MENTAL HEALTH ISSUES AMONG MEDICAL STUDENTS IN SERBIA – CHALLENGES AND PERSPECTIVES

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Abstract: Objective: The authors present a review of results from studies regarding mental health of medical students in Serbia. Methods: Serbian citation index (SCI), MEDLINE, PsycINFO and Cochrane databases were searched, as well as conference proceedings, book chapters and reference lists. Results: The results of numerous studies conducted in Serbia show a higher overall psychological distress among medical students as well as that female students are more vulnerable to stress. The most common are stress-related problems, depression, self-harm and substance abuse. Although there is a high prevalence of depression among medical students in Serbia most of them do not seek help (70-80%). Conclusion: A better understanding of the characteristics of medical students who are prone to experiencing psychological distress is essential for developing mental health support programmes which could decrease the level of reported distress among this vulnerable group.

Key words: medical students, mental health, mental health problems, mental health care

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Introduction

University students are regarded as national capital and as an important resource for the future of a society. An investment into students’ health and development is crucial for them to become capable of fully contributing to society. This is why some think that universities need to work on having a healthy atmosphere and to promote activities that are aimed at mental health support and awareness [1,2].

Students face many challenges during studies with concerns, burdens and worries that are different from other age groups and people in other occupations. Academic overload, constant pressure to succeed, concern about future, financial problems, as well as the lack of leisure time and less time to spend with their families are common stressors, representing reasons for possible forms of psychopathology [2]. Because of social and economic changes in the modern world, with the rise of globalization and pressure to succeed, they are more likely to have a greater number of responsibilities and worries than students in the past.

According to the latest census the total number of citizens in Serbia is 7.120.666, 30% of which are young people under 24 years of age. In 2010/2011 there were more than 220 thousand students in 189 schools (tertiary education, faculties within different universities) [3]. There are five medical schools in Serbia, and all of them share the same program of studies, lasting 12 semesters. Training is conducted at the faculties’ institutes for basic science and the faculties’ teaching bases for clinical subjects.

Mental health of students

Mental health of students concerns people around the world and refers to a broad array of activities which are, directly or indirectly, related to the mental well-being of this population. According to the official world statistical data on health, out of all population groups, the lowest disease and mortality rate is registered among youth groups [4,5]. However, the latest studies in Serbia (UNICEF, WHO, UNFPA) indicate that there is a generation of young people whose health is endangered. Results of these studies have shown that the leading health risks are increasing abuse of tobacco, alcohol, narcotics, and a high level of injuries in traffic accidents. There is an increasing rate of behavioral disorders, substance abuse, depression and suicide [6,7].

The years of crisis in Serbia which were accompanied by numerous acute and chronic stressors, have adversely affected the mental health of the population, and particularly of young individuals. In the last two decades Serbia is facing destroyed infrastructure, social instability, economic difficulties, brain drain and an on-going process of social transition [12]. In part due to this, the second largest public health problem after cardiovascular diseas-
Mental health issues among medical students in Serbia – challenges and perspectives

It is well known that medicine is an intrinsically demanding profession, one that seems likely to leave many practitioners at risk of developing burnout syndrome. Medical students face many difficulties during their studies which cause high level of stress [15]. Some characteristics concerning the organization (academic overload), content (working on cadavers, for example) and duration of medical studies, add to the difficulty of that period of their lives. Stressfulness of communication with teaching staff and patients also increases from the first to the sixth year [16]. One study which explored differences between groups of Serbian students from various faculties showed that medical students are more vulnerable to stress compared to their colleagues from other disciplines - 76% of medical students scored above the threshold in terms of psychological distress compared to their peers [17,18].

Various risk and protective factors are involved in mental health issues of medical students, such as age, gender, personality characteristics, as well as interpersonal difficulties, loneliness, financial issues and pressure of exams. These problems can become overt at different times of their studies (e.g. during transition from undergraduate to graduate programs) [2]. In relation to gender, the results of a recent study on Serbian medical students showed that female students are more vulnerable to stress, and that there are
some gender differences in the self-perception of health and stress effects of particular academic activities (i.e. examinations, autopsy) [19].

Specific sociodemographic variables have been shown to be associated with mental health issues. In a multicentre study conducted in 2008 and 2009 on a sample of 2,285 students of both sexes (including medical students), 16.3% reported the need to see a psychologist/psychiatrist, especially those with a low socioeconomic status [20]. On the other hand, a study conducted at the same time in the Serbian province of Vojvodina, showed that social background alone correlates with interest in educational activities and art, while social background and place of residence correlate with dominant orientations towards social life and relations [21]. Furthermore, the level of vulnerability to stress has been found to be significantly different among medical students from different regions. For example, medical undergraduate students from Kosovska Mitrovica, were significantly more susceptible to stress compared to students from the University of Nis [17].

Our study has also pointed out that personality is a key factor of both vulnerability and resilience [22]. Perfectionism is a personality trait that is often common to those studying medicine, and may possibly predispose them to an increased risk of mental health problems. There are correlations between some positive aspects of students’ perfectionism and global self-esteem, as well as between some negative aspects of perfectionism and levels of depression [23]. It has also been shown that perfectionism as a personality trait was a significant predictor of insomnia [24]. A better understanding of the way in which specific personality profiles react to stress can be useful in the prevention of potential mental health problems.

Numerous studies show that exam anxiety is a specific risk factor for the development of psychopathology: high anxiety prior to exams is negatively correlated with the average mark during the studies [25]. A prospective study conducted on a sample of 858 medical students at the School of Medicine, University of Nis, showed that 67% of the students reported constant exposure to stress situations, especially prior to exams [20]. The high exam anxiety was often followed by intense symptoms such as lack of concentration, insomnia, crying and nervousness [26]. A recent study conducted at the School of Medicine University of Belgrade, has shown a moderate level of exam anxiety among medical students with the most intense symptoms in the 3rd year of studies, predominantly among female students. Strategies that decrease frustration intolerance prevent the increase of anxiety before an exam [27].

The most common problems found among medical students in Serbia are stress-related problems, substance abuse, depression and self-harm.
Stress related problems

The prevalence of burnout among medical and surgical residents has been reported to range from 30 to 80%. It is associated with self-reported suboptimal patient care, self-perceived medical errors and is positively correlated with depression [28, 29]. In the Serbian sample, the frequency of burnout syndrome was found to be twice as high in medical professionals, particularly young ones, compared to other professions on average [30]. The burnout has been observed in as many as 50% of medical students, similar to the results obtained in other countries [31].

In a study of the influence of academic stress on the mental health status of the first cohort of medical students educated using the new Bologna curriculum in Serbia, it was found that about half of female and one third of male students estimated their own general stress level as moderate or high [19]. 52.6% of examined students scored high on the Maslach Burnout Inventory (MBI) subscale of Depersonalization and 33.6% on the MBI subscale of Emotional exhaustion, without a gender difference. The obtained scores were higher than those found among medical students from the USA, especially on Depersonalization scores, and were most relevant for students’ clinical years [31].

When assessing the impact of stressors and its consequences, there is a need to evaluate contextual factors as well. It has been well established worldwide that a significant number of students living in areas of conflict develop psychological symptoms of posttraumatic stress, such as intrusion and avoidance – whereas many students experience serious trauma and develop posttraumatic stress disorder [23,32-34]. Acknowledging the contextual variable, Steptoe and Wardle (2001) found that students from Eastern Europe reported more depressive symptoms than did students from Western Europe [35].

Depression and self-harm

Anxiety and depression are the most prominent symptoms in medical students [36]. Depression was identified in 26.7% of Serbian medical students, which is 2-3 times more prevalent than in the general population. Results were similar to those obtained in a study carried out in Thailand and slightly higher than in a country within our region [37,38].

While it is still unclear whether or not at the start of medical school the percentage of depressive students is higher than in comparable groups, a consistent finding of various studies seems to be the worsening of the students’ global mental health and the presence of depression and anxiety during their studies, especially between the first-year orientation and the beginning of the second year [39]. In spite of the high prevalence of depression among medical students, a surprisingly high number of them do not seek help. Stigma asso-
associated with mental disorders and the fear of possible impact on their professional future may represent one barrier to seeking treatment. Studies confirmed that depressed medical students more frequently endorsed several depression stigma attitudes compared to non-depressed students [40]. The authors of a recently published review stated that only 20-30% of depressed medical students in Serbia ask appropriate health services for help [41].

It is widely accepted that deliberate self-harm is another major problem among young people and it has been identified as one of the key mental health problems affecting students. It was shown that medical students have a higher risk of suicidal ideation and suicide, especially those facing problems in their academic life or in family relationships, as well as those with certain personality characteristics [17,42]. A recent assessment of 131 fourth year medical students in Serbia showed that mild suicidal risk was present in 35.1% of students, which is higher than of the figure of 7.9%, reported by the other authors [40,43]. The strong positive correlation between the level of depression and suicidal risk was shown in the that study. Several studies have highlighted other factors associated with higher risk for suicide beside depression such as dissatisfaction with academic performance, studying clinical subjects, lower socioeconomic status, headache and sleep disorders [44,45].

Substance abuse

Studies among medical students have shown that about 90% of them drink alcohol, while the prevalence of harmful alcohol drinking was 33% and perseveres for the duration of the studies, especially among men [46, 47]. Students could be at risk of illicit substance use because of the social nature of university life, peer-pressure, the change of life structure and reduced parental supervision, as well as because of potential underlying psychological problems [25]. In addition to this, coping with stress by using excessive alcohol could be a consequence of failing to recognize their depression. The National Health Survey conducted in Serbia has shown that deaths caused by the consequences of abuse were predominantly registered in the age group of 20 to 24 years [6,7]. One of the surveys among medical students in Belgrade, at the beginning and at the end of their studies, has shown that final-year students consume larger amounts of alcohol compared to their more junior colleagues [48].

High prevalence of benzodiazepine (BZD) use was shown among citizens of Serbia. Despite this, a cross-sectional pilot study among medical students has shown that the majority of students stated that they never use BZD (64.3%), while all the users (35.7%) were so called „occasional users“ (less than once a week) [49]. High frequency of benzodiazepine use (13.1%) among medical students, on the contrary, was found in the FYROM [38].
Health services for students in Serbia

Primary healthcare is well organized and developed for the students' population in university centers. It is implemented through the health promotion service, general practice service, gynecology, and mental health care teams. At the secondary and tertiary levels, the health service is not particularly tailored for young people, and especially not for the population group aged between 19 and 26. Belgrade University students have a special stationary healthcare center (Student's hospital), but generally in Serbia, young people over the age of 19, with the exclusion of exceptional cases, are treated and hospitalized with older patients in specialized departments within general hospitals, clinics and institutes [50]. A special, unique treatment is organized at the Day Hospital for Adolescents of the Institute of Mental Health.

The Ministry of Health developed a Strategy for youth development and health care in the Republic of Serbia, which was approved by the Government in May 2008. The key guidelines of the Strategy are youth health promotion and primary prevention, as well as the development of partnership relations and strengthening of legislature. The Strategy underlines the need to provide all young people with a set of healthcare services that are confidential and of high-quality, based on youth needs, and provided by motivated, friendly and educated health professionals in a safe environment, where young people will have a key role in processes of planning, implementation, monitoring and evaluation. Special emphasis has been placed on overcoming the health challenges faced by young people who are already in an unfavorable social and economic position. The Strategy stresses that the teamwork between the sectors is important for youth health and development, including the cooperation with counseling services at primary health care. Its should be the way for creating such an environment in which all young people will have conditions ensuring physical and mental health, psychological and emotional wellbeing, as well as the knowledge and opportunity to lead a healthy life.

The population’s health culture is at a low level in general in Serbia. Young people are not accustomed to their health care or having regular check-ups, and they do not have healthy lifestyles or take responsibility for their own health. They usually see a doctor after the appearance of discomfort that can point to some disorders. The problems of discrimination, prejudice and stigma are still very serious, and if a young person takes care of his/her health, it is usually due to the fact that he/she is already sick, infected, etc. [51].

Strategic goals for improving students' mental health

We suggest that several topics should be emphasized among the strategic goals for improving students' mental health, including the following: to promote healthy lifestyles and youth health care and health promotion; to
achieve youth health equality regardless of differences relating to sex, health condition, socio-economic status, ethnic, religious or other affiliations; to move from nosocentric healthcare towards health promotion and intersectoral cooperation, including community care, active youth participation and development of individual health responsibility.

Some universities develop specific preventive programs such as the Medical Student Well-Being Programme at the University of California San Francisco, which promotes a healthy learning environment [51]. It supports wellness for students including mental and physical health, and spiritual, financial, environmental, and social well being. This could be done by providing free confidential psychotherapy for all medical students, by organizing workshops and presentations, or consultation to medical students, faculty, and house staff on issues pertaining to medical student well being.

Being a medical student requires tolerance of uncertainty and ambiguity, to be prepared and to learn how to make the best possible judgments based on one’s knowledge, personal experience, professional values – requiring critical self-reflection and ongoing self-assessment. Students should be committed to excellence, honesty and integrity.

Some studies confirm a significant correlation between the level of self-efficacy and outcomes of cognitive assessment of stress, as well as with the use of specific coping mechanisms. This evidence could justify creating more specific and effective preventive programs focused on raising competencies concerning coping styles among medical students [18, 52]. Furthermore, in accordance with evidence suggesting that burnout occurs early, at the beginning of the third year of medical school and prior to the initiation of the clinical years of medical training, focused student counseling might be recommended for all students of medicine, but especially in the first year of their studies [53].

Lessons aimed at developing study skills and coping strategies for study- and exam-related anxiety should be recommended as well. Medical students should pay special attention to their own personal health and physical and mental wellbeing through paying attention to their sleep, exercise and relaxation. In addition to practicing medicine, students should work on their emotional, social and moral development. Having this in mind, the role of teachers, especially those involved in mental health issues, is of great importance. We think that these conditions can be more easily met when the health service for youths is differentiated from the service for adults, and comprised of counseling, psychological and social support, as well as prevention and mental health promotion.
Conclusion

Medical school training is intended to prepare graduates for a responsible, personally rewarding and socially meaningful career of caring for the sick people and of promoting health for all. At the same time, this period is a time of great personal distress for many students. The results of numerous studies conducted worldwide, as well as in Serbia, have shown a higher overall psychological distress among medical students than in other student groups. It is therefore of great importance that educators and health professionals are aware of the stressors medical students face, in order to provide them with the care they need, and that interventions to address burnout and its consequences begin early in medical training in order to be effective. Strategies aiming to empower students to develop their professional knowledge, skills and attitudes, as well as their personal strength should be implemented in the process of medical training. Furthermore, intervention programmes and thematic counselling (i.e. for depression) should target the “risk-groups” among the medical students (those of lower socioeconomic status, for example).

Future studies are needed, to explore causes, consequences and possible solutions for these problems. Specifically, an examination of demographic, individual and environmental factors associated with medical students’ mental health is necessary to develop effective preventive interventions. Even though some factors by their nature cannot be altered (e.g., gender), understanding their influence can guide planning of specific preventive strategies and increase its effectiveness. A better understanding of the characteristics of medical students who are prone to experiencing psychological distress is essential for developing such interventions. We believe that programs providing specific mental health support for medical students may significantly decrease the level of reported distress among this vulnerable group which is of valuable importance for all societies and their future.

Declaration of interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.
PROBLEMI MENTALNOG ZDRAVLJA KOD STUDENATA MEDICINE U SRBIJI – IZAZOVI I PERSPEKTVI

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Apstrakt: Cilj: Autori rada pokušali su da prikažu rezultate istraživanja stanja mentalnog zdravlja studenata medicine u Srbiji. Metod: U svrhu prikupljanja podataka pretražili smo sledeće baze podataka: Srpski citatni indeks (SCI), MEDLINE, Cochrane bazu podataka, kao i na osnovu saopštenja sa stručnih skupova i podataka iz poglavlja u knjigama koje se odnose na predmet istraživanja. Rezultati: Rezultati brojnih istraživanja sprovedenih u Srbiji ukazuju na značajno visok nivo distresa među studentima medicine, pogotovo među ispitancima tokom aktivnosti u vezi sa studiranjem. Najčešći problemi mentalnog zdravlja jesu depresija, problemi udruženi sa stresom, samopovrede i zloupotreba psihoaktivnih supstanci. Uprokos visokoj prevalenciji depresije, većina studenata medicine ne traži stručnu pomoć (70-80%). Zaključak: Bolje razumevanje specifičnih karakteristika (proile ličnosti) studenata medicine koji su skloni distresu je od suštinske važnosti za unapređenje programa unapređenja mentalnog zdravlja koji bi doprineo redukciji navedeno distresa u ovoj vulnerabilnoj grupi stanovništva.

Ključne reči: studenti medicine, mentalno zdravlje, problemi mentalnog zdravlja, zaštita mentalnog zdravlja
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