

Brożyna Klaudia, Radzka Agnieszka, Tkaczyk Jędrzej, Ciechański Krystian, Pieciewicz-Szczęsna Halina. Stress among medical students in Poland. Journal of Education, Health and Sport. 2018;8(8):171-179. eISSN 2391-8306. DOI <http://dx.doi.org/10.5281/zenodo.1304266> <http://ojs.ukw.edu.pl/index.php/johs/article/view/5625>

The journal has had 7 points in Ministry of Science and Higher Education parametric evaluation. Part B item 1223 (26/01/2017).
1223 Journal of Education, Health and Sport eISSN 2391-8306 7

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The authors declare that there is no conflict of interests regarding the publication of this paper.

Received: 05.06.2018. Revised: 28.06.2018. Accepted: 03.07.2018.

Stress among medical students in Poland

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Abstract

There is no doubt that stress is bonded with daily routine of students. Medical colleges are one of these environments, which are associated with negative impact of stress on many fields of life like physical health, academic feedback and physiological mood of student`s. Aim of study is to analyse the incidence of stress among students from different fields of study in Medical Universities in Poland. In that case we perform anonymous questionnaire, which contained 23 original questions and was widespread via Internet.

Stress is a common problem among students from medical faculties. There is no doubt that stress is an inseparable companion during not only studies, but also after degree while working as a professional. For that reason it is necessary to encourage young people to find their own effective manner to cope with stress.

Abstrakt

Bez wątpienia stres jest związany z codziennym, studenckim życiem. Uniwersytety Medyczne są jednymi z tych środowisk, które są związane z negatywnym wpływem stresu na wiele dziedzin życia takich jak zdrowie psychiczne, wyniki w nauce oraz nastrój. Celem pracy jest analiza występowania stresu wśród studentów różnych kierunków na Uniwersytetach Medycznych w Polsce. W związku z tym, przeprowadzono anonimową ankietę, która zawierała 23 pytania i została rozpowszechniona przez Internet. Stres jest częstym problemem wśród studentów kierunków medycznych. Nie ulega wątpliwości, że stres jest nieodłącznym towarzyszem podczas nie tylko studiów, ale także po ukończeniu studiów w trakcie pracy zawodowej. Z tego powodu konieczne jest zachęcanie młodych ludzi do znalezienia własnego skutecznego sposobu radzenia sobie ze stresem.

Background

There is no doubt that stress is bonded with daily routine of students. Medical colleges are one of these environments, which are associated with negative impact of stress on many fields of life like physical health, academic feedback and physiological mood of student`s [1]. Stress has a different meaning among various people in varied situations. The first appropriate definition of stress was defined by Hans Selye, Canadian doctor [2]. He considered that stress is the non-characteristic neuroendocrine reaction of the body [3]. Selye revealed that stress is a result of "stressors", which may be physical like changes in external temperature, chemical or psychological [4]. It is known that, hormones play the most important role in pathophysiology of stress reaction. Mainly the catecholamines and the glucocorticoids initialize changes in cells and tissues, which help to get through the stress [5]. We can distinguish two types of stress reaction on grounds of duration ; acute and chronic. First one is when the response takes place right after the stressor and is time-bound. Second one describes situation, when the exposure to stressors is prolonged [6].

Aim of study

Aim of study is to analyse the incidence of stress among students from different fields of study in Medical Universities in Poland.

Material and method

The questionnaire contained 23 questions, both one-time and multiple choice. The survey was widespread via Internet among students from various Medical Universities in Poland. The reached data were evolved by Microsoft Excel.

Results

In the survey took part 1167 responders, the mean age was 22,28 (19-35), SD= $\pm 2,09$. Males were 243 (20,8%) and females were represented by 924 (79,2%) interviewees. In the questionnaire answered students from different fields of study (Table 1). The most frequent degree courses were medicine (56,58%), dentistry (10,80%) and pharmacy (7,20%). The most often were students from II (22,7%) and IV (23,22%) year of study (Table 2.)

Table 1. Fields of study of responders

Field of study	%	
Medicine	660	56,56%
Dentistry	126	10,80%
Nursing	84	7,20%
Pharmacy	59	5,06%
Obstetrics	37	3,17%
Public health	36	3,08%
Physiotherapy	34	2,91%
Dietitian	29	2,49%
Medical analytic	28	2,40%
Cosmetology	19	1,63%
Medical rescue	12	1,03%
Biotechnology	10	0,86%
Electroradiology	10	0,86%
Dental technician	6	0,51%
Dental hygiene	5	0,43%
Biomedicine	3	0,26%
Ophthalmometrist	1	0,09%
Others	8	0,69%
Sum	1167	

Table 2. Years of study among responders

<i>Year of study</i>	
I	186
II	265
III	207
IV	271
V	135
VI	103
Summary	1167

About 91,2% responders claimed that they are stressed during academical year more than during time without classes. Among women stress was present in 91,77% responders and among man in the case of 88,89% responders, the difference was not statistically significant ($p=2,34$). Incidence of stress among responders depending on field of study is presented in Fig. 1. The most stressful faculties are medicine, dentistry, pharmacy, dietitian, medical analytics and nursing. The less stressful are elecroradiology and biotechnology. The difference was not statistically significant ($p=0,0849$). For the multiple choice question about frequency of stress (Fig.2) most of the students answered that they feel stressed many times per week (46%), during passing time (32%) or exam session (31,1%). According to results of questionnaire, more than 37% of responders claimed that stress makes logical thinking and undertaking decisions harder. However, similar number of people answered that they are more motivated to act (26,3%) and stress has any influence on ability to making decisions and logical thinking (25,9%).

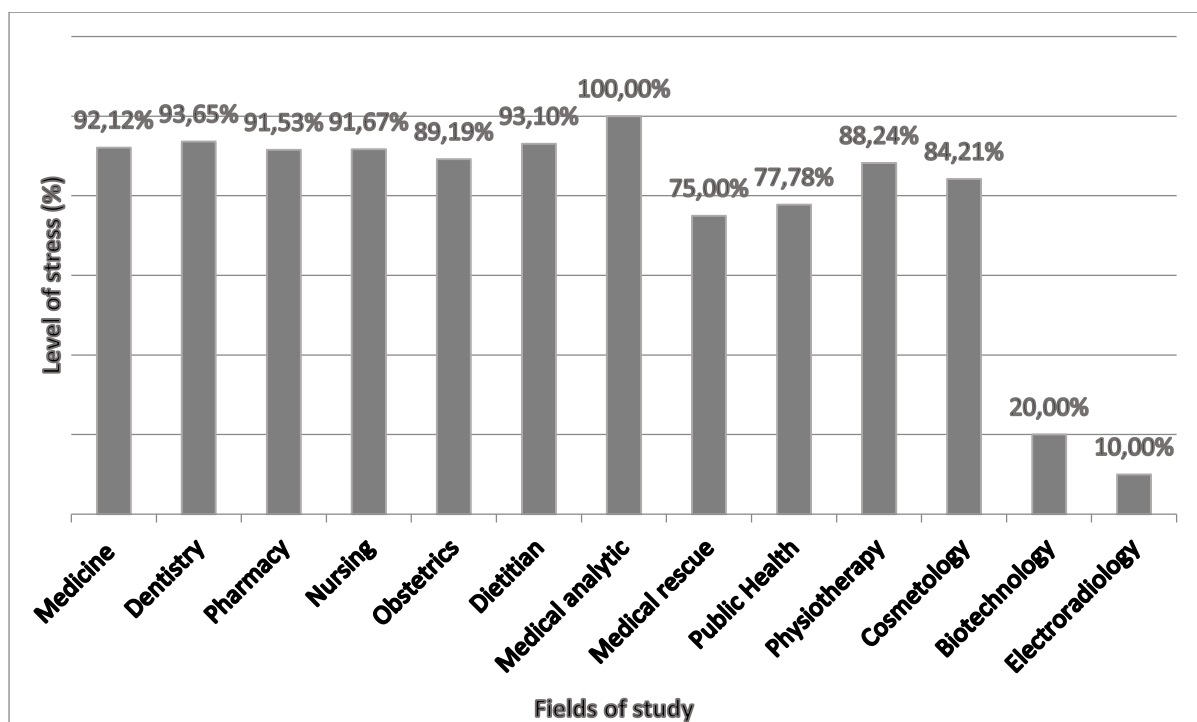


Fig. 1. Comparison between field of study and level of stress among students

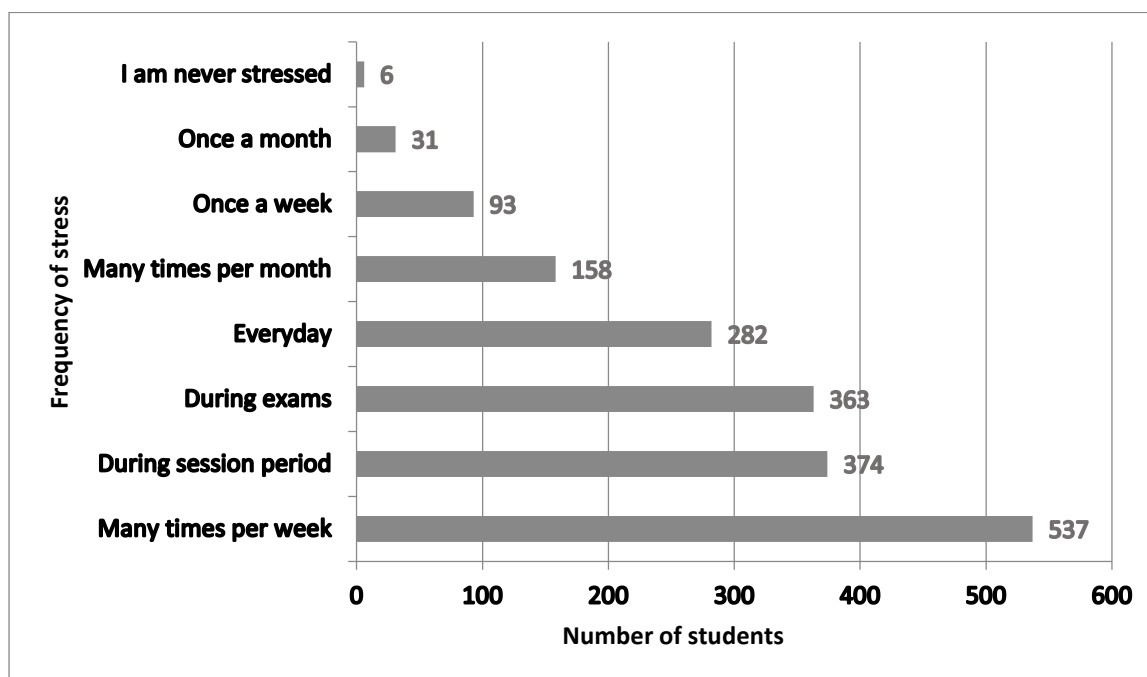


Fig. 2. Frequency of stress among students.

The most stressful situations during studies chosen by interviewees are oral exam (79,8%), failing exam (76,5%), expressing own opinion in front of group (40,5%), exam with open questions (38%). The multiple choice question "Did you experience side effects of stress and what was that?" showed that the most frequent answers were: feel irritated and

have dropped of frame of mind - 834 (71,5%), have problems with concentration – 585 (50,1%) and insomnia – 511 (43,8%) (Fig.3). For the multiple choice question about manners to overcome stress, the most popular answers among students were: conversation with family/friend - 788 (67,7%), sleeping –734 (63,1%), physical activity 691 (59,4%) (Fig.4). In another question about effectiveness of methods used by responders, 327 (28,1%) of them claimed that manner is always working and reducing the level of stress. Nonetheless, vast majority answered that method sometimes works – 766 (65,9%). When asked about sources of knowledge about how to manage stress, most of the students – 508 (43,5%) claimed that they do not search information how to deal with stress in which 74% were woman and 26% were man, which is not statistically significant ($p=1,77$). 380 (32,6%) of responders chose "advice from family and friends" and 137 (11,7%) elected "Blogs in Internet" (Fig. 5).

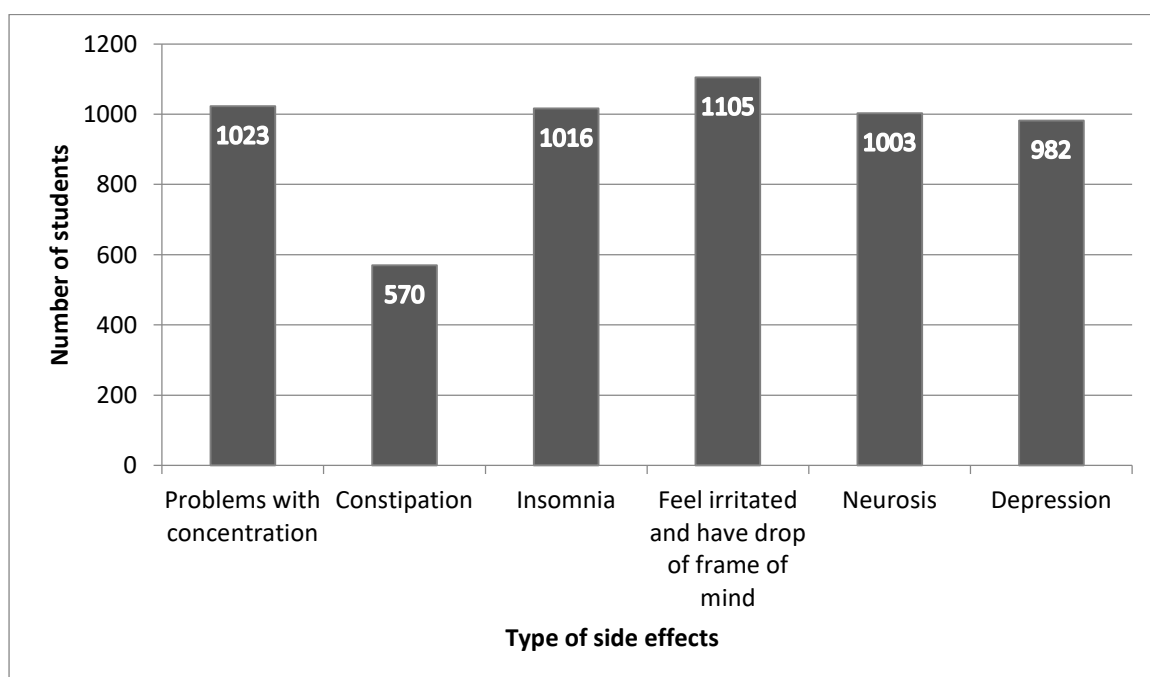


Fig. 3. Side effects of stress among medical students

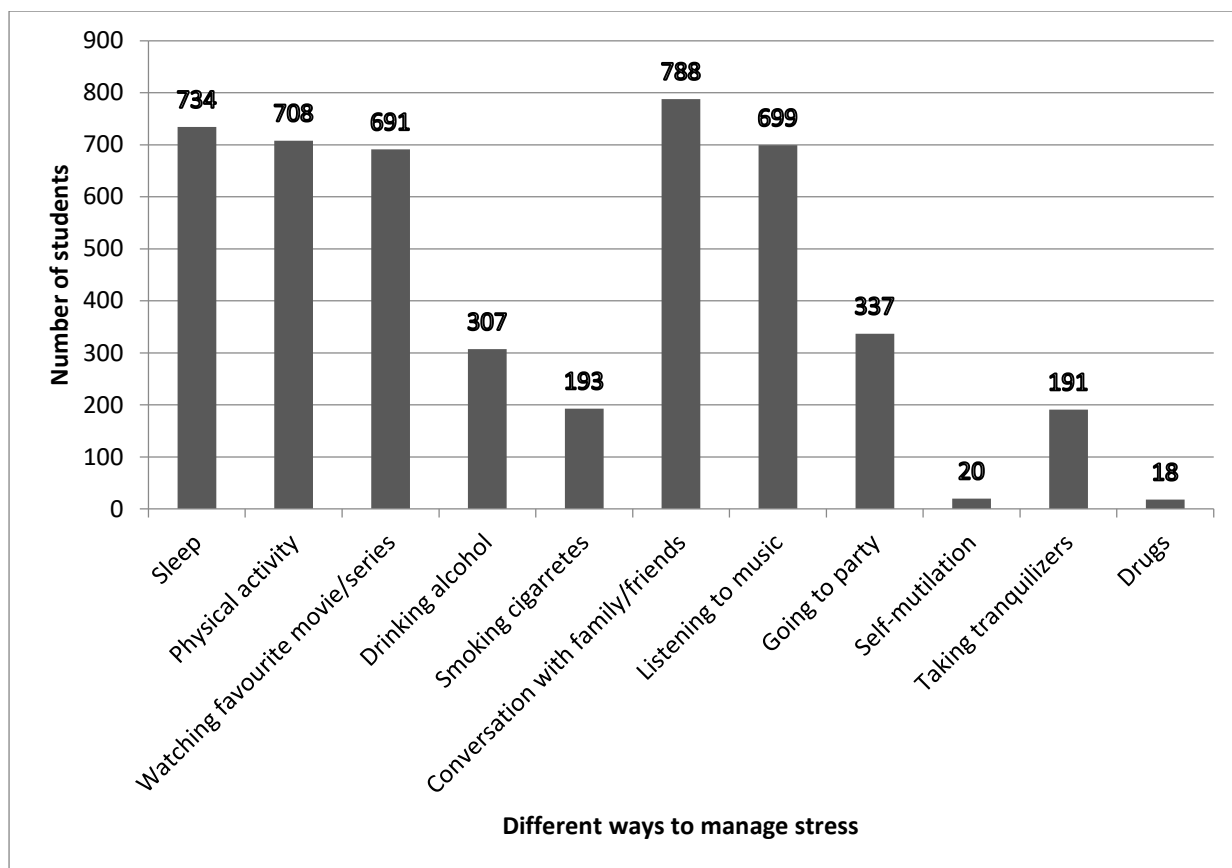


Fig. 4. Ways to overcome stress among medical students.

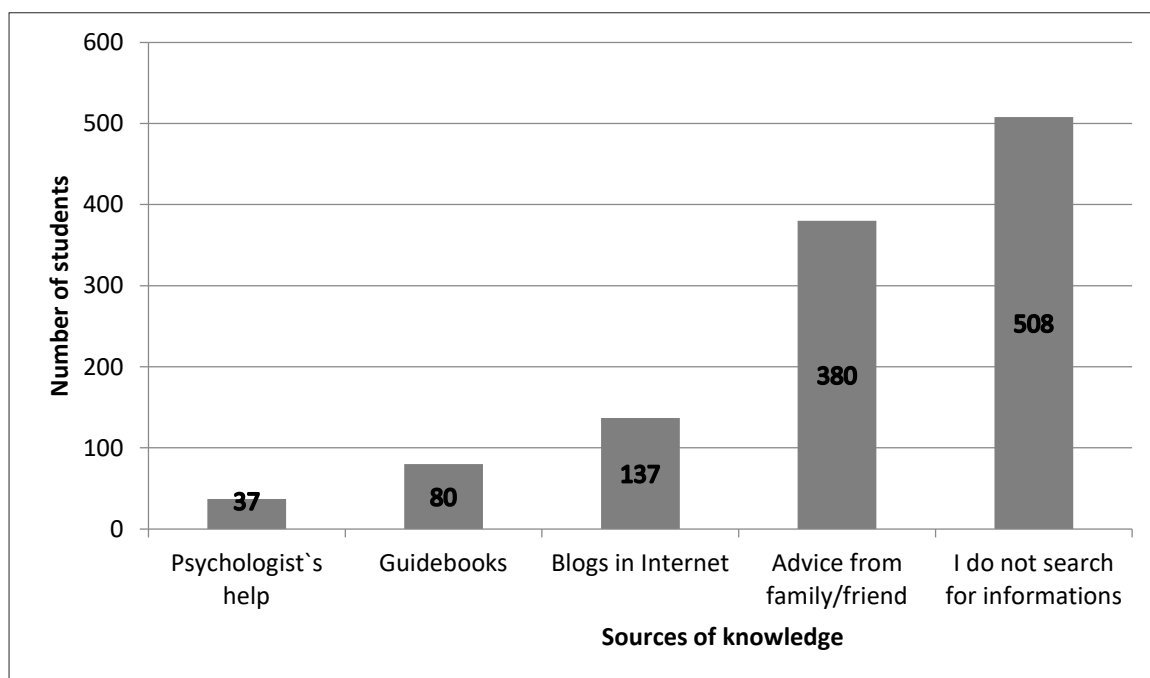


Fig.5. Sources of knowledge about how to manage stress

Discussion

Stress among medical students is a common phenomenon, most of the students in this survey feel stressed during academic year. That can have a big influence on efficiency of their work in the future and quality of private life [7]. The problem of psychological disorders such as stress or depression among students from medical universities are still not treated seriously and properly [8]. In many scientific works, exams are mentioned as a dominant stressor [9]. In some of them not only participating in exams are stressful but also the frequency of test in semester or year [9,10,11]. In many scientific works it is said that females are more often stressed than males [11,12]. According to this survey and other articles, the most common symptoms or side effects of stress are lack of happiness, problems with sleeping (insomnia), losing self-confidence or problems with concentration [1,13]. It is known that the high level of stress can cause both somatic and mental disorders in the future [4]. In Indian studies more than 48% of medical students had depression symptoms [14]. Moreover, according to survey from Pakistan almost 44% of responders from Medical Universities showed similar signs [15]. Probably the earliest is the stress reduced, the lowest is the risk of depression [16]. As well in our scientific work as in other articles, physical activities, conversation with friends and listening to music are known as activities which relieve stress. The difference is that in other surveys listening to music is known as a most popular way to manage stress (33,08%) while in our survey the most common is conversation with family or friend [17].

Conclusion

The study reveals that stress is a common problem among students from medical faculties. There is no doubt that stress is an inseparable companion during not only studies, but also after degree while working as a professional. For that reason it is necessary to encourage young people to find their own effective manner to cope with stress. Moreover, it is essential to make students aware of first signs of depression and burnout, because it will ensure their both personal and professional life.

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