30 by Jović was previously tested on a sample of 1,273 students of the Faculty of Medicine in Niš, Serbia from 1996 to 2006 and 269 students of medicine at the Faculty of Medicine, East Sarajevo (Foča, Republic of Srpska, Bosnia and Herzegovina in the period from 2007 to 2010^{21, 24}. The questionnaire contains 30 stressful events, most frequently cited in the abovementioned previous studies, evaluated by students according to the intensity using grades from 1 (minimum) to 10 (maximum). The second part of the questionnaire referred to the mechanisms for overcoming stress and offered students 19 stress relief mechanisms, cited in the study of the same author ^{21, 24} where students stated whether or not they used such mechanisms of stress defense.

Statistical analysis was done using the SPSS software package version 20.0. For comparison of statistical significance, gender differences were used from nonparametric Pirson's quadratic square frequency test, and from parametric Student's *t*-test

significance.

Results

To verify the validity of both questionnaires used, the Kronbach coefficient was used.

Out of the total of 831 students surveyed, there were 188	
young men (22.6%) and 643 young women (77.4%); 46.5% of	

Table 1

	of stress intensity on the Stress Total					Women		
Life events	rank	mean \pm SD	rank	$\text{mean} \pm \text{SD}$	rank	$\text{mean} \pm \text{SD}$	t	р
Death in a family	1	9.47 ± 1.70	1	9.22 ± 2.02	1	9.54 ± 1.60	2.926	0.022
Critical illness in a family	2	8.94 ± 1.81	2	8.50 ± 2.08	2	9.07 ± 1.70	3.809	0.000
An accident of a beloved person	3	8.07 ± 2.08	3	7.46 ± 2.21	3	8.24 ± 2.02	4.525	0.000
Unwanted pregnancy	4	7.47 ± 2.91	8	6.22 ± 2.20	4	7.82 ± 2.72	6.682	0.000
Lies by close people	5	7.20 ± 2.37	4	6.65 ± 2.43	5	7.36 ± 2.34	3.587	0.000
Disagreement with parents	6	7.11 ± 2.45	6	6.37 ± 2.63	6	7.33 ± 2.36	4.751	0.000
Loss of a study year	7	6.92 ± 2.72	9	6.06 ± 2.98	7	7.17 ± 2.58	4.964	0.000
Lack of money, economic crisis	8	6.82 ± 2.56	7	6.28 ± 2.68	8	6.97 ± 2.51	3.271	0.001
Uncertainty after graduation	9	6.67 ± 2.57	12	5.73 ± 2.69	9	6.94 ± 2.47	5.778	0.000
Partner'sinfidelity	10	6.60 ± 2.88	5	6.53 ± 2.69	11	6.62 ± 2.86	0.346	0.729
Exams and grading	11	6.48 ± 2.60	16	5.37 ± 2.64	10	6.80 ± 2.51	6.794	0.000**
Separation from the family	12	6.35 ± 2.83	13	5.46 ± 2.94	12	6.61 ± 2.73	4.945	0.000**
Permanent loss of a friend	13	6.26 ± 2.63	10	5.98 ± 2.67	13	6.34 ± 2.62	1.641	0.101
Great material loss	14	6.20 ± 2.53	11	5.96 ± 2.74	15	6.27 ± 2.47	1.467	0.143
Lack of time for fun	15	6.11 ± 2.57	15	5.45 ± 2.57	14	6.31 ± 2.54	4.042	0.000
Separation from the loved person	16	6.00 ± 2.65	14	5.46 ± 2.57	16	6.16 ± 2.67	3.185	0.002
Care whether a student meets the requirements of classes	17	5.77 ± 2.71	19	4.77 ± 2.49	17	6.07 ± 2.71	5.866	0.000
Burden of obligations	18	5.73 ± 2.62	18	4.87 ± 2.71	18	5.98 ± 2.55	5.179	0.000
Feeling of unsafety	19	5.47 ± 2.01	24	4.26 ± 2.95	19	5.83 ± 2.94	6.417	0.000
Poor communication with staff at professional practice	20	5.32 ± 2.53	20	4.69 ± 2.39	20	5.50 ± 2.55	3.906	0.000**
Belief in one's own efficiency	21	5.14 ± 2.75	27	4.06 ± 2.79	21	5.45 ± 2.67	6.212	0.000**
Administrative jobs on the faculty	22	5.09 ± 2.93	21	4.41 ± 2.89	22	5.29 ± 2.91	3.641	0.000**
Physical conflict with someone	23	5.00 ± 2.89	17	5.32 ± 2.94	27	4.90 ± 2.87	1.976	0.049*
Request for the perfect performance of professional skills	24	4.92 ± 2.55	22	4.36 ± 2.35	24	5.09 ± 2.58	3.435	0.001**
Availability of literature for the preparation of exams	25	4.84 ± 2.72	26	4.08 ± 2.69	25	5.06 ± 2.70	4.384	0.000**
Organization of classes and practical work	26	4.82 ± 2.90	28	3.91 ± 2.71	23	5.10 ± 2.91	4.957	0.000**
Teachers' and associates' behavior	27	4.81 ± 2.55	25	4.07 ± 2.57	26	5.02 ± 2.50	4.522	0.000**
Practical work environment	28	4.61 ± 2.61	29	3.69 ± 2.24	28	4.88 ± 2.65	5.582	0.000**
Excessive weight	29	4.50 ± 2.10	30	3.59 ± 1.67	29	4.76 ± 2.77	4.580	0.000**
Watching a game where a team is loosing	30	3.20 ± 2.84	23	4.35 ± 2.32	30	2.86 ± 1.62	6.464	0.000**

SD – standard deviation.

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respondents were at the second year of study, 37.5% at the third year, and 14.3% at the fourth year, while the least number of included respondents were at the first year (1.7%), because at the time of the study they were not having lectures.

Reliability of questionnaires on stress factors was extremely high ($\alpha = 0.910$), meaning that the questionnaire was well conceived, as well as that the scoring was excellent. It is interesting that the elimination of any issue did not change significantly the value of the Kronbach coefficient, so the conclusion of this analysis was that all the questions in the questionnaire should remain and that scoring should be the same in the future work.

The reliability of the second part of the questionnaire, the mechanisms for overcoming stress, was medium ($\alpha = 0.516$), meanings that the questionnaire was well conceived. It is interesting that the elimination of any issue did not change the significant value of the Kronbach coefficient, and the conclusion of this analysis was that all the questions in the questionnaire should remain there, and the biggest loss would be to remove the issue of using the Internet and the greatest gain to eliminate the issue of intense physical activities.

An analysis of the intensity of stressful events/situations in a complete sample of students was performed and gender differences were examined (Table 1).

First, the high-ranked situations in both genders were: 1. Death in the family, 2. Critical illness in the family, and 3. Accident of a beloved person. The list of the other analysed life events and difference in their perception by gender is shown in Table 1.

The analysis of stress by gender (Table 1), from the 4th place onwards, shows a different self-assessment of the intensity of stress in some situations, regarding the student's gender. So, at the high 4th place with the female students is the Unwanted pregnancy, while with the male students only at the 8th place. For all items, the average score was higher for female students, except questions 28 and 29 (Watching the favorite team's game when losing and a Physical conflict with someone, respectively) where the scores were greater among the young men.

Comparison of the average scores from the questionnaire on stress factors in relation to gender showed that the difference was statistically significant for all questions, except for questions 5, 19 and 26 (Breaking Friendship, Great material loss and Partner's infidelity, respectively).

Further, the frequency of various mechanisms for overcoming stress in the whole sample of students, as well as gender differences, were examined (Table 2).

The most commonly used mechanisms for overcoming stress were: 1. Conversation with friends, 2. Listening to music, 3. Family support, 4. Frequent walks, 5. Socializing and going out, 6. Internet usage, 7. Frequent and long sleep, 8. Intensive physical activity, 9. Crying and 10. Relaxation. The first five mechanisms involve the use of social support (family, relatives, friends) or self-help. Matching the frequency of students' responses with the questionnaire on stress factors by gender and the mechanism of defense showed that young women statistically significantly more frequently used certain ways of overcoming stress: Talking with friends (79.0% vs. 70.2%), Family support (67.8% vs. 52.1%), Frequent walks (63.1% vs. 46.3%), Frequent outings and socializing (51.0% vs. 43.6%), Listening to music (74.3% vs. 62.2%) Reading books and magazines (30.6% vs. 16.0%), Using sedatives (4.2% vs. 1.6) and Frequent crying (42.3% vs. 5.9%), where statistically significance of gender differences was convincingly the biggest.

Young men used the following mechanisms for overcoming stress more often than young women: Intense physical activity (55.3% vs. 30.2%), Frequent relaxations (38.3% vs. 30.9%), Frequent TV viewing (37.2 % vs. 28.0%), the

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Coping mechanism	Total (yes)		Men (yes)		Women (yes)		χ^2	n
Coping mechanism	rank	n (%)	rank	n (%)	rank	n (%)	λ	р
Conversation with friends	1	640 (77.0)	1	132 (70.2)	1	508 (79.0)	6.352	0.024
Listening to music	2	595 (71.6)	2	117 (62.2)	2	478 (74.3)	10.483	0.000
Family support	3	534 (64.3)	4	98 (52.1)	3	436 (67.8)	15.572	0.000
Frequent walks	4	493 (59.3)	5	87 (46.3)	4	406 (63.1)	17.146	0.000
Socializing and going out	5	410 (49.3)	6	82 (43.6)	5	328 (51.0)	3.498	0.048
Using the Internet	6	361 (43.4)	7	79 (42.0)	6	282 (43.9)	0.199	0.884
Frequent and long sleeping	7	330 (39.7)	8	75 (39.9)	8	255 (39.8)	0.003	0.991
Intense physical activity	8	298 (35.9)	3	104 (55.3)	11	194 (30.2)	39.998	0.000
Crying	9	283 (34.1)	16	11 (5.9)	7	272 (42.3)	86.062	0.000
Relaxation	10	271 (32.6)	9	72 (38.3)	9	199 (30.9)	3.575	0.038
Watching TV	11	250 (30.1)	10	70 (37.2)	12	180 (28.0)	5.905	0.034
Reading books and magazines	12	227 (27.3)	13	30 (16.0)	10	197 (30.6)	15.790	0.000
Religion, faith (prayer)	13	191 (23.0)	12	46 (24.5)	13	145 (22.6)	0.302	0.887
Using alcohol	14	128 (15.4)	11	48 (25.5)	15	80 (12.4)	19.129	0.000
Smoking cigarettes	15	123 (14.8)	14	22 (11.7)	14	101 (15.7)	1.851	0.109
Shouting and quarreling	16	100 (12.0)	15	21 (11.2)	16	79 (12.3)	0.171	0.910
Professional help (psychologist)	17	37 (4.5)	18	5 (2.7)	17	32 (5.0)	1.836	0.201
Using sedatives	18	30 (3.6)	19	3 (1.6)	18	27 (4.2)	4.011	0.044
Using drugs	19	15 (1.8)	17	7 (3.7)	19	8 (1.2)	5.045	0.039

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Use of alcohol (25.5% vs. 12.4%) and the Use of illegal drugs (3.7% vs.1.2%), which statistically significant gender differences were confirmed (Table 2).

Statistically significant difference in gender was not defined with regard to the following ways of overcoming stress: Religious motives, Shouting and quarreling, Frequent and long sleeping, Tobacco or cigarette use, Internet use, and seeking help from an expert, which students of both genders are extremely rarely using (Table 2).

Discussion

The conducted research is a study of the perception of stressful life situations and the impact of gender differences on experiencing stress in the population of the Faculty of Security, University of Belgrade, who are studying for the position of security managers responsible for the protection of human resources safety and health. The survey included respondents of all four years of study, with a female population dominating the sample (77.4% vs. 22.6%), which is in line with data from other surveys on prevalent female students at most faculties in our country and in the world educating assisting professionals (assistant professions) ^{21, 24, 25}. Reference data show that feminine gender is a significant independent predictor of stress perception, that is, a higher stress response^{5, 24, 26, 27}, which means that these gender differences are not specific to students who are educated for future emergency care specialists 6, 20, 21.

Most situations of high-ranking stress levels arise from nonacademic sources, mainly from family relationships, relationships with people important to students (friends, family members, partners) and socioeconomic problems.

Our study showed that young women evaluated the majority of stressful situations on the SSM-30 scale statistically significantly more intensively than young men (in 27 out of 30 items, with the exception of three items: Breaking Friendship, Great material loss and Partner's infidelity) (Table 1). A possible explanation for the differences found is that it is easier for a feminine gender to express their feelings related to stressful situations, unlike young men, and it seems that young women express their emotions more turbulently ²⁶. Blanch et al. 27 in the revised literature review of gender differences among students in the US in terms of selfconfidence find that female students have a lower level of self-confidence and a higher level of anxiety with relation to male students, which can also be one of the reasons for a more turbulent response to stress. Gender-specific approach to programs for cognitive-behavioral stress management ²⁸ is also based on these findings.

Students who are studying for assisting professions must meet high academic requirements which, together with interpersonal, intrapersonal and professional requirements, can be an important source of stress.

Interpersonal stresses include: insufficient interest in a particular field, subject or task, negative thoughts arising from the review of their own behavior, feelings related to changes of their own bodies and dissatisfaction with their own appearance ⁵, relationships with the roommates, un-

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wanted pregnancy of female students, sexual problems, relationships with the opposite sex 5, 29. These stressors also include divorce, unemployment, illness or death of parents, excessive expectations from parents, friends and close relatives, or insufficient social support, which ultimately can lead to disappointment or lead to depression and change in interpersonal relationships ¹¹. Intrapersonal stressors are related to public appearances, changes in eating habits, new way of managing finances and often lack of money ^{30–31}. Our results have shown that they are highly ranked on the scale of stress. Social stressors are Death in a family, Critical illness in a family, Accident of a beloved person. Unwanted pregnancy, Lies from close persons, Disagreement with parents, Lack of money, Economic crisis, and Partner's infidelity. Sreeramareddy et al. 33 state that the most significant and most frequently cited psychosocial sources of stress for medical students were family separation and dwelling in a students' dormitory, overly high expectations from parents, a transient curriculum, and a lack of time and conditions for fun. Situations of an Accident of a beloved person and Partner's infidelity are on the 3rd and 10th place among the students in our research, and are also highly quoted in the research of Muirhead and Locker ³⁴, where 60% of students stated that they were under stress due to problems in relations with the opposite sex.

Academic sources of stress are also high on the list of stressful life events of faculty students educated for assisting professionals 6, 25. Academic stressors include: change of the educational environment ³⁵, the way of organizing obligations during the semester ^{11, 36}, inadequate material for the preparation of the exam ³⁷, unclear tasks and uncomfortable classrooms, relationships with faculty employees and time pressures that can also be a sources of stress ¹⁶ as well as the need for constant self-control and the development of better thinking skills, including specific techniques/learning methods. Students under stress show signs of emotional suffering, aggressive behavior, shyness, social phobia, depression, anxiety, suicidal thoughts, concentration drop and often lack of interest in common activities. Additionally, the stressors can include the obligation to pay tuition fees, as well as potential doing business (employment) while complying with student obligations ³⁸, and taking care of an unclear future ^{6, 39}. Of the academic stressors in our research, the highly ranked are a Loss of study year, Uncertainty after graduation and Exams and grading (Table 1), and similar results are often cited in literature 24, 40, 41. The main stressors for students more often related to professional training, individual learning, progress during the year, achievements and availability of literature, than to personal problems ⁴⁰. In addition to these situations, the studies from the available literature state that intensive stress for students is also associated with the following situations: pressure to perfectly perform skills related to working with clients, obligations overload, belief in their own efficiency at work ^{6, 18}, day filled with obligations and lack of free time for relaxation ⁴¹; double obligation – the role of a student and the role of a spouse at the same time ³⁴, which the respondents in our study did not cite as a significant source of stress, would be among the top 15 on the list of life events.

The most frequently used mechanisms for stress control by students in our study were: Conversation with friends, Listening to music, Family support, Frequent walks, Socializing and going out, or using social support mechanisms (Table 2), which is in line with research by other authors ^{1, 24, 29, 42}. It is therefore important to promote social support among students, especially among those with a low level of support. Students without social support find alternate support as a protective factor in order to build resilience and face the stress more efficiently. Peer support especially reduces stress and is advocated as a valid method of stress management among students. However, this strategy is just one aspect of a wider solution and it is necessary to comprehensively examine the problem at the institutional level. What is an alarming result of our study is that an extremely small number of students addresses an expert (psychologist or psychiatrist) to seek professional help, and that a significant percentage of them, primarily male students, use ineffective and harmful health mechanisms, such as the use of alcohol, tobacco and illegal drugs, which can also be a socio-cultural feature of the social milieu.

Stressors during study can affect the quality of life and satisfaction with life, as well as the results of exams, and later the reduced efficiency in their future assisting profession ^{16, 22, 23, 43} therefore, the implementation of preventive measures in this area is extremely important, based on stress assessment and stress coping mechanisms.

The significance and contribution of the study to the investigated problem is that in our country, as far as the authors are informed, no research in stress and coping mechanisms has been conducted so far, with the examination of gender differences in nonmedical students for the assisting profession.

It is recommended to students with discovered high overall stress levels to complete standardized questionnaires for the diagnosis of anxiety and depression, for the purpose of selecting a category of students requiring expert assistance in coping with psychological problems.

The limitations of the study are related to the fact that this is a cross sectional study carried out at one faculty. It would be useful to conduct a prospective study, as well as to compare self-assessments of stress among medical and nonmedical assisting professionals in order to plan specific education and preventive measures for certain types of assisting professions. Another research limitation was the uneven number of students by year of study – fewer first-year students (1.4%) and fourth-year students (14.3%), which affected the research results. This information is significant for future research.

Conclusion

The results of this study showed the high frequency and intensity of self-assessment of stress among the examined students. The most prominent were social stressors, followed by the academic ones. The most frequently used mechanisms of stress management by students in our study were social support mechanisms: Conversation with friends, Listening to music, Family support, Frequent walks, Hanging out and going out. The results obtained with regard to the assessment of stressors and the use of specific mechanisms of coping point to the need of additional education of students in this field in order to be more focused and free to seek professional help, when necessary.

REFERENCES

- Deasy C, Coughlan B, Pironom J, Jourdan D, Mannix-McNamara P. Psychological distress and coping amongst higher education students: A mixed method enquiry. PLoS ONE 2014; 9(12): e115193.
- Tweed R, White K, Lehman D. Culture, stress, and coping. Internally and externally-targeted control strategies of European Canadians, East Asian Canadians, and Japanese. J Cross Cult Psychol 2004; 35(6): 652–68.
- Beiter R, Nash R, McCrady M, Rhoades D, Linscomb M, Clarahan M, Sammut S. The prevalence and correlates of depression, anxiety and stress in a sample of college students. J Affect Disord 2015; 173: 90–6.
- Lazarus R, Folkman S. Stress, appraisal and coping. New York: Springer; 1984.
- Monteiro N, Balogun S, Oratile K. Managing stress: the influence of gender, age and emotion regulation on coping among university students in Botswana. Int J Adolesc Youth 2014; 19(2): 153–73.
- Gazzaz ZJ, Baig M, Al Alhendi BSM, Al Suliman MMO, Al Alhendi AS, Al-Grad MSH, et al. Perceived stress, reasons for and sources of stress among medical students at Rabigh Medical College, King Abdulaziz University, Jeddah, Saudi Arabia. BMC Med Educ 2018; 18(1): 1–9.
- Brongham R, Zail C, Mendoza C, Miller J. Stress, sex differences, and coping strategies among college students. Curr Psychol 2009; 28(2): 85–97.
- 8. Larson EA. Stress in the lives of college women: Lots to do and not much time. J Adolesc Resh 2006; 21(6): 579–606.

- Hicks T, Miller E. College life styles, life stressors and health status: Differences along gender lines. Faculty Working Papers from the School of Education 2006; Paper 4: 23–9. Available from: 4.http://digitalcommons.uncfsu.edu/soe_faculty_wp/4
- Dalky HF, Gharaibeh A. Depression, anxiety, and stress among college students in Jordan and their need for mental health
- services. Nurs Forum 2019; 54(2): 205–12.
 11. *Agolla J, Ongori H.* An assessment of academic stress among undergraduate students: The case of University of Botswana. Educ Res Rev 2009; 4(2): 63–70.
- Ongori H, Agolla J. Occupational stress in organisations and its effects on organisational performance. J Manage Res 2008; 8(3): 123–35.
- Fernández-González L, González-Hernández A, Trianes-Torres M.Relationships between academic stress, socialsupport, optimism-pessimism and self-esteemin college students. EJREP 2015; 13(1): 111–30.
- Simić-Vukomanović I, Mihajlović G, Kocić S, Djonović N, Banković D, Vukomanović V, et al. The prevalence and socioeconomic correlates of depressive and anxiety symptoms in a group of 1,940 Serbian university students. Vojnosanit Pregl 2016; 73(2): 169–77.
- 15. Verdonk P, Räntzsch V, de Vries R, Houkes I. Show what you know and deal with stress yourself: a qualitative interview study of medical interns' perceptions of stress and gender. BMC Med Educ 2014; 14: 96.

- Jahan F, Siddiqui M, Mitwally M, Al Zubidi N, Al Zubidi H. Perception of stress, anxiety, depression and coping strategies among medical students at Oman Medical College. Middle East J Family Med 2016; 14(7): 16–23.
- El-Gilany AH, Amr M, Hammad S. Perceived stress among male medical students in Egypt and Saudi Arabia: Effect of sociodemographic factors. Ann Saudi Med 2008; 28(6): 442–8.
- Baig M, Sayedalamin Z, Almonteri O, Algarni M, Allam H. Perceptions, perceived barriers and practices of physicians' towards evidence-based medicine. Pak J Med Sci 2016; 32(1): 49–54.
- 19. Luo Y, Wang H. Correlation research on psychological health impact on nursing students against stress, coping way and social support. Nurse Educ Today 2009; 29(1): 5–8.
- Višnjić A, Stojanović M, Radulović O, Milosavljević N. Utilisation factor in using mental health services for Niš University students. Acta Fac Med Naiss 2007; 24(3): 101–5.
- Jović S, Simonović Lj, Aranđelović M, Milošević Z, Nikolić M, Petrović B, et al. Izvori stresa kod studenata medicine i rodno uslovljene razlike u percepciji stresa. Med Data Rev 2011; 3(1): 37–42.
- 22. *Liebkind K, Eränen L*. Attitudes of future human service professionals: The effects of victim and helper qualities. J Soc Psychol 2001; 141(4): 457–75.
- Dyrbye LN, Thomas MR, Huntington JL, Lawson KL, Novotny PL, Sloan JA, et al. Personal life events and medical students burnout: A multicenter study. Acad Med 2006; 81(4): 374–84.
- Jovic SJ, Ristic SS, Bogdanovic DC, Radulovic O, Visnjic AM, Sagric Cedomir R. Sources of stress among future helper professionals in human services. HealthMED 2012; 6(8): 2886–92.
- 25. Grandy TG, Westerman GH, Combs CE, Turner CH. Perceptions of stress among third-year dental students. J Dent Educ 1989; 53(12): 718–21.
- Bonneville-Ronssy A, Evansc P, Verner-Filion J, Vallerand R, Bouffard T. Motivation and coping with the stress of assessment: Gender differences in outcomes for university students. Contemp Educ Psychol 2017; 48: 28–42.
- 27. Blanch DC, Hall JA, Roter DL, Frankel RM. Medical student gender and issues of confidence. Patient Educ Couns 2008; 72(3): 374–81.
- Hampel P, Jahr A, Backhaus O. Genderspecific stress management training at school. Prax Kinderpsychol Kinderpsychiatr 2008; 57(1): 20–38.
- Laxmi A, Kadapatti M. Analysis of parenting styles and interpersonal relationship among adolescents. IJSRP 2012; 2(8): 1– 5.
- 30. *Martin M.* Family structure and the intergenerational transmission of educational advantage. Soc Sci Res 2012; 41(1): 33–47.

- 31. *Pinto MB, Parente DH, Palmer TS*. College student performance and credit card usage. J Coll Stud Dev 2001; 42(1): 49–58.
- 32. Khabaz MN, Bakarman MA, Baig M, Ghabrah TM, Gari MA, Butt NS, et al. Dietary habits, lifestyle pattern and obesity among young Saudi university students. J Pak Med Assoc 2017; 67(10): 1541–6.
- 33. Sreeramareddy CT, Shankar PR, Binu VS, Mukhopadhyay C, Ray B, Menezes RG. Psychological morbidity, sources of stress and coping strategies among undergraduate medical students of Nepal. BMC Med Educ 2007; 7: 26.
- Muirhead V, Locker D. Canadian dental students' perceptions of stress. J Can Dent Assoc 2007; 73(4): 323–6.
- Dixon SK, Kurpius S. Depression among college university undergraduates: Do mattering and self-esteem make a difference? J Coll Stud Dev 2008; 49(5): 412–24.
- Awino JO, Agolla JE. A quest for sustainable quality assurance measurement for universities: Case study of the University of Botswana. Educ Res Rev 2008; 3(6): 213–8.
- 37. *Shah M, Hasan S, Malik S, Sreeramareddy CT*. Perceived stress, sources and severity of stress among medical undergraduates in a Pakistani medical school. BMC Med Educ 2010; 10: 2.
- Stinebrickner R, Stinebrickner TR. Working during school and academic performance. J Labor Econom 2003; 21(2): 473–91.
- Pariat L, Rynjah A, Kharjana J. Stress levels of college students: Interrelationship between stressors and coping strategies. J Hum Soc Sci 2014; 19(8): 40–6.
- 40. Panter-Brick C, Eggerman M, Mojadidi A, McDade T. Social stressors, mental health, and psychological stress in an urban elite of young Afghans in Kabul. Am J Hum Biol 2008; 20(6): 627–41.
- 41. *Kulsoom B, Afsar NA*. Stress, anxiety, and depression among medical students in a multiethnic setting. Neuropsychiatr Dis Treat 2015; 11: 1713–22.
- Bi Y, Ma L, Yuan F, Zhang B. Self-esteem, perceived stress, and gender during adolescence: Interactive links to different types of interpersonal relationships. J Psychol 2016; 150(1): 36–57.
- Dyrbye LN, Thomas MR, Shanafelt TD. Systematic review of depression, anxiety, and other indicators of psychological distress among U.S. and Canadian medical students. Acad Med 2006; 81(4): 354–73.

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