Cyberchondria: "Impact of Online Search and Health Anxiety among Adolescents"

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Abstract

Background: *The internet has made it easier than ever for people to access information about medical conditions, symptoms, and treatments. While this can be helpful, it can also lead to anxiety and stress, as people may misinterpret information or convince themselves that they have a serious illness based on their online research known as Cyberchondria.* ***Aim:*** *To evaluate the cyberchondria level among non-medical students using CSS-15 tool.* ***Methods:*** *200 undergraduaten on-medical students of different educational background were recruited. The self-administered 5 –point likert scale was used (Cyberchondria severity scale, English version). It has 5 domains which are scored from 0 to 4 but the mistrust of medical professional is scored in reverse order.* ***Results:*** *The data was received from 200 students, 110 females (55%) with mean age of 21 + 1.05 years. Students are severely affected in all constructs, "compulsion" (51%), "distress" (56%), "excessiveness" (68%), "reassurance" (60%), while majority were found to be having "mistrust on medical professional" (65%).* ***Conclusion:*** *The study concluded that almost all the non-medical students suffers from excessive using and relying on internet for medical information. That is the main cause of anxiety and distress among the youth especially after the covid pandemic, where vast amount of medical information is searched.*

Keywords*: Cyberchondria, Youth, Internet, Students, Anxiety, Distress.*

INTRODUCTION

Cyberchondria is a term used to describe the phenomenon where an individual uses internet to search for information about medical conditions and becoming convinced that they have a serious illness, despite having no or only mild symptoms. The term is a combination of two words i.e "cyber," meaning related to the internet, and "hypochondria," which is the excessive worrying about one's health.[1]

Cyberchondria is not a recognized medical condition, but it is a growing concern for healthcare professionals especially after Covid pandemic. Some studies have found that up to 80% of people search for health information online, with a significant number of them experiencing anxiety or stress as a result.[2]

Factors that can contribute to Cyberchondria include a lack of medical knowledge, anxiety and a tendency to catastrophes or over think situations. It is important for individuals to be aware of the risks of Cyberchondria and to seek medical advice from a qualified healthcare professional if they have concerns about their health. Internet research for health-related information can have both beneficial and bad consequences on people. Positive outcomes that can be credited to health-related

online activities include increasing exercise routines, adopting healthier eating habits, or taking medications as prescribed.[3]

It is important to emphasise that health anxiety, which has a significant association with cyberchondria, occurs in this setting despite the fact that cyberchondria describes a behavioural, emotional, and cognitive pattern and is not yet a diagnosis. Health anxiety is referred to as hypochondria when it reaches a severe level and is defined as the experience of excessive distress or anxiety regarding one's health as a result of misinterpreting physical emotions and the subsequent belief that one has a serious illness.[4] It has not been thoroughly studied how people with cyberchondria do online searches. However, the majority of people who look for health-related information online might begin off using generic search engines like Google. They could also consult a number of other websites. Latest research have shown that there is a significant chance of experiencing collateral consequences during pandemics, including mental and behavioral problems like fear, worry, sadness, dependence on the internet, drug dependency, and others.[5]

This, however, can result in pointless concern and stress as well as potentially hazardous self-treatment. An increasing quantity of research has been done in recent years on cyberchondria and how it affects people's mental health and wellbeing. This study is conducted with the aim of assessing the level of cyberchondria among undergraduate nursing students studying in selected educational institution.

Cyberchondria severity scale was originally developed by Mc Elroy and Shevlin as CSS-33, consisting of 33 questions. This tool was constructed with objective of diagnosing internet addiction among general population. Later, the original german language was translated into English eventually with only 15 items. Finally, the reliability and validity of CSS-15 have resulted in psychometric properties as that of original questionnaire. It has five construct or domains (compulsion, distress, excessiveness, reassurance and mistrust of medical professional).[6]

Since non-medical students are more prone to seek medical information through internet as it is readily accessible these days. It is assumed that these students are more at risk for receiving misleading information which makes them more anxious or distress leading to Cyberchondria. Hence, investigator undertook this study to evaluate level of Cyberchondria among non-medical students using CSS-15 scale.

METHODOLOGY

A quantitative research approach with descriptive survey design was adopted to collect data. The study was conducted from February 2023- April 2023 among undergraduate non-medical students of Sharda University. The sample size selected was total 200 participants. After obtaining the permission from institutional ethical committee structured tool was administered. Research data was collected using self-administered Cyberchondria severity scale English version tool **{Fig.1}** (Originally German)[6].

All the psychometric properties were analyzed before its implementation. The demographic profile consisted of question about age, gender, year of study, internet usage during night and hours spent online during the day of the study participants. (CSS) Cyberchondria severity scale (**Figure no.1**) has total 5 constructs under it to assess the severity of Cyberchondria. These constructs /domains are compulsion, distress, excessiveness, reassurance and mistrust of medical professionals. Further each domain is represented by three questions. Every question in the tool has total five options (no way, rarely, sometimes, frequently and always).

All the constructs are scored from ranges 0 to 4 but only the last construct i.e mistrust of medical professional is scored from 4 to 0. Each construct has score range from 0 to 12. The score interpretation for first four domains are as follows:

1. Not affected- score 0

2. Moderately affected- score 1 to 6

3. Severely affected –score 7 to 12

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 the online information (ex. My work, studies or school)
4.	The internet search for information about symptoms or suspected disease disrupts my online leisure activities (ex. 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 symptoms 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 (ex. 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 sooths me to discuss to 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 researches to be wrong I stop worrying about it.

Figure 1: Cyberchondria severity scale (CSS)

For the last domain (mistrust of medical professional) this order is reversed. Total time taken by students to fill the tool is 15-20 minutes. Data was analyzed using descriptive and inferential statistics.

RESULTS

In the present study majority (74%) of students belonged to 21-22 years' age group and were females (55%). Maximum students (45%) were first year students. Almost (84%) all the students uses internet for more than 6 hours in a day. Majority (65%) of the students uses internet for more than 2 hours in night.

Table no. 1 depicts the frequency and percentage of study participants as per four domains and their respective subgroup scores. The domain of "compulsion" which comprises of Question 3, 4 and 7, measures characteristics related to searches in internet for symptoms or suspicion of disease that is disturbing the search for other onlineinformation for example work, studies or school and leisure activities. Also, the disruption of work caused by searching symptom online for suspected diseases for example, working of documents, or important calculation, sending important mails etc. In this domain the majority (51%) were severely affected whereas 49% were moderately affected. The domain of "Distress" which comprises of Question 6, 9 and 14, measures characteristics about feeling of anxiety, sleeplessness and stressed after searching in internet about any symptoms of suspected disease condition. Under this domain, majority (56%) were found to be severely affected while only 44% were moderately affected. The domain "Excessiveness" which comprises of Questions 1, 2 and

13, measuresspending unnecessary time while searching for unexplained symptoms for suspected disease online through trustworthy and/or lay forums. In this domain, almost (68%) all the students were found to be severely affected by Cyberchondria while only 31% were moderately affected. The "Reassurance" domain covering the Question 8, 10 and 11 measures the feeling of reassurance after discussing the online information with family, doctor or pharmacist. Under this domain majority (60%) of students were severely affected whereas only 39% were found to moderately affected. Out of 200 study participants none of the students came into category of "not affected", so it has been removed from the table.

Table 1: Frequency and percentage of students as per their subgroups and domains N=200

Constructs	Score 1-6 (Moderately affected)	Score 7-12 (Severe affected)
Compulsion	98 (49%)	102 (51%)
Distress	88 (44%)	112 (56%)
Excessiveness	63 (31%)	137 (68%)
Reassurance	79 (39%)	121 (60%)

Table 2: Frequency and percentage of students as per their subgroups and domains N=200

Constructs	Score 1-6(Moderately affected)	Score 7-12 (Severe affected)
Mistrust of medical professional	70 (35%)	130 (65%)

Table no.2 shows that the frequency and percentage of students as per this domain "Mistrust of medical professional" consists of Question 5, 12 and 15 measures the characteristics having trust on doctor more as compared to self-diagnosis.

DISCUSSION

The study was conducted to understand the affect of online searching of symptoms on health issues among undergraduate students. The domain that majorlyaffected are excessiveness (n= 137) and reassurance (n= 121). The least impactful domain is of mistrust of medical professional (n=40).

Out of all the five constraints (compulsion, distress, excessiveness, reassurance and mistrust of medical professional), the compulsiveness to use internet for checking of online symptoms which is addictive and has potential for functional impairment. This is found to be consistent with the study conducted by Khazaal Yasser[7] The study concluded that Cyberchondria has compulsive component in terms of searching for health related information on internet.

Another study conducted by Patanapu S [8] also found to be consistent with significant (p=0.005[*]) higher mean score was obtained for compulsion construct. Students reported that searching on web interferes with their other aspects of offline lives and shows greater negative emotional response.

In another domain "Distress". higher online searches related to symptoms directly linked with distress and anxiety and decrease in academic performance. The findings are similar to study conducted by Shailaja B,[9] which concluded that majority of students were under stress due to Cyberchondria Feelings of anxiety is also similar to study conducted by Cao et al[10]. The distress caused due to overloaded information which is shared on the internet widely without reality checking. Especially during pandemic, there was ever increased number of people used health websites for information related to signs and symptoms, treatment etc. Similar study has been conducted by Muse, K which reported majority (73.3%) participants felt distressed significantly after searching for their health related information online as compared to participants who did not search online. Seeking health information online caused exacerbated health anxiety.

While the findings under the construct "Excessiveness" reflects the increasing amount of time a student spent online. Failure to stop the internet use or feeling of irritability, anxious when not be able to check internet for health information. In this study showed majority are severely affected by online searches, similar results were shown by Malik MN et.al[11]. Almost everyone uses internet excessively for health related searches. Additionally, study conducted by Norr et al. have reported in increased anxiety in health caused by excessive online searching.

In another construct of "Ressurance" which means students seeks information from internet to remove fear, doubts and to comfort themselves. In this study, almost all (60%) the students were severely impacted by Cyberchondria.

LIMITATION

This study used convenience sampling technique to gather data from undergraduate engineering students which made it difficult to interpret and generalize it in overall population. Further, it is difficult to perceive the effect of internet search for health related issues as stress is complicated natural phenomenon which is impacted by several environmental condition.

CONCLUSION

Cyberchondria causes increase in anxiety related to one's health conditions because of excessive internet searches. This can lead to depression and panic, hence decreases the academic performance of students. The "excessiveness", "reassurance" in internet searches delays in seeking for the professional help as they may consider themselves capable of conducting their own diagnosis based on web results. This give rise to a new term "internet- literate" population, where the patient spent too much time on online activity and demonstrate high Cyberchondrial behavior. According to current study, young undergraduate students suffers a lot when opinion of medical expert and online self-diagnosis does not match. Also, females have high level of anxiety in terms of health issues often prompting them to seek medical advice. The healthcare provider plays a key role here in making the internet literate client reassure about the online symptoms authenticity upto their satisfaction. The doctors should spread awareness about which medical sites are actually real and can be viewed for somewhat correct information. The study at last concludes that engineering students who rely more on internet for medical information rather than medical professionals suffers from varying degree of cyberchondria (moderate or severe). This shows that internet might mislead patients by giving information based on emotionally charged stories and content sometimes not relevant to their health.

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Conflicts of Interest

Nil

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