

УДК 613.863-057.875

***SMARTPHONE AND INFECTIOUS DISEASES – MODERN REASONS FOR  
THE GROWTH OF STUDENTS' ANXIETY***

***Kozulya S.V.***

*MD, Associate Professor,*

*Federal State Autonomous Educational Institution of Higher Education " V.I.  
Vernadsky Crimean Federal University",*

*Simferopol, Russia*

***Chernetsky A.A.***

*psychiatric-narcologist, psychotherapist,*

*Sevastopol State Budgetary Health Care Institution "Sevastopol City Psychiatric  
Hospital",*

*Sevastopol, Russia*

***Terentyev V.A.***

*Postgraduate student of the Department of Propaedeutics of Pediatrics*

*Medical Academy named after S.I. Georgievsky (structural subdivision of FGAOUVO  
"V. I. Vernadsky Crimean Federal University"),*

*Simferopol, Russia;*

***Vashisht Dhruv***

*Student*

*S.I. Georgievsky Medical Academy (structural subdivision of the V. I. Vernadsky  
Crimean Federal University),*

*Simferopol, Russia.*

**Annotation**

The purpose of this scientific work was to study groups of factors that cause anxiety in students. It has been established that students of primary courses of higher educational institutions have the same reasons for anxiety. The largest amount of students was in anxiety by situations related to their studies. In addition, the young men demonstrated an unexpectedly high level of "magical" anxiety. The risk of infection with an infectious disease, the inability to use a smartphone (or its individual functions) causes

a rise in the level of anxiety in a modern student, quite comparable to such "classical" reasons as school, self-esteem, interpersonal and "magical" anxiety.

**Keywords:** hygiene, psychology, anxiety, smartphone, infectious diseases.

## ***СМАРТФОН И ИНФЕКЦИОННЫЕ ЗАБОЛЕВАНИЯ — СОВРЕМЕННЫЕ ПРИЧИНЫ РОСТА ТРЕВОЖНОСТИ У СТУДЕНТОВ***

***Козуля С.В.***

*д.м.н., доцент,*

*Федеральное государственное автономное образовательное учреждение высшего образования «Крымский федеральный университет имени В. И. Вернадского»,*

*Симферополь, Россия*

***Чернецкий А.А.***

*психиатр-нарколог, психотерапевт,*

*Государственное бюджетное учреждение здравоохранения Севастополя «Севастопольская городская психиатрическая больница»,*

*Севастополь, Россия*

***Терентьев В.А.***

*инфекционист, педиатр,*

*Государственное бюджетное учреждение здравоохранения Севастополя «Городская инфекционная больница»,*

*Севастополь, Россия;*

***Вашишт Дхрув***

*Студент*

*Медицинская академия имени С.И. Георгиевского (структурное подразделение ФГАОУВО «Крымский федеральный университет имени В. И. Вернадского»), Симферополь, Россия.*

### **Аннотация**

Целью данного исследования было изучение групп факторов, вызывающих тревогу у студентов. Установлено, что студенты начальных курсов высших

учебных заведений имеют те же причины для тревожности, что и ученики старших классов школ. Наиболее значимыми причинами для тревоги у студентов были ситуации, связанными с учебой. Кроме того, юноши продемонстрировали неожиданно высокий уровень «магической» тревожности. Риск заражения инфекционным заболеванием, невозможность использования смартфона (или отдельных его функций) вызывает у современного студента подъем уровня тревожности, вполне сопоставимый с такими «классическими» причинами, как школьная, самооценочная, межличностная и «магическая» тревожность.

**Ключевые слова:** гигиена, психология, тревожность, смартфон, инфекционные заболевания.

The normal (optimal) level of anxiety is considered as necessary for effective adaptation to reality (adaptive, constructive anxiety) [1]. A high level of anxiety is a subjective indicator of the manifestation of mental distress (up to a mental disorder), which is characterized by excessive and unreasonable anxiety and anxiety for a long time. People with an increased level of anxiety often worry about various situations, even if there is no obvious (objective) reason for concern.

Increased anxiety can lead to serious problems in everyday life (decreased performance, problems in communicating with other people, lack of satisfaction from life, etc.). The treatment of increased anxiety can include psychotherapy, medications and lifestyle changes (regular exercise, reducing the use of caffeine and alcohol, etc.).

The environment around us is changing, and, in addition to the classic reasons that increase the level of our anxiety (loneliness, problems at work, problems in relationships, health, environment, and various kinds conflicts ...) new ones appear. The COVID-19 epidemic has not passed without an impact on our mental health. It left us feeling anxious for the health (and the health of our loved ones), as well as anxiety due to the possibility of a repeat outbreak of coronavirus (or other) infection [2].

In addition, the pandemic has spurred a wave of "digitalization", forcing even those people who had previously made do with ordinary "push-button" phones with a minimal set of functions to purchase smartphones. It is not surprising that smartphone

addiction is now the most widespread among non-medical addictions. It is directly related to depression, anxiety, stress, a decrease in self-esteem and self-control, with health problems (for example, sleep), with the quality of life and satisfaction with it, difficulties in the family, a decrease in the academic performance of students, a decrease in labor productivity and the danger of becoming a victim of cyberbullying [3].

The purpose of this study was to analyze groups of factors that cause anxiety in students (both classical and modern).

### **Materials and methods.**

The scale of personal anxiety of A.M. Prihozhan was used in the work [4]. The peculiarity of this technique is that anxiety is determined by a person's assessment of certain situations encountered in life. The advantage of the methodology is that it allows you to identify areas of reality that cause anxiety. We conducted a survey of 84 students of the International Medical Faculty of the S.I. Georgievsky Medical Academy (42 boys and 42 girls). In addition to the "classic" forty questions of the questionnaire A.M. Parishioners, we have asked an additional 20 questions concerning modern causes for anxiety.

10 questions related to disturbing situations related to a smartphone (the battery on the smartphone will soon run out; the teacher forces you to turn off and put away your smartphone; when you get a call or message at a time when you cannot answer or receive; the phone is far away from you (or in your bag, or noisy) - you will not hear the call (message); are you afraid to break or lose your phone (smartphone); there is no outlet (socket) in the room or it is already occupied by someone else's phone; you can't use the maps because of the low battery of your smartphone; you went to study, but you forgot your phone at home; when your relatives (roommates) ask you to turn off your phone at night (prevents you from sleeping); In the morning you don't have time to look at the mail (social networks, news)).

10 questions were related to situations reminiscent of the risk of contracting infectious diseases (next to you, someone is coughing or sneezing; there is a man in a medical mask near you; you are in a place where there are a lot of people; you're

touching cash that's passed through a hundred other people's hands; when in public places you have to touch handrails and other objects; on the train (bus) you sit in the seat from which the other passenger got up; I saw a small scratch on the skin, but do not remember where, when I got it; a cat came up to you on the street and rubs against your legs; you got on the bus and remembered that you don't have a medical mask; after visiting the toilet, you realized that there is no water in the tap).

The data obtained were processed using LibreOffice Calc 7.3.

### **Results and their discussion.**

First of all, we analyzed the results of testing using the "classical" method. To assess anxiety, standards were taken for high school age (15 years and older).

This method of anxiety assessment is based on a "socio- situational approach", which can be applied not only for high school age, but also for the initial courses of higher educational institutions. When a person gets into certain life situations, these situations become triggers that trigger anxiety. The descriptions of situations in the tests are selected in such a way that they are relevant for both schools and other educational institutions.

As can be seen from the data given in Table 1, the guys were the most susceptible to anxiety. The average value of general anxiety in the group in young men exceeded the norm. This happened mainly due to "school" and, oddly enough, "magical" anxiety. In the group of girls, the values also differed from the norm school anxiety, but overall anxiety (on average in the group) did not exceed the optimal values.

Table 1 – students' anxiety (depending on the reasons)

№	type of anxiety	Young men	standard	young woman	standard
1	general anxiety	<b>68,2</b>	61	67,2	67
2	school anxiety	<b>18,5</b>	11	<b>18,5</b>	16
3	self-esteem anxiety	17,9	20	15,5	18
4	interpersonal anxiety	16,5	20	16	18
5	"magical" anxiety	<b>15,3</b>	13	17,2	19

General anxiety refers to the anxious state of the student as a whole. Symptoms of increased general anxiety may include: constant anxiety and tension; difficulty with concentration and memorization of information; physical symptoms such as anxiety, trembling, sweating, dizziness and increased pulse; avoidance of situations that can cause anxiety; fear of the future and the unknown; sleep disorders; constant somatic complaints (chest pains, headaches, abdominal pain, etc.) [5].

General anxiety consists of many reasons: financial condition, studies, health, personal life, communication, etc. However, if the anxiety state lasts more than 6 months, then, most likely, we can talk about the occurrence of neurosis or even more serious psychiatric illness [6].

Among 84 students who had completed the questionnaire, the indicator of general anxiety was exceeded in 45 people (53.6%). At the same time, the number of young men whose overall anxiety exceeded 61 points was 26 people (61.9% of the total number of boys), and the number of girls whose overall anxiety exceeded 67 points, amounted to 19 people (45.2% of the total number of girls). As can be seen from the data obtained, among male students, the number of people who experience anxiety is higher than among female students.

Among the students who had completed the questionnaire, the school anxiety index was exceeded in 57 people (67.9%). At the same time, the number of boys whose school anxiety exceeded 11 points was 32 people (76.2% of the total number of boys), and the number of girls whose school anxiety exceeded 16 points was 25 people (59.5% of the total number of girls).

This suggests that interacting with people in situations where you are evaluated by others causes the greatest anxiety. Each person has a certain image of himself, which is often influenced by the opinions of other people. This is especially evident at school age. Schoolchildren are willing to do a lot to maintain a certain image of a "cool" guy among classmates and avoid becoming "nerds". As can be seen from the study, this type of anxiety is also characteristic of students. As soon as a student finds himself in the center of attention of his classmates and a teacher, anxiety occurs.

Among the respondents who had completed the questionnaire, the indicator of self-esteem anxiety was exceeded in 28 people (33.3%). At the same time, the number of boys whose self-assessment anxiety exceeded 19 points was 15 people (35.7% of the total number of boys), and the number of girls whose self-assessment anxiety exceeded 18 points was 13 people (30.1% of the total number of girls).

Self-assessment is an assessment of oneself, one's strengths and weaknesses. The idea of yourself as a person. The foundations of self-esteem are laid in childhood. Self-assessment it refers to the "inner world" of a person, so it is much more to a lesser extent depends on external circumstances. Most students have already formed their self-esteem. Therefore (in contrast to "school anxiety"), anxiety associated with self-esteem is lower. In the case when self-esteem is underestimated, often external circumstances are triggers. They trigger a feeling of anxiety, sadness and the person is dissatisfied with himself and with his behavior.

Among the students who had completed the questionnaire, the indicator of interpersonal anxiety was exceeded in 25 people (29.8%). At the same time, the number of young men whose interpersonal anxiety exceeded 20 .The number of girls whose interpersonal anxiety exceeded 18 points was 9 people (21.4% of the total number of boys), and the number of girls whose interpersonal anxiety exceeded 18 points was 16 people (38.1% of the total number of girls).

Interpersonal anxiety is an anxiety that occurs during communication with classmates and teachers. As can be seen from the results of the study, communication causes a higher level of anxiety in girls.

Among the students who had completed the questionnaire, the indicator of "magical" anxiety was exceeded in 36 people (42.9%). At the same time, the number of young men whose "magical" anxiety exceeded 13 the number of points was 22 people (52.4% of the total number of young men), and the number of girls whose "magical" anxiety exceeded 19 points was 14 people (33.3% of the total number of girls).

Magical thinking is the belief that thoughts, actions, or symbols influence events in the real world; the belief that otherworldly forces exist and can influence people.



Magical anxiety is usually characteristic of adolescents [7], however, increased magical anxiety can also occur at an older age. Despite the modern age and the development of information technology, people still believe in symbols, signs, etc.

Figure 1 shows the average indicators of two more types of anxiety: caused by the use of a smartphone and associated with the likelihood of infection with infectious diseases in comparison with the above reasons for anxiety.

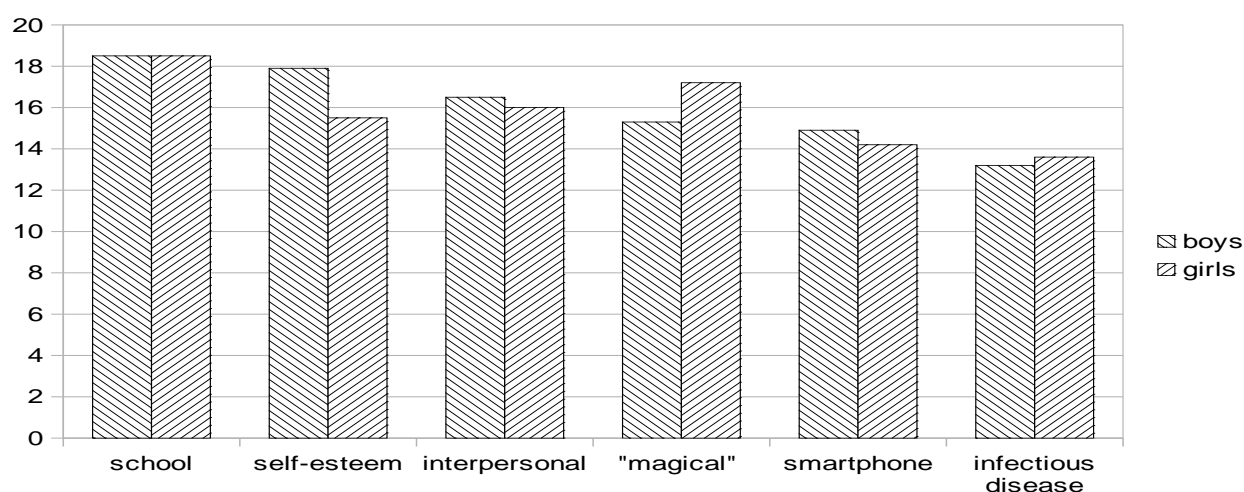


Fig.1 - Average indicators by types of anxiety

Among the students who had completed the questionnaire, the average indicator of anxiety associated with smartphone use was 14.9 points for boys and 14.2 points for girls. At the same time significant anxiety level (above 20 points) it was observed in 20 people (23.8%). Of these, 11 boys (26.2%) and 9 girls (21.4%).

This proves that smartphones are a new anxiety factor, along with "classic" situations. People are so used to phones that they can't imagine their life without them. Situations where students do not have access to a smartphone (or its functions) creates anxiety.

Among the students who had completed the questionnaire, the average indicator of anxiety associated with the possibility of infection with an infectious disease was 13.2 points for boys and 13.6 points for girls.

At the same time, a significant level of anxiety (above 20 points) was noted in 12 people (14.3%). Of these, 6 boys (14.3%) and 6 girls (14,3%). This suggests that



the psychological consequences of the epidemic COVID-19 still lingers in our minds and will probably influence our behavior for many years to come.

### **Conclusions:**

1. Elementary students of higher academic institutions have the same reasons for anxiety as high school students.

2. The most significant reasons for students' anxiety were study-related situations. In addition, young men demonstrated an unexpectedly high level of "magical" anxiety.

3. The risk of infection with an infectious disease, the inability to use a smartphone (or its individual functions) causes a rise in the level of anxiety in a modern student, quite comparable with such "classical" reasons as school, self-esteem, interpersonal and "magical" anxiety.

### **Bibliographic list:**

1. Бочева Н. А. Ситуативная тревожность как один из факторов адаптации первоклассников к школе //Вестник Московского государственного областного университета. Серия: Психологические науки. – 2011. – №. 3. – С. 87-90.

2. Кольцова И. В., Долганина В. В. Влияние пандемии на возникновение тревожности у студентов педагогического вуза //Мир науки. Педагогика и психология. – 2020. – Т. 8. – №. 4. – С. 49.

3. Шейнов В. П., Девицын А. С. Факторная структура модели зависимости от смартфона //Институт психологии Российской академии наук. Социальная и экономическая психология. – 2021. – Т. 6. – №. 3. – С. 174-197.

4. Батышева К. Ю. Изучение уровня тревожности у младших подростков // Педагогика и психология как ресурс развития современного общества : научные статьи XIII Международной научно-практической конференции. - Рязань, 2022. – С. 149-153.

5. Степанова А. И. Тревожность в младшем школьном возрасте: причины и пути коррекции //Инновационное развитие: потенциал науки и современного

образования: сборник статей Международной научно-практической конференции. - Пенза : Наука и Просвещение, 2018. – С. 213-216.

6. Зюзин В. Д. Краткие представления о диагностике и терапии тревожных расстройств // NovaUm. Ru. – 2020. – №. 25. – С. 411-413.

7. Хусаинова Д. Х. Тревожность в подростковом возрасте, как устойчивое состояние, препятствующее становлению личности //Проблемы и перспективы осуществления междисциплинарных исследований : сборник статей по итогам Международной научно-практической конференции. - Магнитогорск, АМИ, 2022. – С. 68-76.

*Оригинальность 89%*