

Research Paper

Rising Concerns among Healthcare Students of South Asian Countries- A Study on Cyberchondriasis, Medical Student Disease, and Health Anxiety between MBBS and M.Sc. Clinical Psychology Students

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ABSTRACT

The internet provides a wide variety of knowledge on a broad spectrum of information including lifestyle and health services. Self-diagnosis, particularly the diagnosis of mental health disorders has become very common with escalated use of social media. With limited knowledge and coping skills, healthcare students in their initial days of exposure to clinical knowledge of psychopathology and psychiatry are likely to have health anxiety. Subject matters such as Cyberchondriasis, Health Anxiety, and Medical Students' Syndrome and Self Diagnosis are important concerns for healthcare sector professionals and educators to tackle the complications faced by students. The current study aimed to explore the prevalence of Cyberchondriasis, Medical Student Disease, and Health Anxiety among healthcare students specialising in the fields of MBBS, and M.Sc. in Clinical Psychology in South Asian Countries. A cross-sectional study was conducted on 202 South Asian (India and Bangladesh) healthcare students specialising in MBBS (N=101) and M.Sc. Clinical Psychology (N=101) who are exposed to subjects namely Psychopathology and Psychiatry. The tools were selected based on their relevance to the set aim of the study which included the Cyberchondria Severity Scale (CSS-12), The Medical Student's Disease (MSD) Perception Scale and Distress Scale, and the Short Health Anxiety Inventory- 18 (SHAI-18). In addition, the medical history of the past six months was also taken into consideration. Descriptive Statistics (means and SD), One-way ANOVA, and Pearson's Correlation were employed. The results showed that Cyberchondriasis was prevalent at a moderate rate among healthcare students (90.5% scored moderate and 2.97% scored high on the CSS-12 Scale), 26.73% had significant Health Anxiety, and significant difference were found in the level of Medical Student's Disease (Perception & Distress Dimension), and Health Anxiety between the criterion groups. The result also indicated a significant positive relationship between Health Anxiety and Cyberchondriasis, Medical Student's Disease (Perception & Distress Dimension), and clinical history of the past six months.

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Keywords: *Cyberchondriasis, Medical Student's Disease, Health Anxiety, Self-diagnosis, Internet*

The internet and fast-developing technology have begun to impact our everyday functioning to the extent that it has become impossible to imagine life without such advancement. There are 692 million internet users in India as of 2023. India had 467 million social media users as of January 2023, equating to 32.8 percent of the total population. With the growing advancement, it has developed into a significant and important source of health-related knowledge. Likewise, searching for health-related information has become very common with escalated use of social media. Frequent searches for such information on the internet may aggravate health anxiety, which is not an exception for the students who are pursuing MBBS and Clinical Psychology as they are exposed to an enormous amount of clinical knowledge of diseases and disorders, unlike other fields of specialization. Students rely on immediately accessible information found on the internet instead of books, leading to misinterpretation of their perceived symptoms as evidence.

The term Cyberchondriasis is the amalgamation of two words- Cyber and hypochondriasis, meaning an excessive or frequent search for health-related information on the internet as a result of fear of having or developing a certain illness. It is a phenomenon driven by health-related distress or anxiety which further intensifies such anxiety or distress upon internet reviews. It is the utilization of the web as an indicative strategy of diagnosis, where queries and doubts describing symptoms are entered and results displayed are interpreted as diagnostic conclusions. Cyberchondria has a multidimensional construct which is suggested by the fact that it reflects both compulsiveness and anxiety.

Health anxiety is somewhat parallel to the DSM-5 diagnosis criteria of Illness anxiety disorder, previously known as hypochondriasis. People with illness anxiety disorder look for signs of illness in themselves, experience high levels of health anxiety, and have worries that are not dispelled by reassurance or negative test results. It is relatively common in people and often unreported, unlike other anxiety disorders.

Morris & Petrie defined Medical Student's Disease as “the process of matching one's symptoms or bodily sensations to known disease labels” (Moss-Morris & Petrie, 2001). Clinical knowledge affects the perception of symptoms and signs through illness beliefs that arise from the topics they study, leading to ‘selective attention’ to specific bodily sensations, symptoms, and signs (Janssens T et al. 2009). To accurately diagnose patients, it takes many years of focused study. Thus, students who are exposed to vast clinical knowledge in their early years of education might fall prey to the habit of self-diagnosis when enough precautions and interventions are not provided to differentiate between having fully developed an illness or disorder or having simply a few characteristics that look or feel alike.

Need for the study

The internet provides a wide variety of knowledge on a broad spectrum of information including lifestyle and health services. This increases the likelihood that the user might be exposed to a dilemma, with very wide information that is confusing, conflicting, or even unreliable inducing fear and worry. Excessive and increased disease-related fear and symptoms shown by students, the tendency of self-diagnosis or exaggeration of small symptoms especially by healthcare students pursuing MBBS and M.Sc. Clinical Psychology

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can lead to the development of Medical Student's Disease or Intern's syndrome. In accordance with the prevailing problems, this study aims to analyse Cyberchondriasis, Medical Student Disease, and Health Anxiety among healthcare students specialising in the fields of Bachelor of Medicine and Bachelor of Surgery, and Master of Science in Clinical Psychology.

REVIEW OF LITERATURE

Cyberchondriasis

Santi, N. & Sahoo, J. (2023) carried a research to ascertain the extent of cyberchondria in medical students using the cyberchondria severity scale-15 (CSS) which has 5 measurable domains. The sample included 763 undergraduate and postgraduate medical students among which 732 (95.94%) participants completed the survey. 95.36% of the total sample was affected by excessiveness (a domain of the CSS), 86.48% was affected by compulsion, 58.61% by distress, 41.94% was affected by reassurance, and 25.41% of the total sample was affected by mistrust of a medical professional. The result concluded that at least one category of cyberchondria was present in all research participants, which exacerbated their anxiety.

Medical Student's Syndrome/ Disease

Ngo-Thi et al. (2021) have studied Medical Student Syndrome among Vietnamese psychology students undertaking courses in clinical psychology and psychotherapy. The questionnaires used for the study include the 5-item Medical Students' Disease Perception Scale, the 5-item, Medical Students' Disease Distress Scale, and the Health Anxiety Questionnaire. The results showed that the students pursuing more than one clinical course were more likely to have an increase in their level of distress. In addition, the results indicated that Medical Students Syndrome and health anxiety were significantly and positively correlated.

Health Anxiety

Androniki Papadopoulou et al. (2021) have done research on the Increased Frequency of Health Anxiety among Health Science Students. The population sample of this cross-sectional study included 561 health-science students and 204 non-health-science students from Greece. Students' health anxiety was assessed by employing the 14-item Short Health Anxiety Inventory (SHAI). Results showed health anxiety was prevalent in 18.1% of the total population while 8.3% of the participants experienced clinical health anxiety (SHAI score >18). Students majoring in health science scored higher in SHAI as compared to non-health science students.

Self-Diagnosis

Aaiz Ahmed and Stephen S. (2017) have researched on Self-Diagnosis among Psychology Students. They used an extensive qualitative exploration to examine how, why, and how often final-year undergraduate psychology students self-diagnose, as well as the effects this has on their lives. The result indicated that students self-diagnose based on past experiences, psychological knowledge acquired in academic settings, and self-reflection. Schematic thinking was one factor that contributed to self-diagnosis, and it had both good and negative cognitive, emotional, and behavioural impacts.

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METHODOLOGY

Objective

- To compare health-care students pursuing MBBS and M.Sc. Clinical psychology on the level of Cyberchondriasis, Medical Student’s Disease, and Health Anxiety.
- To study the relationship between Cyberchondriasis, Medical Student’s Disease, Health Anxiety, and Clinical history of medical visits in the last six months among healthcare students pursuing MBBS and M.Sc. Clinical psychology.
- To study if the level of Health Anxiety will have any effect on the level of Cyberchondriasis, Medical Student’s Syndrome, and Clinical history of medical visits in the last six months among healthcare students pursuing MBBS and M.Sc. Clinical psychology.

Hypotheses

- There would be no significant difference in the level of Cyberchondriasis between healthcare students pursuing MBBS and M.Sc. Clinical Psychology.
- There would be no significant difference in the level of Medical Student’s Disease (Perception and Distress) between healthcare students pursuing MBBS and M.Sc. Clinical Psychology.
- There would be no significant difference in the level of Health Anxiety between healthcare students pursuing MBBS and M.Sc. Clinical Psychology.
- There would be no significant relationship between Health Anxiety, Cyberchondriasis, Medical Student’s Disease, and Clinical History in the last six months between healthcare students pursuing MBBS and M.Sc. Clinical psychology.

Sample Selected

The sample comprises 202 participants from two specialised fields of education of healthcare namely, (N=101) MBBS students (3rd and 4th Year) and (N=101) M.Sc. Clinical Psychology students (3rd and 4th Semester) who are exposed to subjects namely Psychopathology and Psychiatry. The sample varies in qualification and the Clinical history of medical visits in the last six months

Tools used

The following tools were employed for the present study. The tools were selected based on their relevance to the set aim of the study.

12-item Cyberchondria Severity Scale (CSS-12)

Subscales of CSS-12 Scale

Subscales	Explanation	Items
Excessiveness	Surge or increase in the nature of online searches	1,3,6.
Distress	Anxiety or distress because of the online searches	4,8,9.
Reassurance	Searches driving individuals to seek out professional advice from a physician	5,11,12.
Compulsion	Web or online searches that interfere with other and different aspects of life	2,7,10.

The Medical Student’s Disease (MSD) Perception and Distress Scale
Short Health Anxiety Inventory- 18 (SHAI-18)

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Data analysis

IBM SPSS version 29.0.1.0 was used to analyse and calculate the data. Descriptive Statistics- Means of both the criterion group was computed and presented through a line graph. Inferential Statistics- One-way ANOVA was used to determine whether significant differences exist among the selected variables between the criterion groups. Correlation- Pearson's Correlation was employed to determine the relationship between Cyberchondriasis, Medical Student's Disease, Health Anxiety, and Clinical history of medical visits in the last six months.

RESULT AND DISCUSSION

Descriptive Analysis

Table 1: Descriptive group statistics of MBBS Students and M.Sc. Clinical Psychology Students on Cyberchondriasis, Medical Student's Disease (Perception & Distress), Health Anxiety, and the Clinical history of medical visits in the last six months.

Descriptive Group Statistics

	Field of Specialization	N	Mean	Std. Deviation	Std. Error Mean	
Cyberchondriasis	MBBS Students	101	28.09	9.128	.908	
	M.Sc. Clinical Psychology Students	101	26.33	8.439	.840	
	Total	202	27.21	8.813	.620	
	MSD- Perception	MBBS Students	101	6.97	3.656	.364
MSD- Distress	M.Sc. Clinical Psychology Students	101	4.89	3.280	.326	
	Total	202	4.89	3.280	.255	
	MSD- Distress	MBBS Students	101	6.02	4.133	.411
	M.Sc. Clinical Psychology Students	101	3.79	3.272	.326	
Health Anxiety	Total	202	4.91	3.882	.273	
	Health Anxiety	MBBS Students	101	16.15	6.664	.663
	M.Sc. Clinical Psychology Students	101	12.46	5.714	.569	
	Total	202	14.30	6.463	.455	
Clinical history of medical visits in the last six months	MBBS Students	101	1.07	1.699	.169	
	M.Sc. Clinical Psychology Students	101	1.62	2.092	.208	
	Total	202	1.34	1.945	.143	

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Differential Analysis

Table 2: Comparison between MBBS Students and M.Sc. Clinical Psychology Students on Cyberchondriasis, Medical Student Disease (Perception & Distress), Health Anxiety, and Clinical history of last six months.

ANOVA		Sum of Square	df	Mean Sq.	F	Sig.	
Cyberchondriasis	Between groups	156.85	1	156.85	2.030	.156	
	Within groups	15454.42	200	77.27			
	Total	15611.27	201				
Medical's Student	MSD- Perception	Between groups	218.32	1	218.32	18.097	<.001
		Within groups	2412.71	200	12.06		
		Total	2631.03	201			
	MSD- Distress	Between groups	250.62	1	250.62	18.039	<.001
		Within groups	2778.60	200	13.893		
		Total	3029.21	201			
Health Anxiety	Between groups	688.76	1	688.76	17.876	<.001	

Hypothesis 1: There would be no significant difference in the psychological construct of Cyberchondriasis between healthcare students pursuing MBBS and M.Sc. Clinical Psychology.

According to Table 2 of ANOVA, the statistics show no significant difference between healthcare students pursuing MBBS and M.Sc. Clinical Psychology on the psychological construct of Cyberchondriasis at a significance level of 0.05. With $p > 0.05$, we retain the null hypothesis stating there would be no significant difference in the psychological construct of Cyberchondriasis between healthcare students pursuing MBBS and M.Sc. Clinical Psychology. However, Cyberchondriasis is moderately prevalent among healthcare students.

Hypothesis 2: There would be no significant difference in the psychological construct of the Medical Student's Disease (Perception & Distress dimension) between healthcare students pursuing MBBS and M.Sc. Clinical Psychology.

According to Table 2 of ANOVA, the statistics show a significant difference at 0.05 level between healthcare students pursuing MBBS and M.Sc. Clinical Psychology on the psychological construct of Medical Student's Disease (Perception & Distress dimension). As the present study's finding demonstrates a significant difference; we reject the null hypothesis and accept the alternate hypothesis.

Hypothesis 3: There would be no significant difference in the psychological construct of Health Anxiety between healthcare students pursuing MBBS and M.Sc. Clinical Psychology.

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With respect to Table 2 of ANOVA, the statistics showed a significant difference at 0.05 level between healthcare students pursuing MBBS and M.Sc. Clinical Psychology on the psychological construct of Health Anxiety rejecting the null hypothesis. In addition, with regard to the prevalence rate of Health Anxiety among 202 healthcare students, the current study shows that 26.73% have significant Health Anxiety. Various factors that may impact this difference include a lack of understanding of the medical problems, association between exposure, experience, and competence as well as excessive academic pressure during their clinical years.

Table 3: Relationship between the psychological construct of Cyberchondriasis, Medical Student Disease (Perception & Distress), Health Anxiety, and the Clinical history of medical visits in the last six months among healthcare students pursuing MBBS and M.Sc. Clinical Psychology

Pearson Correlations

		Health Anxiety	Cyberchondriasis	MSD- Perception	MSD- Distress	Clinical history of medical visits in the last six months
Health Anxiety	Pearson Correlation	1	.48**	.48**	.62**	.20**
	Sig. (2-tailed)		<.001	<.001	<.001	.004
	N		202	202	202	202
Cyberchondriasis	Pearson Correlation		1	.55**	.52**	.11
	Sig. (2-tailed)			<.001	<.001	.131
	N			202	202	202
MSD- Perception	Pearson Correlation			1	.70**	.01
	Sig. (2-tailed)				<.001	.905
	N				202	202
MSD- Distress	Pearson Correlation				1	.03
	Sig. (2-tailed)					.647
	N					202
Clinical history of medical visits in the last six months	Pearson Correlation					1
	Sig. (2-tailed)					
	N					

Hypothesis 4: There would be no significant relationship among psychological constructs of Health Anxiety, Cyberchondriasis, Medical Student’s Disease, and Medical History in the last six months between healthcare students pursuing MBBS and M.Sc. Clinical psychology. Table 3 of Pearson Correlation reflects that the statistics show a significant positive relationship between Health Anxiety, Cyberchondriasis, MSD- Perception dimension, MSD- Distress dimension, and the Clinical history of medical visits in the last six months. As a result, we reject the null hypothesis and accept the alternate hypothesis indicating a significant relationship between the mentioned psychological constructs. The result indicates

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that the higher the level of Health Anxiety among healthcare students, the higher the level of Cyberchondriasis, Medical Student's Disease (Perception & Distress), and the higher the clinical history of medical visits in the last six months. We may infer that people who are concerned about their health are more likely to utilise the Internet to find health-related information that is reassuring.

SUMMARY AND CONCLUSION

The findings of the current study are relevant for healthcare professionals and students for a better understanding of their implications. Subject matters such as Cyberchondriasis and Medical Student's Disease have not been researched well as they do not fit into any criteria given in DSM-5 TR or ICD-11. However, these subject matters need to be addressed to reduce their effects on healthcare students. These are important concerns that need to be addressed by healthcare professionals and educators and require attention to tackle the complications for building a resilient and self-reliant fraternity of the healthcare organisation.

Health experts should be involved in the development, distribution, and assessment of web-based health and medical information. Addressing the dearth of research on the occurrence of Cyberchondria and Medical Student's Disease will allow for empirical evaluation of the condition's scope and character. To tackle the problem and risk of self-diagnosis, it is advised that the healthcare institution curriculum include discussions on self-diagnosis and emerging health issues like Cyberchondria. Measures must be taken for assessment, prevention, and treatment because Cyberchondria and MSD are more recent kinds of health concerns.

It can be concluded that Health Anxiety, Cyberchondriasis, Medical Student's Disease (Perception & Distress), and the Clinical history of medical visits are correlated and have the capacity to spike other concerns related to health. The current findings provide evidence that levels of Health Anxiety have predictive power on Cyberchondriasis and the Clinical history of medical visits.

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Conflict of Interest

The author(s) declared no conflict of interest.

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