

УДК 159.952.5 : 614.253.4

Olga YURTSENYUK

Bukovinian State Medical University
olseli@mail.ru

Iryna ANTOFIJCHUK

Bukovinian State Medical University
sunant@ukr.net

THE ANXIETY LEVEL OF MEDICAL STUDENTS

Ключевые слова: личностная тревожность, ситуативная тревога, психическое здоровье.

Юрценюк О., Антофийчук И. Уровень тревоги у студентов-медиков.

Статья посвящена исследованию уровней личностной тревожности и ситуативной тревоги у студентов высших учебных заведений. Тревога является реакцией на опасность, которая грозит человеку, реальная или воображаемая, эмоциональное состояние диффузного страха неизвестно, характеризуется смутным чувством угрозы (в отличие от боязни, что является реакцией на определенную опасность). Тревога является индивидуальной особенностью, которая находится в высокой склонности испытывать беспокойство в различных ситуациях, включая объективные характеристики, которые не проявлялись раньше.

The goal of medical education is to train knowledgeable, competent and professional physicians to care for the nation's sick, advance the science of medicine and promote public health. Medical school can impose significant psychological stress on medical students, mainly through time pressure, large amount of new information, excessive working hours and the knowledge that at the end of their training they will be directly responsible for the health and welfare of others and their post matriculation.

A considerable degree of psychological morbidity has been reported in medical students ranging from stress, inter-personal problems and suicidal ideation to psychiatric disorders. These reports have given rise to concern on how students' distress can affect their learning, professional development and patient contacts. Psychological problems from medical school stress may predict later mental health problems; students seldom seek help for their problems. In this respect, attention has been paid to the increase in stress, health concerns and emotional problems among medical students.

Health is the main value of the human, it describes not only the condition but also the strategy of life. Mental health depends not only on the way of life, the environment and the person's

attitude to his or her individual health, medicine and all factors that affect on health generally.

Decision to make a career in medicine can be affected by many factors. Besides external factors, such as parental influence, anticipated income and prestige, factors such as willingness to help others, primary interest in medicine or wanting to be skilful in medicine were also reported as more personal factors in the literature. Desire is defined as a strong wish to have or to do something perceived in order to have an effect on career choice and psychological well-being.

The fact that the students made out a list and the medical faculty was placed on the list indicates career desire. This means that a student who placed the medical faculty at the seventeenth order desired medicine less than a student who listed medicine in the first rank. Desire may make one happy or satisfied in spite of the challenges and thus may be a protective factor against the harsh experience of medical school mentioned before. Expectation is a belief that is considered the most likely to happen, maybe non-realistic and could result in disappointment. Some conditions such as health policy changes or lower income may result in a disappointment in the volunteers. In this point of view, unfulfilled expectations are

supposed to add to the unfortunate experiences of the medical faculty.

Literature on students' anxiety and depression levels generally focusses on causes such as gender, school year, academic pressures and on the end points such as poor academic performance, sleep disorders and suicidal ideation. There is a need to investigate the effect of desire and expectations from medicine on anxiety and depression levels of medical students and this study primarily aims to explore this aspect in medical students in their first two years of medical school

Signs of students' mental health are: their activity, vitality, observation, adaptation to the conditions of higher education learning, low anxiety, emotional stability, ability to perceive and analyze information¹.

Stress in medical students is concerned with the levels of stress and the effects on the physical and psychological well-being of medical students in strenuous medical programs. Excessive amount of stress in medical training predisposes students to have difficulties in solving interpersonal conflicts as a result of previous stress.

A significant percentage of medical students suffer from anxiety disorders because of the long term effects of stress on the emotional and behavioral symptomatology. This condition becomes a focus of concern nationally and globally, so the first line of detection and defense of the stress are the students.

Students need to be given the tools to recognize and cope with stress, as well as being assured that they will not suffer judgment from others for recognizing their need for help in dealing with stress. The instructors, advisers and other faculty members who notice the signs of stress in a particular student need to have a non-threatening, non-judgmental way to help medical students recognize and handle their stress.

The need of students' mental health research is determined by the presence of factors that affect on the state of their mental health in case of examination periods, social adaptation, the need of personal self-determination in the future professional environment and others. Emotional states are bygone at this, and their results are a serious threat on the students' psychological health. In terms of higher education institution mental health is a very important factor that determines the success of students in educational activities, promotes their self-development and communication without conflict.

Stress is defined as an imbalance between environmental conditions necessary for survival and the ability of individuals to adapt to those

conditions. Stress in medical students has been recognized for a long time many studies have explored the causes, consequences and solutions.

There are three issues considered the most important for the development of stress in medical students. First is the fact that they have to learn a massive amount of new information in a short time. Second is when they have exams (evaluation period), and the last one is that they have little or no time to review what they have learned.

Medical students are overloaded with a tremendous amount of information. They have a limited amount of time to memorize all the information studied. The overload of information creates a feeling of disappointment because of the inability to handle all the information at once and succeed during the examination period. Many medical students struggle with their own capacity to meet the demands of medical curriculum.

Stress responds to different situations at different levels of consciousness, psychological stress, and physiological stress. These points of stress may be interrelated with each other, and be at different levels.

The most stressful period that medical students have is when they need to bridge the gap between graduation from medical school and being board eligible in a medical specialty. The Resident Service Committee of the Association of Program Directors in Internal Medicine (APDIM) divided the common stressors of residency into three categories: situational, personal, and professional.¹

Situational stressors include inordinate hours, sleep deprivation, excessive workload, overbearing clerical and administrative responsibilities, inadequate support from allied health professionals, too many difficult patients, and conditions for learning that are less than optimal. Second year students have other stress situations because they start to interact with the patients. This interaction includes moments when the medical students face their patients with bad news.

Personal stressors include family, who may be a source of support, but can also be a source of conflict and negative stress. Financial issues, as many residents carry heavy educational debts, and they feel compelled to have a secondary job in order to repay their debts. Isolation is frequently exacerbated by relocation away from family and friends. Other stressors include limited free time to relax or develop new support systems, psychosocial concerns brought by the stress of residency, and inadequate coping skills. Professional stressors include responsibility for patient care, supervision of more junior residents and students,

difficult patients, information overload and career planning.

Anxiety is one of the main factors of affecting on the mental health of students. We must distinguish anxiety as a state of anxiety and as a property of the individual. Anxiety is a reaction on the danger that threatens the person, real or imaginary, emotional state diffuse fear of unknown, characterized by vague feeling of threatened (as opposed to fear, which is a reaction to a definite danger). Anxiety is individual feature that is in high propensity to experience anxiety in different situations including those objective characteristics which had not attracted.

Stress levels have a strong relationship with physical condition. Medical students during an examination period can experience insomnia, fatigue, and nausea. Moreover, metabolism is disturbed by diarrhea or constipation. Skin diseases are common during the examination period which include acne, dermatitis, or psoriasis. Last symptoms are provoked by long working hours and tension of completing in good terms the courses.

Medical students have been known to consume caffeinated beverages to be active and alert during time of studying. These students drink large quantities of coffee, tea, cola, and energy drinks. Though an increased intake of caffeine can increase the levels of adenosine, adrenaline, cortisol and dopamine in the blood, caffeine also inhibits the absorption of some nutrients, increasing the acidity of the gastrointestinal tract and depleting the levels of calcium, magnesium, iron and other trace minerals of the body through urinary excretion. Furthermore, caffeine decreases blood flow to the brain by as much as 30 percent, and it decreases the stimulation of insulin, a hormone that helps regulate the body's blood sugar level.

Stress can cause high levels of the following hormones: cortisol, epinephrine and norepinephrine, leptin, NPY, nitrite, ACTH and adrenomedullin. Elevated level of adenosine, adrenaline, cortisol and dopamine in the blood can produce fatigue, depression, behavior changes, heart disease, weight problems, diabetes, and skin diseases. It also decreases the immune response that can lead to heartburn and stomach ulcers.

The hormones of the menstrual cycle (follicle-stimulating hormone (FSH) and luteinizing hormone (LH)) during the examination periods are also affected. Females can be disturbed during menstrual cycles because the FSH and LH normal levels changes radically. Medical students may also have disturbed sleep cycles in these periods.

Social educational school provides a central role of anxiety in the socialization of the person. Underlying this view is noticed that neutral stimulation can become emotional and anxious to acquire properties through reinforcement and learning. As a result, easy arising anxiety is very stable with great difficulties in future. It can contribute the development as positive qualities, so negative, such as aggression or excessive dependence.

It should be noted that the distribution of the state of anxiety (situational anxiety) and property of the individual (personal) is most evident in the works of C. Spielberger and R. Cattell. According to Charles Spielberger, situational anxiety occurs when an individual perceives a stimulus or situation as one that contains the actual or potential elements of danger, threat or harm. Personal anxiety does not appear directly in behavior, but the level can be determined based on how often and intensely alarm condition occurs.

Psychological studies indicate the existence of these kinds of anxiety as mobilizing and demobilizing anxiety. Mobilizing kind of anxiety is manifested in the increased activity of up to aggression; in increased appetite. Demobilizing kind of anxiety particularly evident in the process of a stable anxiety.

As too much stress causes problems, it is important to evaluate the degree of stress a student may have. Today, there are methods to assess the level of emotional stress that medical students can handle. It is advisable to manage study time and include healthy nutrition during the whole day. Interventions against dishonesty such as copying or other forms of cheating also prevent the risk of stress and depression in medical students.

Communication among third and fourth year medical students prepares them for the stressors of real-life clinical practice. This mental preparation stimulates the students to reduce the percentages of error in a medical consult.

Medical students are prepared to know the diagnosis and the treatment, but may not be successfully prepared to interact with the problems of their patient, or how to deal with bad news during consultations, as well as dealing with the patient's emotional stress.

Emotional intelligence (EI) can be a protection against the effects of psychological stress, and it may enhance well-being. However, EI is molded through personality and has not been observed that it is affected by stress situation. However, those students who are in extra-curricular activities have lower states of anxiety than those who are only concentrated in their

studies. To address these problems, some medical schools have made changes such as reducing the workweek, instituting curricular reforms such as having shorter classes, less rote memorization, and providing psychological services.

Stress in medical students has become a focus of concern globally, with the first line of detection and defense of the stress being the students themselves. Some interventions include compulsory attendance in support groups, so the level of stigma is much lower than that associated with attending individual therapy. This provides long-term continuous support and help for students to monitor the progress and preparation for a better practice.

Other stress-management programs provide trainees with coping techniques such as hypnosis, imagery, and muscle relaxation; affiliation with peers, opportunities for emotional expression and intensified relationships with the faculty.

The interventions of the majority of the programs use a group structure where the trainees meet with their peers, or with leaders. No "gold standard" exists for the content of stress-reduction programs for medical trainees. Some propose a scheme of directed and non-directed support groups, relaxation training (including meditation and hypnosis), time-management and coping skills, mindfulness-based stress reduction, and mentoring programs.

Good intervention includes relaxation basics like abdominal breathing, learning to identify and counter negative thoughts, use of the imagery in relaxation, practical ways to increase healthy eating, building positive coping, apply relaxing or activating words appropriately, and re-direct time and energy based on the level of importance.

The aim of this work is to study the levels of trait anxiety and situational of students anxiety

Materials and Methods:

The study was conducted in 2013-2014. In general 327 university students were examined. There were no significant differences by sex and age composition, place of residence, learning.

The degree of expression of anxious symptoms was studied using the Spielberger-Hanin test. It consists of 20 statements that consist of both state anxiety (anxiety, reactive or situational anxiety) and 20 to determine the expression of anxiety as dispositions, personality characteristics (property anxiety). Scale of personal anxiety and reactive anxiety of Spielberg is the only method that allows a differentiate measure anxiety as personality trait and as a state. We used a modification of Y. L. Hanin (1976), which is adapted to the Russian language⁵.

This method allows you to make the first significant refinement of integrated self-identity quality: is the instability self or situational, means personal. The results indicate this method not only on psychodynamic personality characteristics, but also on the general question of the relationship of reactivity and activity of the individual, his temperament and character. This technique is deployed subjective personality characteristic that does not diminish its value as a diagnostic psychological terms. Evaluation of results: 30 points - low anxiety; 31-45 - moderate anxiety, 46 points or more - high anxiety.

Significant deviations from a moderate level of anxiety require special attention, high susceptibility to anxiety, involves the emergence of anxiety on human situations for its competence. In this case reduce subjective importance of situations and problems and move the focus to the understanding of the formation and sense of confidence in the success of⁶.

Results: The level of trait anxiety and students' situational anxiety determined the use of Spielberger-Hanin test. Established that among the students the vast majority of them are persons with middle-trait anxiety - 145 persons (44.34%), high levels of trait anxiety was determined in 98 persons (29.97%), low trait anxiety were found in 84 students (25.69%). In the sexual case of male students of middle-trait anxiety - 56.2% was significantly higher compared with 39.6% of patients with high levels of 4.2% and a low level, unlike the women in the group are dominated by those with high levels of anxiety (76.9% vs. 21.2% with an average level of trait anxiety and 1.9% with low trait anxiety). A direct correlation between high levels of trait anxiety and the woman ($r = 0,50$, $p < 0.05$). Remarkably, in subgroups with high and middle-trait anxiety absolute values which were higher according women than men - $57,73 \pm 4,38$ to $49,33 \pm 3,74$ points ($p < 0.05$) for high level of anxiety, and $37,66 \pm 4,15$ vs $36,0 \pm 3,54$ ($p < 0.05$) for the average.

Analyzing the performance level of situational anxiety it can be noted that the high level of situational anxiety was exposed to 81 students, representing 24.77% of the patients, the average level of situational anxiety found in 194 persons - 59.33%, and 52 young people revealed a low level of situational anxiety - 15.9%.

In the sexual division of men and women with high levels of situational anxiety were respectively - 41.6% versus 25.0%. Average level of situational anxiety was detected in 58.4% of men and 75.0% women.

Elevated levels of anxiety may indicate a lack of emotional adjustment to certain social situations, and students with a high level of anxiety are manifested attitude as to the weak. Anxiety students usually are not recognized standing in the group, they often are among the least popular, because they are often diffident, closed, unsociable or, on the contrary, very sociable, annoying or even angry.

The result of lack of initiative anxious students is that a peer has a desire to dominate him, leading to a decrease in emotional background, to avoid communication trends, increased insecurity. Disturbed student fear of others, waiting for the attack, ridicule, insults, contributing to the development of psychological defense reaction in the form of aggression directed at others. These students are usually single, closed, inactive. It usually affects the success of training and establishing contacts with the environment.

At the same time, such students have a tendency to the personal anxiety and situational anxiety who are in a group of honors. This is due to the fact that they are students who regularly attend classes, seminars and prepare to actively respond to them, mostly worried about their performance. They are trying to get all the possible points for employment and successfully write all modular control while often under stress.

Conclusions: The emergence of anxiety may be associated with both external and internal factors. Under the influence of external conditions alarm occurs as an emotional reaction on a stressful situation and may be different than intensity and duration. So we can assume that individuals with high trait anxiety level of situational anxiety also increase due to personal experiences of stress response situations that arise in the lives of students, particularly in education.

LITERATURE

¹ Айзенк Х. Психологические теории тревожности: В кн. Тревога и тревожность / Под ред. В.М. Астапова. СПб.: Питер, 2001. — С. 224—247.

² Ibid., С. 224—247.

³ Райгородский Д. Я. Практическая психодиагностика. Методики и тесты. [Учебное пособие] / Д. Я. Райгородский – Самара: "БАХРАХ-М". – 2001. – 320 с.

⁴ Айзенк Х. Психологические теории тревожности: В кн. Тревога и тревожность / Под ред. В.М. Астапова. СПб.: Питер, 2001. — С. 224—247.

⁵ Прихожан А.М., Дубровіна І.В. Психологія. – М.: АКАДЕМІЯ, 1999 – 461с.

⁶ Ibid., 461с.

⁷ Малкина-Пых И. Г. Психосоматика / И.Г. Малкина-Пых. – М.: Эксмо, 2009. – 1024 с.

⁸ Бреслав Г.М. Психология эмоций. – учеб. пособие для вузов. М.: Академия: Смысл, 2004. – 541 с.

Юрценюк О., Антофійчук І. РІВЕНЬ ТРИВОГИ У СТУДЕНТІВ-МЕДИКІВ.

Стаття присвячена дослідженню рівнів особистісної тривожності та ситуативної тривоги у студентів вищих навчальних закладів.

Необхідність дослідження психічного здоров'я студентів визначається наявністю факторів, які впливають на стан їх психічного здоров'я, у разі екзаменаційних періодів, соціальної адаптації, потреб в особистому самовизначенні у майбутньому професійному середовищі тощо. Емоційні стани становлять серйозну загрозу психологічному здоров'ю студентів. З точки зору вищого навчального закладу психічне здоров'я є дуже важливим фактором, який визначає успіх студентів в освітній діяльності, сприяє їх саморозвитку і зв'язку без конфлікту.

Тривога є одним з основних факторів, що впливають на психічне здоров'я студентів. Ми повинні розрізняти тривогу як стан і як властивість особистості. Тривога є реакцією на небезпеку, яка загрожує людині, реальний чи уявний, емоційний стан дифузного страху невідомо, що характеризується невизначним почуттям загрози (на відміну від боязні, що є реакцією на певну небезпеку). Тривога є індивідуальною особистістю, яка знаходиться у високій схильності відчувати занепокоєння в різних ситуаціях, включаючи ті об'єктивні характеристики, що не залучалися досі.

Ключові слова: особистісна тривожність, ситуативна тривога, психічне здоров'я.