

The Tale of Medical Student Syndrome

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Abstract

Review Article

Health-related anxiety issues are common among medical students. One such entity is Medical Student Syndrome. As beginners into the study of various pathologies and diseases, medical students sometimes attribute undue attention to apparently trivial events and symptoms, which they would have otherwise previously neglected. Consequently they become apprehensive and often preoccupied with the thought of suffering from serious ailments. It has even been described as being analogous to a mild form of occupational illness by some authors. Apart from affecting the academic performance and clinical acumen of the budding doctor, the mere assumption of it being just a psychological construct could also adversely affect the health-care seeking behaviour of medical students. The present article intends to present a narrative review of the research done on this subject from 1960 onwards to the present day which would enhance our current understanding and implications of this condition.

Keywords: Medical student syndrome, Hypochondriasis, Somatic symptom Disorder, Illness Anxiety Disorder, health-related anxiety.

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INTRODUCTION

Medical studies, though one of the most sought-after and alluring career options for students across the globe, comes with its fair share of stress and anxiety issues. The common sources of stress as pointed out in various studies include vastness of the curriculum, lack of recreation, pressure of performance in examination, etc [1]. Health is also one such source of concern. Health-related anxiety issues are a fairly common finding among medical students [2]. The medical literature describes a very interesting pattern of health-related anxiety among the medical students which has often been called as the “medical student syndrome”. It refers to a condition where medical students develop fears or concerns relating to presence of symptoms of the diseases they are studying. Although there is little evidence to support that these actually warrant physician consultation [3], the associated perceived distress could definitely impair their quality of life and overall performance.

What is Medical Student Syndrome?

Medical Student Syndrome (MSS) may be described as a unique type of hypochondriasis which specifically causes health-anxiety related to the

diseases medical students study during their medical training [4]. Hypochondriasis is a state when a person is excessively and unduly worried about suffering from a serious illness, in the absence of an actual medical ailment or presence of mild symptoms. It is a somatoform disorder as per DSM-IV criteria [5]. The continuous worry translates into frequent visits to the physician and the doctor’s reassurance does not allay the fear of the person. Medical students scrupulously acquire knowledge about the body’s structure and functions in the pre-clinical subjects in the first year. They are then freshly exposed to the aberrations of the same in the para-clinical subjects and symptomatology and course of diseases in the clinical subjects and postings. In a trajectory similar to hypochondriasis, a significant chunk of them often attribute unwarranted attention and importance to apparently trivial symptoms that they sometimes develop and which they would have previously neglected or sometimes, even no symptoms at all. The affected students are then preoccupied with the misinterpretation of symptoms. This condition has also been termed as medical student’s disease, nosophobia, hypochondriasis of medical students, and medical studentitis [6, 7]. Colloquially, it also goes by the name second year syndrome, third year syndrome, etc. However, this

phenomenon usually does not translate into an actually increased number of consultations differentiating it from classical cases of hypochondriasis [7].

Genesis of Medical Student Syndrome

As per the latest DSM-5 criteria, there are two closely related entities of Somatic symptom and related disorders in context of the medical student syndrome: Somatic symptom Disorder (SSD) and Illness Anxiety Disorder (IAD) based on whether the subject is having significant symptoms or no symptoms respectively [8, 9]. In the former, the subject has distressing somatic symptoms (i.e. physical symptoms such as pain or discomfort) that cause excessive thoughts, anxiety, or concern about health. And it is distressing to such an extent that it usually results in significant disruption of the quality of daily life. In illness anxiety disorder, there is an excessive preoccupation about having a serious illness in the absence of actual medical condition [5]. The subject has excessive fear or anxiety over minor or inconsequential symptoms like e.g. fatigue occurring after muscle exertion or exercise, slight nausea or bloating after a meal normal bowel sounds which can sometimes be audible, normal amount of hair loss from the scalp, occasional giddiness or light-headedness. There is a constant tendency towards self-examination and self-diagnosis. Most of the affected individuals discredit lab or investigation reports when found to be normal and express considerable doubt or disbelief on reassurances provided by the treating physician to allay the unfounded fears. The essential difference in both of these entities is that of degree and there could be a certain degree of overlap [10]. Medical students could suffer from both these patterns. To use a metaphorical analogy, just as colours and forms capture the mental landscape of an artist, melody talks to the mind of a musician and machines talk to an engineer, similarly the human body beckons the mind of a doctor. Even the most subtle of changes in the human physiology have their own significance. The mind of a budding doctor is continuously charged with information about normal functioning of human body and its deviations in diseases. In lecture formats, medical students are taught about different aspects of diseases in details and in wards and clinical postings, they get to observe real-life scenarios of the same in the patients. It is this conditioning of the mind by repeated exposures that helps them to learn the things, develop an analytical approach and acquire skills. A mind which has been primed and conditioned to look for symptoms and analyse events in a clinical perspective could sometimes end up attributing excessive importance to minor things leading to anxiety. The high amount of stress interwoven in the medical lifestyle [11, 12] could further aggravate the process because stress disturbs the autonomic homeostasis and a consequent shifting of the equilibrium towards the activation of sympathetic nervous system [13]. Sympathetic activation is associated with a heightened state of alertness. In individuals with a susceptible cognitive framework, this

could transcend into different degrees of apprehension and eventually cascade into enhanced detection of bodily sensations, abnormally high awareness of bodily state, culminating into the syndrome. An article in *The Lancet*, describes this as a form of occupational illness² that is yet poorly characterised in medical literature.

Summary of Previous Work

Exhaustive research on the subject is still awaited. And there is a considerable spectrum of variation in the research available. The earliest work dates to the 1960s, where the prevalence of the condition was found to be between 70% and 80%. Hunter RCA *et al.*, in their study based on case records found that about 70% of medical students had groundless medical fears during training.⁶ In a second study, among 33 randomly chosen medical students from 1st year, 78.8% were observed to have medical student disease.⁷ Much of it however has been questioned and criticised by the intellectual community on the grounds of methodological issues like reliability on case records rather than interviews, over-generalization of symptoms and its emphasis on the number of visits to doctors rather than the nature of the complaints [14]. In a comparative study between 60 matched medical and law students, Kellner and colleagues found that medical students attended to their health symptoms more than law students but there was no significant difference in the rate of hypochondriasis [15]. Relatively recent works also show variations in prevalence. Howes *et al.*, in their study found that 70% of medical students had medical student syndrome [16], whereas Weck *et al.*, on the contrary, observed the prevalence of health anxiety to be only among 5-30 % among study participants [17]. In a study conducted among the medical students in Chattisgarh, India, the prevalence of Illness Anxiety Disorder and Somatic Symptom Disorder was found to be 0.084% and 2.77% respectively which combines to give a figure of 3.61% for prevalence of hypochondriasis [18]. Nearly similar figures were also reported by Yousef A Al-Turki *et al.*, among medical students [19]. Some authors have also made interesting observations about certain patterns of this condition. Students have been found to change their diagnosis depending on the clinical posting they were currently engaged in and the degree of knowledge they had on a particular disease or pathology. For example, a set of symptoms construed as schizophrenia during psychiatry posting was later “self-revised” to Meniere’s disease when the same student attended ENT posting [20]. Azuri *et al.*, in their study recorded that the dream content of pre-clinical medical students commonly had preponderance with illness of the heart, eyes and bowels [21]. Manore S *et al.*, in their study among medical students reported that females had a slightly higher preponderance as compared to their male counterparts with the difference being statistically significant. They also found that when the prevalence between different academic years was compared, the differences were non-significant [18].

Implications

There are three broad ramifications of the condition. The assumption that medical students would be suffering from this psychological construct in the absence of an illness, reasons being whatsoever, has the potential to adversely affect diagnosis in actual cases. It could have an undesirable bearing on the doctor-patient relationship when the patient is a medical student. From, the students' perspective, a feeling of abrogation and trivialization of the complaints by the treating physician on the premise of medical student syndrome, could well become an impediment to their help-seeking behaviour in health-related distress. The other scenario that could potentially occur is this benign condition becoming complicated when it is compounded by the malaise of "cyberchondria", which is a condition where people add up isolated symptoms and events like the pieces of a jigsaw puzzle from unauthenticated information available on the internet and arrive at an apparently alarming diagnosis. Such an unhealthy trend could lead to severe mental stress and turn it into a case of full-blown hypochondriasis [22]. Yet another effect of this condition is that it can seriously impact the academic performance, technical proficiency and decision-making abilities of a budding doctor.

CONCLUSION

Stress is ubiquitous in all aspects of medical training due to multiple reasons. In the presence of a certain priming effect when the students study about diseases and their symptoms, it wouldn't be unnatural for a student's thinking mind to become unusually aware of their own bodily functions and scan for similar instances in their lives. Consequently, they could sometimes end up attaching undue importance to these non-issues. Whether the problem is real or purely perceptual is still a matter of debate and scientific exploration, but instead of a rather dismissive outlook to it, we need reassurance and reasoning to deal with those suffering from it. Also since this health-related concern affects students from almost all academic years [18, 19], the casual use of terms such as second year syndrome, third year syndrome, etc is at best avoided.

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Conflicts of Interest: Nil

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