



## PREVALENCE OF CYBERCHONDRIA AMONG UNIVERSITY STUDENTS: A SURVEY STUDY

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### Abstract

Cyberchondria is a multi-faceted phenomenon characterized by and increased concern for one's health, resulting from an intense examination of online health information. It primarily included two cognitive- emotional dimensions: excessive behavior and heightened anxiety. This study aimed at determining the prevalence of cyberchondria among university students. The data was collected via self-administered questionnaire designed for the purpose and Cyberchondria Severity Scale (CSS) produced using google forms. Cyberchondria must be seen as a serious public health concern among university students. Since it is associated with distress and worry, measures need to be adopted to evaluate, prevent, and treat it at the population level.

**Keywords:** Cyberchondria, Health anxiety, Prevalence, Cyberchondria Severity Scale

### 1. Introduction

Digital advancement has made it more common for people to seek health-related information via the internet. Regularly looking for medical information online is a typical behaviour in daily life, but some dispositional attributes may encourage the development of numerous dysfunctional and disrupted online information-seeking behaviours (1). Cyberchondria is also considered one of the unusual behaviour patterns (12). Cyberchondria is considered an emerging challenge associated with an use of internet for health-related information (5).

Cyberchondria is a multi-faceted phenomenon characterized by and increased concern for one's health, resulting from an intense examination of online health information. It primarily included two cognitive- emotional dimensions: excessive behavior and heightened anxiety. The phenomenon denotes a distress and problematic behaviour rather than a diagnostic entity (9). Cognitive-behavioural paradigm of cyberchondria states that the majority of individuals with this condition suffer from health anxiety because of their need for reassurance, individual seeks the internet excessively for information about health (1).

Cyberchondria has five dimensions; "**excessiveness**" as a first dimension refers to a pattern of searches brought on by worry and anxiety over compulsively looking up medical information (1). The second dimension is "**distress**" which describes the degree of severe worry and anxiety brought up by seeking health information online (1). The third dimension "**compulsion**" refers to the degree of anxiety/worry brought on by searching for health information online which in turn reduces time and inhibits individuals from participating in both offline and online channels (9). The fourth dimension "**reassurance**" is defined as the level of worry and anxiousness that prompts a person to visit a doctor to confirm the accuracy of details acquired from the internet (1). "**Mistrust of medical professionals**" is the final dimension which shows how looking for healthcare information online can make people sceptical of expert health advice (5). Due to the content or information received people have a tendency to experience certain problems, including, health-related anxiety, distress and depression (10).

Despite providing medical information through easy-to-understand diagnosis web sites makes it possible for non-health professionals to better understand health conditions and diseases and to present logical explanations for their symptoms,



Internet has the potential to increase anxiety of people with little or no medical knowledge, particularly when used as a diagnostic tool (1).

In recent years, more and more young individuals have expressed their health concerns via the internet (1). The current study was planned to investigate the prevalence of cyberchondria among university students and to analyze their self-diagnostic behaviours.

**2. Materials and Methods**

This study was a survey study. The questionnaire included Informed Consent for the Voluntary participation of the students. Ethical clearance was obtained from the Institutional Ethics Committee, Reference number SGGSWU/IEC/2025/52. The study was conducted among university students in Fatehgarh Sahib, Punjab, India. Both male and female, aged 18-25 years of age were included in the study. Data was collected using a self-administered (Table 1) CSS-15, English-translated German questionnaire (Table 1) (14).

The questionnaire had five constructs, i.e., compulsion, distress, excessiveness, reassurance and mistrust of medical professional. Each construct was represented by three questions. Each question had five options (Never, Rarely, Sometimes, Usually and always).

All the constructs were scored from ranges 0 to 4 but only the last construct i.e., mistrust of medical professional was scored from 4 to 0. Each construct has score ranging from 0 to 12. For the first four domains, the scores were interpreted as follows:

1. Score 0- Not affected
2. Score 1-6- Moderately affected
3. Score 7-12- Severely affected

This order was reversed for the mistrust of medical professional domain.

**Table 1: Cyberchondria Severity Scale (CSS-15) Questionnaire (14)**

S.no	Questions
1.	If I notice an unexplained bodily symptoms I will search for it on the internet.
2.	I am looking for the same symptoms on the internet.
3.	The internet search for information about symptoms or suspected disease disturbs the search for other online information (e.g. my work, studies or school).
4.	The internet search for information about symptoms or suspected diseases disrupts my online leisure activities (e.g. streaming movies).
5.	I attach more importance to my doctors assessment than my online research.
6.	I get panicked when I read online that a symptom that I have is rare or serious condition.
7.	The internet search for information about symptoms or suspected disease disrupts my work on the computer (e.g. writing mails, working on documents or calculations).
8.	I discuss the results of my online research with my family doctor or pharmacist.
9.	After looking for information about symptoms or suspected disease, I feel more anxious and stressed than before.
10.	The internet search information about symptoms or suspected disease leads me to a specialist.
11.	It soothes me to discuss the online information about suspected disease with my family doctor.
12.	I trust the diagnosis of my home doctor than my own online self-diagnosis.
13.	When I search for symptoms or disease online, I visit both trustworthy sites and/or lay forums.
14.	After looking for information about symptoms or suspected disease, I have difficulty falling asleep.
15.	If my house doctor considers the results of my own online research to be wrong, I stop worrying about it.



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### 3. Results

Out of 326 students, 206 (63.2%) were female and 119 (36.5%) were male. The overall mean age was  $20.21 \pm 1.89$  years. The demographic characteristics of the respondents are shown in Table 1. Most of the participants were from medical background 144 (44.2%), those who were anxious about medical condition were 216 (66.3%) and those who were most knowledgeable about resources for self-diagnosis were the ones familiar with the internet 168 (51.5%).

Headache was the commonest symptom they used for self-diagnosis 114 (35.0%). The primary source they consulted for self-diagnosis was their family doctor 165 (50.6%).

Table 2 presents the distribution of the respondents across the four constructs and subgroups. The data indicates that all the participants experienced moderate effects from the Compulsive, Distress and Excessiveness constructs, with the percentages of 54.29%, 57.6% and 58.58%, respectively. In contrast, the Reassurance construct had a severe impact on all the participants, with a percentage of 69.63%. Additionally, within the Mistrust of Medical Professionals construct, 44.78% of participants reported moderate effects. Overall, the Reassurance construct was the most significantly affected.

**Table 3 presents the Prevalence of Cyberchondria among both Male and Female.**

The prevalence of cyberchondria among university students was found to be 90.49%.



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<b>DEMOGRAPHIC VARIABLES</b>	<b>n</b>	<b>%</b>
<b>Gender</b>		
Male	120	36.8%
Female	206	63.2%
<b>Field of study of respondents</b>		
B.A	64	19.6%
B.ca	7	2.1%
B.com	13	4.0%
B.P.E.D	11	3.4%
B.Tech	28	8.6%
BA B.ED	6	1.8%
BBA	5	1.5%
BPT	144	44.2%
Bsc Agriculture	14	4.3%
Law	31	9.5%
M.P.E.D	3	0.9%
<b>Anxious about medical condition</b>		
No	110	33.7%
Yes	216	66.3%
<b>Resources most familiar with for self- diagnose</b>		
Chatgpt	1	0.3%
Doctor	5	1.5%
Family Members	107	32.8%
Friends	19	5.8%
Internet	168	51.5%
Newspaper	25	7.7%
None	1	0.3%
<b>Common symptoms used to self- diagnose</b>		
Body pain	48	14.7%
Constipation/Diarrhoea	3	0.9%
Cough and Cold	24	7.4%
Fatigue	13	4.0%
Fever	44	13.5%
Genital issues	7	2.1%
Headache	114	35.0%
Heart burn	7	2.1%
Stomach pain	39	12.0%
Other	27	8.3%
<b>Sites referred to self- diagnose</b>		
Everyday Health	37	11.3%
Family Doctor	165	50.6%
Health Direct	15	4.6%
Isabel Healthcare	9	2.8%
Mayo clinic	26	8.0%
Medicinenet	6	1.8%
NHS UK	10	3.1%
Patient Info	14	4.3%
WebMD	40	12.3%
Your Diagnosis	4	1.2%

**Table 1: Demographic characters of the respondents and their self-diagnostic behaviour**



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**Table 2: Distribution of the percentage of people according to the subgroup scores and the constructs using the Cyberchondria Severity Scale (CSS-15)**

Constructs	Score 0 (Not affected)	Score 1-6 (Moderately affected)	Score 7-12 (Severely affected)
Compulsive	93 (28.52%)	177 (54.29%)	56 (17.17%)
Distress	70 (21.47%)	188 (57.66%)	68 (20.85%)
Excessiveness	36 (11.04%)	191 (58.58%)	99 (30.36%)
Reassurance	47 (14.41%)	52 (15.95%)	227 (69.63%)

Constructs	Score 0 (Not affected)	Score 1-6 (Moderately affected)	Score 7-12 (Severely affected)
Mistrust of Medical Professional	110 (33.74%)	146 (44.78%)	70 (21.47%)

**Table 3: Prevalence of Cyberchondria among both Male and Female**

Prevalence of Cyberchondria	n	%
Male	106	32.51%
Female	189	57.95%

#### 4. Discussion

In this study we documented the prevalence of cyberchondria among university students. The overall findings suggest that the participants were influenced by the five constructs: Compulsion, Distress, Excessiveness, Reassurance and Mistrust of Medical Professional.

The “Compulsion” construct can negatively impact the social, professional, and academic lives of people (8). Such findings were observed in 71.46% of the participants whereas similar studies conducted by Dagar et al.,2019 stated about 74.85% of participants were getting affected by the compulsion construct which was comparatively higher than the present study. Internet helps in increasing the knowledge but it makes the patient overwhelmed by the information (8).

The “Distress” construct is more subjective and suggests that there is a feeling of distress associated with online health research (8). Such findings were observed in 78.51% of participants while other study reported that the findings were observed in 92.97% of the participants. The most common health searches were about possible causes of symptoms, information on diagnosed medical conditions, and treatment options (8). Research has shown that looking for information might actually make people feel more anxious and distress about their health (8).

The “Excessiveness” construct suggests that individual searches the Internet for the health-related symptoms repeatedly. In the present study, this construct was reported by 88.94% of the participants, and in previous it was reported by 100% of participants. Excessiveness reflects the increasing amount of time of a student spent online (15).

The “Reassurance” construct indicates that people with cyberchondria seek confirmation from doctors about the medical conditions they read about. These findings were reported by 85.88%of the participants, whereas Sivasanker et at., 2023, observed that the reassurance was reported by 60% of participants. Although acquiring reassurance is a normal and reasonable response to health concerns, its anxiety-reducing impacts are relatively brief and can adversely reinforce health concern in health-anxious people (1).



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The “Mistrust of Medical Professional” construct suggests the individual has paranoia and fails to take any comfort from their medical professionals (8). Such findings were observed in 44.78% of the participants while 21.47% of the participants felt reassured about their concerns after consulting their healthcare provider about their online research, whereas the other study conducted by Sahoo et al., 2022, reported that mistrust was observed in 25.41% of participants. The differences in the results could be attributed to the variation in sample size and heterogeneity of population studies.

Women scored high on cyberchondria than men in the current study which was consistent with a previous study (1). A study also reported that the internet searches for any inexplicable bodily sensations were substantially more common among women than men (13).

## 5. Conclusion

Cyberchondria, a negative consequence of the digital revolution, has impacted the healthcare system by disrupting treatment plans, influencing the anxiety levels of the participants, diminishing the perceived necessity for emergency care when it's crucial, and crucially, leading individuals to rely on symptom-checker websites instead of seeking guidance from a physician. Thus, Cyberchondria must be seen as a serious public health concern among university students as it is associated with distress and worry, measures need to be adopted to evaluate, prevent, and treat it at the population level.

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