Influence of the COVID-19 Pandemic on the Occurrence of Somatization Disorders in Students.

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Abstract

In the past psychosomatic illnesses have been seen as the consequences of primary psychological disorders. Lacking confidence in this causal model, many prefer Engel's biopsychosocial model which refers to the circular interaction between body, soul and environment. This model is in agreement with neuropsychoimmunological theories of the body's feedback loops that include emotions and behavior.

Many clinicians re-frame somatization as a psychopathology and use the biopsychosocial model as a basis for directing attention to the patient's personality traits and life context. Some consider that the role of the clinician is to emphasize the links between symptoms and external stressors and how these lead to psychophysiological changes.

Keywords: somatization, COVID – 19, pandemic, students

INTRODUCTION

Somatization is defined as a wide range of somatic complaints that lead patients to believe that they are suffering bodily, despite demonstrable emotional or psychosocial problems, and that it is not possible to define clearly under these conditions. The patient's belief is that their suffering has its origin in a definable illness which causes them to seek medical help and which induces disability and handicap [1;2].

The DSM-IV manual emphasizes as a common feature of somatoform disorders the existence of physical symptoms, which indicate an internal medicine disorder, but which cannot be fully explained by a general medicine illness, another mental disorder, or the direct effects of a substance. In contrast to simulation, somatic symptoms are not under voluntary control. The difference between somatoform disorders and mental symptoms from a medical pathology is the lack of a medical condition responsible for the patient's symptoms. The common denominator of this condition is considered to be undue bodily discomfort that is produced by psychological, psychiatric or social problems. In a bizarre way the functional symptoms of somatization are a considerable public health problem because they are among the leading causes of work and social disability. Equally problematic is that these patients with relapsing symptoms and no medical explanation are thoroughly investigated, hospitalized and exposed to invasive diagnostic procedures, costly treatments that can lead to iatrogenic illnesses possibly more serious than the illnesses they previously suffered from [2].

In the general population, the frequency of somatization is estimated to be in the range of 0.1-0.5%, with a female to male ratio of 5 to 20, with the possibility that the male sex is under-diagnosed by physicians, resulting in an indicative ratio [3].

Some studies report more frequent reports of somatoform symptoms in isolated rural individuals working in modest or unsupportive institutions [2].

While the ethology of somatization disorders remains unclear, several possible risk factors have been uncovered, including female gender, low socioeconomic status, financial problems, substance use, neuroticism, and a link to other mental illnesses (especially depression) [4]. Often a patient with somatization will refuse to accept the possibility that they are depressed or anxious or that their emotional distress is based in physical distress or disability. The patient's accusations should not be considered sufficient for a diagnosis and therefore evidence should be sought to support the diagnosis of depression and associated symptoms such as: loss of interest and pleasure in daily activities, poor eating and libido, insomnia, lack of energy, initiative and ambition, difficulty concentrating and memory, underestimation, pessimism and feelings of guilt and failure. Anxiety disorders present as marked and unfounded worry in varying degrees and can occur at any time or only in specific situations that the patient avoids. Common physical symptoms accompanying anxiety may include: retrosternal pain, dizziness, shortness of breath, palpitations, fatigue, tingling sensations, trembling. Some symptoms may be the result of hyperventilation, a common symptom in both acute and chronic forms of anxiety [5].

Somatization can amplify any of the symptoms outlined above, leading to fear or belief that the patient has a condition such as heart disease. This belief may be so strong that it remains even after thorough investigations have ruled out the diagnosis of heart disease [5].

Typically, patients with somatization disorders tend to change doctors frequently due to lack of diagnosis and lack of credibility. In the case of a single doctor, this may also be the family doctor. The doctor should empathize with the patient and give the patient the opportunity to present their symptoms, but in short pre-scheduled and regular visits with the examination focused on the newly emerging symptoms. In principle, paraclinical investigations should be avoided due to lack of relevant findings [3].

Adjuvant modalities include individual psychotherapy, psychodynamic or cognitive-behavioral therapy, or group therapy. In addition to risk factors including psychological strain and stressful life events, not only a high frequency of somatization, but also a link between somatization and academic stress, as well as an intensification of somatization and academic stress in the pre-exam period, was observed among medical students. The main factors mentioned by students include: fear of failure, inability to catch up if they fall behind, the amount of information they have to retain, competition between students, academic overload, financial problems, performance pressure and lack of time for learning. In addition to these, a high frequency of depression, anxiety and burnout has been found among medical students in many countries around the world [4].

To test whether somatization has an impact on general medical students or affects other categories of students, we also studied dental students. Studies have found a higher prevalence of anxiety, depression, burnout, depersonalization, exhaustion and high alcohol consumption in dental students than in general medical students [4].

Often a patient with somatization will refuse to accept the possibility that he or she is depressed or anxious, or that the emotional distress is based on physical distress or disability [5,6]. Anxiety disorders present as marked and unfounded worry in varying degrees and can occur at any time or only in specific situations that the patient avoids. Common physical symptoms accompanying anxiety may include: retrosternal pain, dizziness, shortness of breath, palpitations, fatigue, tingling sensations, trembling. Some symptoms may be the result of hyperventilation, a common symptom in both acute and chronic forms of anxiety [7].

Typically, patients with somatization disorders tend to change doctors frequently due to lack of diagnosis and lack of credibility. In the case of a single doctor, this may also be the family doctor [8].

Adjuvant modalities include individual psychotherapy, psychodynamic or cognitive-behavioral therapy, or group therapy. In some cases, psychotropic drug therapy may be particularly helpful in the presence of a concurrent anxiety or depressive disorder [9].

Stress-related somatization among medical students may be exacerbated by the large amount of clinical knowledge they accumulate during their undergraduate studies [10,11]. To test whether somatization has an impact on general medical students or affects other categories of students, we also studied dental students. Studies have found a higher prevalence of anxiety, depression, burnout, depersonalization, exhaustion and high alcohol consumption in dental students than in general medical students [4].

Research conducted in China, at the height of COVID-19, showed an increased prevalence of psychological distress in society. Levels of indicators of somatization, anxiety and distress showed moderate increases after the onset of COVID-19-specific clinical symptoms, suggesting the experience of severe illness [12]. The study revealed that even young COVID-19 patients with attenuated symptoms and a modest course could experience side effects such as anxiety, discomfort, somatization and other complaints [13].

Management of somatization has been difficult due to the impact that the pandemic has brought with increased psychological stress, which has been maintained by factors such as isolation at home, social distancing, financial problems, reduced physical activity, etc. The approach to this situation is cognitive-behavioral therapy which has proven helpful in eliminating harmful habits, an evolution of self-care and self-compassion [14,15]. Pharmacological therapy involves the use of antidepressants, hypnotics and sedatives, with benzodiazepines proving effective. In addition to those mentioned above, meditation, mindfulness-based cognitive therapy sessions, positive emotions and relaxation training are also indicated [16,17].

MATERIAL AND METHODS

To conduct the study, we disseminated an online questionnaire with a total of 22 single and multiple choice questions. The interval in which it could be completed was from March 13, 2024 to May 17, 2024.

The study included a total of 91 people, the selection criterion being the affiliation to the Faculty of Medicine of the "George Emil Palade" University of Medicine, Pharmacy, Science and Technology "George Emil Palade" in Târgu Mureș.

RESULTS

The predominant age of those who filled in the questionnaire is 24 years of age, 29.7% of them. The second highest percentage is 19.8% for 25 year olds, followed by 23 year olds (18.7%), then those over 25.

The response variants were structured into individual years in order to differentiate individuals according to their possible age in college due to the inclusion criterion of student status.

The final results reveal the female gender as predominant in a percentage of 59.3%, while men are only 40.7%.

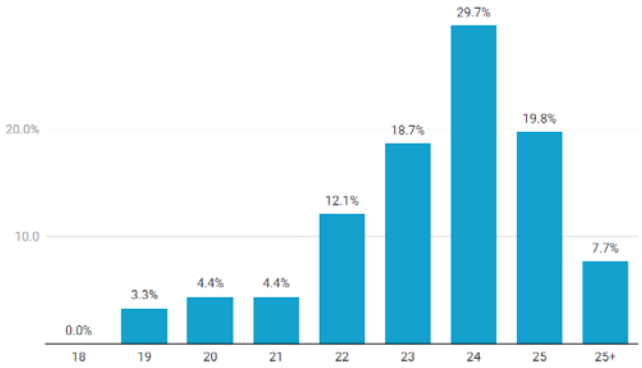

Figure 1. Distribution of responses by age

The prevalence of somatization is known to be higher among women than men.

Most of those who took part in the study are in the sixth year of university (41.8%), followed by the fifth year (35.2%), and the fourth year (8.8%), the first year (5.5%), and finally the third and second years are equal (4.4%).

Figure 2. Distribution of responses by academic year

80.2% of the participants reported the presence of symptoms of a disease, while 19.8% denied the presence of symptoms of a pathology.

The predominance of algic symptoms in a percentage of 54.9% are followed by gastrointestinal symptoms which are in a proportion of 45.1%. These two groups were the most representative symptom groups in the study being followed by the other groups that

had a much lower prevalence: sexual symptoms (25.3%), pseudoneurological symptoms (14.3%) and other symptom groups (18.7%).

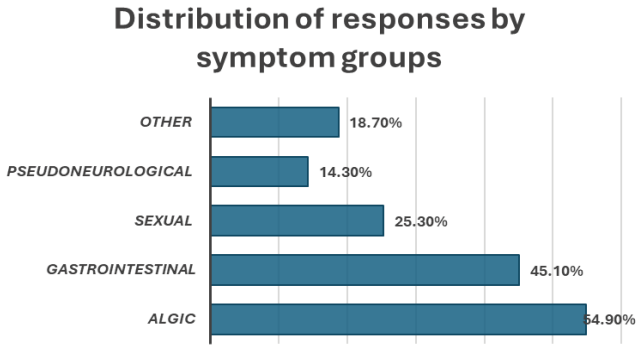

Figure 3. Distribution of responses by symptom groups

Of those with symptoms 72.5% used the internet to search for the symptoms they were experiencing in order to define a pathology they considered they were suffering from, and the other 27.5% did not use external sources for self-diagnosis. Due to the discomfort and stress induced by the symptoms almost three quarters of the study participants self-examined their body while 26.4% did not do so. Taking into account that the participants are medical students we assumed that having contact with various pathologies may be a cause of turning information into physical symptoms. 52.7% of them stated as the cause of the symptoms the disease studied in the faculty and the remaining 47.3% said no. In the end, the two answers are in similar proportions which cannot substantially confirm, but neither substantially disprove the hypothesis of the cause of symptoms in medical students, however, the balance is tipped more towards an endorsement of the hypothesis. Almost two thirds (62.6%) denied a dissatisfaction/ lack of confidence in the medical act for a diagnosis that encompasses the symptoms manifested, and 37.4% were not reconciled with the medical evaluation that was performed. Among those who disagreed with the medical act in view of their symptoms 43.6% had performed tests and investigations more than once, 41% had asked for the expertise of several doctors for their allegations, 15.4% had performed a prolonged treatment beyond the period prescribed by the attending physician, and 5.1% had used other medication without prescription in the hope of a different outcome. Dissatisfaction with the medical evaluation caused various negative feelings in patients. The feeling with the highest prevalence was insecurity with a percentage of 58.7%, followed by frustration with 41.3%, anxiety with 39.1%, fear with 23.9%, anger with 13%, injustice with 10.9% and disappointment with 2.2%.

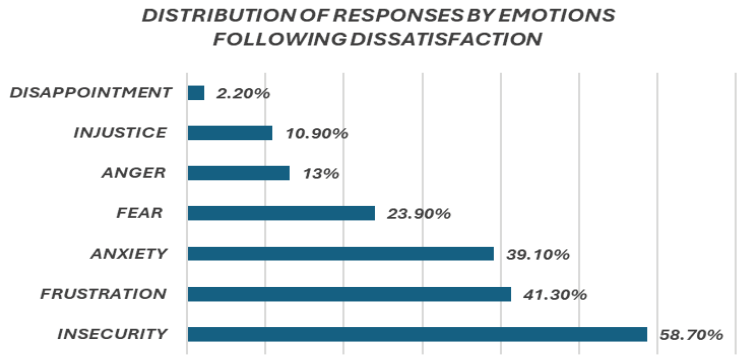

Figure 4. Distribution of responses by emotions following dissatisfaction

36.3% of those who filled in the questionnaire felt misunderstood by others around them, while 63.7% did not experience this problem.47.3% of those who filled in the questionnaire had difficulties in exposing their emotions to others, while the other 52.7% denied this. One third of the participants (36.3%) refused to believe that the symptoms they have are psychologically created, while the other two thirds, 64.7%, accepted that the symptoms are psychologically caused. Nearly three quarters (73.6%) of those surveyed had been stressed recently due to personal problems, while the remaining 26.4% had not experienced any significant stress recently. The main cause of stress among the people in the study was exams for 83.8% of them, followed by family problems with 30.9%, problems in intimate life with 29.4% and illness/ death in the family. To a lesser extent we have friendships, career orientation, degree and high number of responsibilities as causes of stress, all of them with 1.5% each.

Stress is known to be a precipitating factor in the onset of somatization because the person will turn their negative feelings and emotions into physical symptoms in the absence of a present pathology.

In order to estimate the stress level at that time, we proposed five variants for stress staging.

The level of stress during that period that had the highest prevalence was level 3 which had 37.4% of people, then level 4 had 30.8%, followed by level 2 with 18.7%, level 5 with 9.9% and level 1 with only 3.3%.

During the pandemic, 30.8% of participants experienced COVID19 specific symptoms19 in the absence of a positive test for the virus, and 69.2% did not. The main source of symptoms during the pandemic was considered to be isolation at home with 40.7%, followed in descending order by the internet (34.1%), family/friends/acquaintances (26.4%), social networking (18.7%), other respiratory pathology (2.2%), and finally college stress, sedentary lifestyle and congenital pathology each with 1.1%.

DISCUSSIONS

Somatization is the presence of physical symptoms that many patients report to the doctor who, following a clinical examination, laboratory tests and other investigations cannot find a pathological cause to explain their origin. This situation increases the patient's feelings of anxiety, frustration and insecurity, resulting in frequent changes of doctor, frequent tests and investigations and investigations, which turn out to be useless because of a negative unsatisfactory outcome and additional resources and costs.

Psychological stress has a noticeable effect on people and in some individuals it can translate into physical symptoms. Students are prone to significant stress due to exams, the sheer volume information, fear of failure, academic overload, competition between pressure to perform and lack of time allocated to learning.

The pandemic had a marked impact on the population through the stress caused by information about the COVID-19 virus, a newly emerging virus that highly infectious with person-to-person transmission and which untreated. The specific symptoms of this virus were emphasized so that all people showing symptoms would be tested as soon as possible and self-isolate. Isolation at home, social distancing, lifestyle, limitation of physical, recreational and social activities and fear of the virus or passing it on to loved ones have been at the root of anxiety, personal discomfort and somatization.

A total of 91 people participated in the study by completing an online questionnaire. The objective was to follow the frequency of somatization disorders in the students in the period following the COVID-19 pandemic. Following the results 80.2% of the participants presented symptoms of which algic symptoms were predominant, followed by those

gastrointestinal and sexual symptoms. About three quarters used the internet to self-diagnose themselves on the basis of symptoms and self-examined their bodies. The 37.4% who were dissatisfied with their medical care chose to change doctors frequently and have repeated tests and investigations. Feelings predominant feelings developed were insecurity, frustration, anxiety and fear. Of those involved in the study 73.6% reported stress due to exams, family problems, couple problems and people sick/deceased family members. During the pandemic the potential sources leading to somatization symptoms were isolation at home, the internet, social networking and family and friends.

The presence of somatic symptoms among students which are a result of the transformation of psychological stress gathered both from both the academic sphere and the pandemic experience.

CONCLUSIONS

Somatization disorders still remain under-diagnosed due to the lack of clinically relevant evidence for a diagnosis following clinical examination and investigations based on self-reported symptoms. An appropriate response is for the clinician to empathize with the patient, to understand the patient's problem, and to explain the real situation in a friendly manner. If the patient does not accept that his or her symptoms have a psychological source, regular short appointments can be made to give the patient a chance to express his or her newly-emerging symptoms without further investigation. This method can reduce these patients' habit of going from one doctor to another and of having unnecessary tests and investigations, while cutting costs.

The study found that students are susceptible to mainly moderate stress, which may underlie the onset and maintenance of somatic symptoms. Exams, family and marital problems are the predominant causes of stress encountered during their studies, together with the information that medical students have acquired about various pathologies, but which they have not yet mastered sufficiently to distinguish accurately.

The COVID-19 pandemic has had a considerable impact on the entire population by inducing high psychological stress and heightened everyone's attention to the specific symptoms of the coronavirus and the fear of becoming ill for oneself or one's loved ones. The main causes of the onset of somatic symptoms during the pandemic period were isolation at home, the internet, social networks and those around (family, friends, acquaintances) disseminating information about the symptoms, effects, spread and number of people infected with the new virus.

Conflicts of Interest

The authors declare no conflict of interest.

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