ORIGINAL ARTICLE

ASSESSMENT OF HYPOCHONDRIASIS IN MEDICAL AND DENTAL STUDENTS

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ABSTRACT

Background: Anxiety and depression are considered as an important mental health indicators in the community. Medical undergraduates face several emotional, mental and physical stresses during the academic years. Researches indicate that medical students experience a large amount of psychological pressure due to work required in a competitive environment, extreme working hours, examination stress, large amount of information to seek, lack of social life, responsibility of human welfare. Anxiety and depression ranks fourth as the leading cause of disability globally. Several studies suggest high prevalence depression and anxiety among medical students with distress levels consistently higher than general population. The objective was to assess the level of hypochondriasis among the medical and dental student from first year to final year.

Methodology: A cross sectional survey was conducted amongst the students of medical and dental college at Ziauddin University. The study included total 404 students from both disciplines, a pre-structured questionnaire "The Illness Altitude Scale- IAS" was given to the students after validation. SPSS version 17 was used for data analysis and p value >0.05 was considered significant.

Results: Of the total (n=450) 404 students completed the questionnaire. The average mean age was 22.05±2.6. Of the total (n=164) dental students, 10 students had mild, 83 moderate and 71 had severe hypochondriasis. Among (n=240) medical students, 13 had mild, 153 moderate and 74 had severe hypochondriasis.

Conclusion: These finding confirms the presence of hypochondriasis among the medical and dental undergraduate students, which increases from mild to severe from initial to final years.

Keywords: Hypochondriasis; Anxiety; Depression; Mental Health; Medical Students; Dental Students.

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INTRODUCTION

Anxiety and depression are fundamental mental and social health concerns that people face in their lifetime, making it a basic health concern in the society[1]. Anxiety can be considered as an abnormal state, having both emotional and functional symptoms like shiver, chest stiffness, sweating, tachycardia, and over activation occurring in the absence of an organic brain disease or a psychological issue. Whereas, depression is a mood disorder with a cluster of symptoms including mood swings, negative thinking, loss of interest, sleep and appetite, ideas of self-harm, guilt and slowness[2]. Being a student of the most stressful and a challenging degree program of all, several studies reported stress among medical undergraduates as they face several emotional, mental and physical stresses during the academic years[1,2]. Medical colleges symbolize a geographically different student population with different racial, social, cultural and educational backgrounds[3].

Researches point out that medical students experience a massive amount of psychological pressure due to work required in a competitive environment, extreme working hours, examination stress, large amount of information to seek, lack of social life, responsibility of human welfare and services and anxiety related to new clinical experiences[2,3].

It is generally believed that several medical students repeatedly develop fear and symptoms of illness relating to the diseases they are studying at the time. Moss-Morris considers it as a perceptual procedure where learning is believed to create plan which comprises the diseases label and its related symptoms[4]. The stress have an effect on symptom detection by means of improving physical sensations thru autonomic initiation, making human beings conscious about their bodily state, specifically enhancing pain after learning about a certain disease which do not necessarily point to an illness until now be perceived as extensive in context of the know-how[5,6]. A condition known as Hypochondriasis, a hypokonder experiences subjective physical symptoms that he misinterprets, he chooses the least and the most dangerous interpretation of a symptom ignoring the inconsistent ones[2, 4,7-9]. Hypochondrial concerns are thus characterized as apprehensions that are groundless; perceived due to unreal signs and symptoms or unjustified importance being placed on bodily sensations that do not clinically justify either medical attention or degree of anxiety that they have aggravated; they are now not in reality relieved following scientific reassurance[6].

Anxiety and depression positions fourth as the important source of inability all around the world and if the progression at the similar rate continues, it could turn into a second foremost reason for worldwide disease burden by 2020[2]. Several studies suggest high prevalence depression and anxiety among medical students with distress levels consistently higher than in general population and age-matched peers[10]. In the 1960s, two uncontrolled studies were made that supported the hypothesis that drug students have increased disease anxiety. The first in 1964 showed that 70% of medical 5students had baseless fear of illness during the course of the study. The second, in 1966 showed that nearly 80% of the first year medical students suffered from "medical student disease", a term that indicate that drug students should have higher degree of disease anxiety than others[8]. A study conducted in UK, psychiatric morbidity was once observed 16% cases, whereas prevalence rate of depression was found to be in range of 14-24%[11]. Similarly, in Turkish medical students, this prevalence was calculated to be 21.9%[12]. In some other study, 335 undergraduate Chinese medical students were assessed for depressive symptoms and almost half of them were discovered to be depressed with having 2% severe depression[13]. Anxiety and depression ranged from 44-70%in Pakistani studies, which are higher than those reported from other countries [3, 10, 14, 15] while US reported 19%[16], UK24%[11], New Zealand 13.7-16.9%[17] and Israel 29.4%[18].

It has additionally been reported that females are more prone to depression than males, variation is found in both gender regarding mental health. Woman being 41.9% as compared to males that only account for 29.3% in general population, as indicated by one research. The gender difference of neurotic disorder in clinical students is additionally supported by means of various different researches completed in different medical college in which females had a greater level of depression than males[2,13]. Other research also confirmed the threat of developing depression and nervousness is greater in females than males[14,19].

The objective of the study was to pertain the risk of developing health related anxiety and depression among the medical and dental students throughout their study course. Various factors are considered like year of study, age and gender during examining existing individual health and morbidity. The objective of the study was to assess the level of hypochondriasis among the medical and dental student from first year to final year.

METHODOLOGY

The Illness Attitude Scales (IAS), was developed by Kellner in 1986, is used to assess fears, beliefs, and attitudes linked with hypochondriasis and abnormal illness behavior[20,21]. As this study was not conducted on a local population, a pilot study was conducted to validate the questionnaire on a sample of 50 students and all ambiguities were rectified. A cross sectional survey was conducted amongst the students of medical and dental college at Ziauddin University. The survey included students from first to final year, both males and females in the discipline of Medicine and Dentistry. The total study participants (n=450) out of which 404 responded from both disciplines, 164 dental and 240 medical students. The total time period of study was from July- December 2017. The study was based on the criterion that they have spent at least 6 month in the medical/dental school to be familiar with the environment, its stressors and did not have any major exams or any physical illness in the past 3 months. Verbal consent was taken and a pre-structured questionnaire "The Illness Altitude Scale- IAS" was given to the participants. The sample was a convenience sample. Data analysis was done using SPSS-17 and was scored according to the year of study. Chi- Square test at 95% significance level was applied to determine the association of age, gender and year of study with the Illness Score. The sample size was calculated by using sample size calculator i.e., OpenEpi software, assuming prevalence of health related anxiety and hypochondrial concerns in medical students 50%, 95% confidence interval and a bound error of 5%.

RESULTS

The average mean age was 22.05±2.6. Of the total (n=404) among them 141(39.1%) were male and 263(60.9%) were female out of which 164 dental

students and 240 were from medicine. Figure 1 showed mild hypochondriasis in medical and dental student. Total n=240 medical students who had mild hypochondriasis were 13(5.4%) moderate hypochondriasis 153(64.8%) and 81(33.7%) severe. In dental students total n=164, 10(6.09%) showed mild, 83(33.7%) were moderate and 71(43.2%) were suffering from severe hypochondriasis. Moderate hypochondriasis was found more in medical students 153(64.8%) as compare to dental students 83(35.5%). However, severe hypochondriasis was seen more in dental students 71(43.2%) as compared to medical students 81(33.7%).

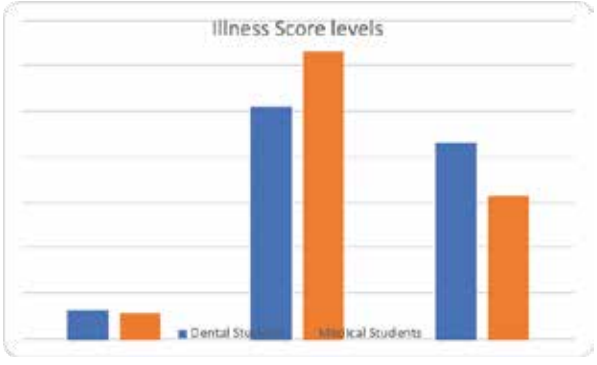

Figure 1: Illness Score Levels among the Medical and Dental Students.

In the medical year of study as shown in Figure 2A (n=240), first year (n=50) showed 6(12%) mild, 26(52%) moderate and 18(36%) severe. Second year (n=51), 2(3.9%) showed mild, 22(43.1%) moderate and 27(52.9%) severe. Third year (n=58), 4(6.9%) mild, 37(63.8%) moderate and 17(29.3%) severe. Fourth year (n=23) only, 1(4.3%) showed mild, 15(65.2%) moderate and 7(30.4%) severe. Final year (n=58) reported no mild, 53(91.4%) moderate and 5(8.6%) severe hypochondrial cases.

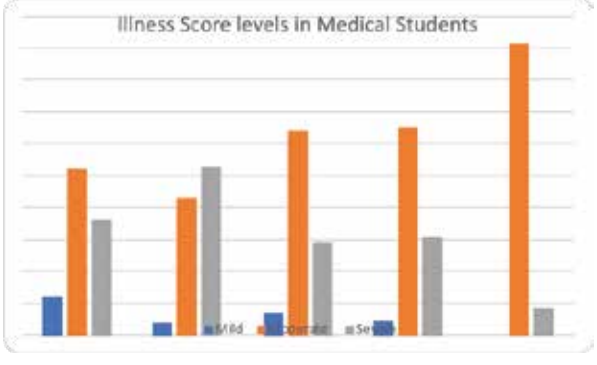

Figure 2A: Illness Score Level According to the year of study in Medical Profession.

According to the dental year of study as shown in Figure 2B (n=164), first year students (n=41) showed mild hypochondriasis 3(7.3%), 17(41.5%) moderate and 21(51.2%) severe. Students in second year (n=41) reported, 4(9.8%) mild, 25(61%) moderate and 12(29.3%) severe hypochondriasis. Third years (n=38) reported 3(7.9%) mild, 23(60.5%) moderate and 12(31.6%) severe, whereas in the final year (n=44) of study, no mild hypochondriasis was seen, whereas 18(40.9%) and 26(59.1%) reported moderate and severe hypochondriasis respectively.

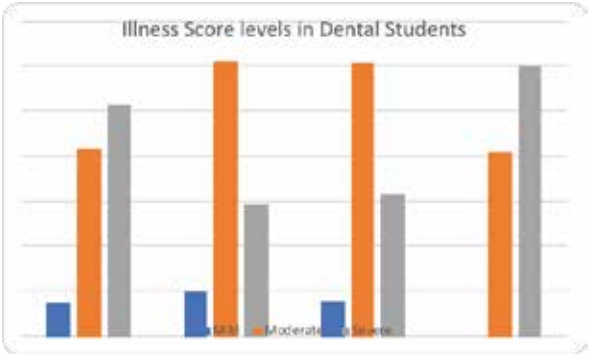

Figure 2B: Illness Score Level According to the year of study in Dental Profession.

In both study groups, students of final year in medical 58(24.1%) and dental students 44(26.8%) were more hypochondriac as compared to 1st year medical and dental students. Age and year of study were associated with hypochondriases, which are mentioned in Table 1. Hypochondriasis was significantly associated with age (p=0.004) and year of study (p=0.000). However, our study failed to support the relationship of gender with hypochondriasis (p=0.468).

Table 1: Characteristics of the Study Population.

Variables	Frequency (n=404)		%	
Age (in Years)		**Mild**	**Moderate**	**Severe**
≤20	138	7	47	46
≥20	266	6	64	30
Gender				
Male	141	7	60	33
Female	263	5	57	38
Dental Students				
BDS 1st Year	41	7.3	41.5	51.2
BDS 2nd Year	41	9.8	61	29.2
BDS 3rd Year	38	7.9	60.5	31.6
BDS 4th Year	44	0	40.9	59.9
Medical Students				
MBBS 1st Year	50	12	52	36
MBBS 2nd Year	51	3.9	43.1	52.9
MBBS 3rd Year	58	6.9	63.8	29.3
MBBS 4th Year	23	4.3	65.2	30.4
MBBS 5th Year	58	0	91.4	8.6

DISCUSSION

The psychological well-being of undergrad medical students has always been an important issue to numerous studies and our research is also focused on the same issue. The mean age of students in this study was 22±2.6, representing younger population. In both groups positive association was found between age and hypochondriasis among medical and dental undergrads (p=0.000) as does the studies by Morris et al. and Azuri et al. where age is thought to play a potential role in manifestation of hypochondriasis[4,5]. Our study highlighted that out of total (n=404), medical students 240 (59.4%) were subjected to more anxiety as compared to dental 164 (40.6%) due to increase coursework, numerous diseases to know and learn about, long clinical hours as compared to dental[1,2]. In both groups, medical (n= 240) and dental (n=164), final year students reported greater level of hypochondriasisas compared to the previous years because of increased work and knowledge burden, patient-doctor interaction and clinical duty hours (p =0.000)[5,10,15]. However, some of the studies showed that medical students have little or no hypochondriasis level[22,23]. Higher levels were found in the initial years of medical college[1,2] when students are introduced to illnesses as examples of concepts presented in basic sciences[3]. Talaei et al. also found high prevalence of hypochondriasis symptoms in students with lack or inaccurate medical information[24], as opposed to our study. In conflict to our results, some studies suggest that students in the last years of their medical school have developed more knowledge-based thinking of the symptoms of disease hence, more likely to overcome and look past the anxiety they feel related to it[6,8,10].

Higher Hypochondriasis levels were found in females as compared to males which has been supported by different research studies[10,13,15] females are more anxious than males[16]. They believe that stress is uncontrollable and must be evaded because of metacognition. There is a connection between health anxiety and metacognitive opinions about stress, in light of the fact that it is progressively predominant in females. It suggests that if an individual imagines that stress is uncontrollable, then they were more likely influenced by health and social nervousness. Hence, Females are more anxious than males believing that stress is uncontrollable[24,25]. However, our research failed to support the association of gender with the illness score (p= 0.468). Pooja et al. regarded the gender-neutral environment and increased proportion of females and equal stressors being directed towards both gender to contribute to the similar findings as our[2,6,8].

In accordance to our study and others held globally, showed significant changes in anxiety and depression, which should be addressed. However, some researchers suggested that students who are suffering from anxiety and depression seek medical opinion from a physician and require multiple consultations, unnecessary medical examination and investigations burdening the healthcare system[5, 26].

Health related anxiety is a global health concern hence it should be addressed. More studies should be conducted to evaluate the major issue behind the medical related anxiety and its related consequences in the form of any disability, addiction or any effects on the quality of life. Medical course should be designed in such a way that makes stress manageable. Awareness sessions, peer group sessions should be conducted to counteract such ideas and fears among the undergraduates with the addition of student counselors at the campus. Co-curricular activities should be introduced to make campus life interactive and enjoyable. It is imperative for the clinicians and students to know about the condition and its coping mechanism to effectively combat the condition

CONCLUSION

Our study confirmed the presence of hypochondriasis among the medical and dental undergraduate students, which increases from mild in initial years to severe in the final years of the program.

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CONFLICT OF INTEREST

The authors do not have any financial interest or any conflict of interest.

ETHICS APPROVAL

As per international standard or university standard, student's written consent has been collected and preserved by the author(s).

AUTHORS CONTRIBUTION

This work was carried out in collaboration among all authors. Mahnoor Moiz and Khizra Rehman designed the study, wrote the first draft of the manuscript. Saima Akram Butt and Sanam Tauheed wrote the protocol and statistical analysis. Mahnoor Moiz Khan, Khizra Rehman and Waqas Khan Jadoon managed the data collection and analysis of the study. Shoaib Khan and Madiha Pirvani managed the literature searches and References. Shoaib Khan revised the first draft. All authors read and approved the final manuscript.

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