

## CYBERCHONDRIA AMONG INFORMATION TECHNOLOGY PROFESSIONALS OF BHUBANESWAR BY USING CYBERCHONDRIA SEVERITY SCALE (CSS-15)

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### ABSTRACT

**Background.** Internet can act as an excellent resource for gaining valuable health related information. However, excessive online research and investigation about health-related issues may impose a negative impact. The term cyberchondria is used to describe a clinical condition in which frequent internet searches for health-related information leads to exaggerated anxieties about physical well-being.

**Objectives.** To determine the prevalence of cyberchondria and associated factors among the information technology professionals of Bhubaneswar in India.

**Materials and methods.** A cross-sectional study was carried out among 243 software professionals in Bhubaneswar using a previously validated Cyberchondria Severity Scale (CSS-15) questionnaire. Descriptive statistics in terms of number, percentage, mean and standard deviation were presented. Independent t-test and one-way analysis of variance was applied to compare the cyberchondria score between two and more than two independent variables respectively.

**Results.** From 243 individuals 130 (53.5%) were males and 113 (46.5%) were females with mean age 29.82±6.67 years. The prevalence of cyberchondria severity was found to be 46.5%. The mean cyberchondria score of all study subjects was 43.80±10.62. It was significantly higher among those who spend more than 1 hour in the internet during night, feel fear and anxiety in visiting the doctor or dentist, interested in gaining the health-related information from other resources and agreed that gaining health related information has increased after COVID-19 pandemic ( $p < 0.05$ ).

**Conclusion.** Cyberchondria is a growing issue with regard to mental health in developing countries and has the ability to cause anxiety and distress. Appropriate actions must be taken to prevent it on a societal level.

**Key words:** *cyberchondria, internet, anxiety, information technology, cyberchondria severity scale*

### INTRODUCTION

Internet can act as an excellent resource for gaining valuable health related information. Now-a-days the usage of internet has increased to such an extent that online sources of health information are preferred. Even during COVID-19 pandemic, usage of internet has increased tremendously because of increased amount of time spent at home due to social distancing considerations, limitations on face-to-face communication, and the dearth of indoor activities [2]. Cyberchondria is the term used to describe an increase in anxiety over one's own health status as a result of overanalysing internet health information [11]. White and Horvitz [24] defined cyberchondria as "the unfounded escalation of concerns about common

symptomatology, based on the review of search results and literature on the web". Due to the rapid advancement of information and communications technology, the internet has grown to be a well-liked resource for the general population to receive health information. Online resources offer a wealth of health-related information, but some of it may mislead patients [24]. People who are prone to concern about their health browse online for health-related information. They learn the facts, which causes them to feel even more distressed and anxious [15]. It is also claimed that cyberchondria is a combination of clinical disorders because it exhibits symptoms of health anxiety, obsessive-compulsive disorder and hypochondriasis [1, 8]. Literature search also revealed that frequent online searching for health related issues

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may impose a negative impact on life, can disturb someone's mental peace, has the ability to increase anxiousness among the patients and moreover it can affect the quality of life [13, 18].

The Cyberchondria Severity Scale with 33 Items (CSS-33) was created by *McElroy* and *Shevlin* as a cyberchondria questionnaire [17]. It was mainly developed to assess the psychometric characteristics of a self-report measure of anxiety as a result of online inquiries for medical information. The short version of CSS scale consisting of 15 items was also developed, validated and preserved good psychometric qualities of CSS-33 [4]. This CSS-15 questionnaire comprises of 5 constructs namely excessiveness, compulsion, distress, reassurance, mistrust.

In addition to anxiety, it may overestimate the disease condition and can make the life of people more stressful. In the current scenario where most of the people are overburdened with work and a lifestyle that might not permitting them to go out and consult a health care provider for their diagnosis. Because of this they are rely more on the online information and diagnosis. On the other hand cyberchondria has reportedly been linked to excess usage of medical services [7]. More apprehensive and anxious patients repeatedly search google or any other internet sources even for a small symptom and to have a clarity they also frequently turn to a specialist for assistance [5]. Even taking the advice or opinion of a medical professional for second time to reassure themselves might develop into a regular reaction to fear [22].

These days, majority have access to internet 24\*7 specifically those employees or population who are working in various Information Technology sector. The COVID-19 pandemic has introduced the work from home culture to these software professionals with unhindered internet access for which they can be at a higher risk of acquiring anxiety related to online health related search. They may be more likely to check regarding symptoms online [6, 15]. Still there is lack of clarity and evidence regarding prevalence of cyberchondria among the professionals working in different software companies. Studies on the prevalence and associated influencing factors on cyberchondria are limited. Hence, the current study was carried out to determine the prevalence of cyberchondria and to evaluate the associated variables that may influence the cyberchondria among the Information Technology professionals of Bhubaneswar.

## METHODOLOGY

This cross-sectional study was conducted upon Information Technology professionals working in various software companies of Bhubaneswar. The study was carried out between May and July of 2022.

Ethical clearance was obtained from the institutional ethics committee. By utilizing the prevalence of previous study [6], minimum sample size was derived with the help of the formula  $Z^2pq/d^2$  ( $Z=1.96$ ,  $p=0.62$ ,  $d=0.06$ ,  $\alpha=0.05$ ) which was found to be 235. Finally, 243 individuals participated in the study. A Google form-based email survey was used to carry out the investigation. The human resources (HR) head of different software companies of Bhubaneswar were contacted and these electronic questionnaires were sent to them for distribution to their staff. The HR managers received reminders for the same.

Collection of data was done by using the previously validated questionnaire CSS-15 to evaluate the cyberchondria [4]. The first part of the questionnaire included written consent in the form of explaining purpose of study and obtaining approval of participation. Five constructs were included in the questionnaire: excessiveness, compulsion, distress, reassurance, mistrust (Annexure). Three questions were used to illustrate each domain. The responses were recorded based upon five-point Likert scale where score 1 denotes never, 2 rarely, 3 sometimes, 4 often and 5 always. This order is followed for the first four constructs i.e excessiveness, compulsion, distress, reassurance whereas for mistrust construct score 1 denotes always, 2 often 3 sometimes 4 rarely and 5 never. For each construct an individual can score minimum of 3 and maximum up to 15. The interpretation of the scores per each domain were done in the following ways: Score 3- not affected, Score 4-9- moderately affected, Score 10-15- severely affected.

The total CSS scores for each person were calculated by adding the results from the 15 questions and as a result, the least CSS score for each person is 15 and the maximum is 75. As there is no particular cut-off value of CSS scale is available for a person to be called as cyberchondriac, in the current study median value was considered as the threshold value.

The "excessiveness" construct includes question 1,2 and 3 and examines characteristics associated with repeatedly spending unnecessary time on the internet investigating the same symptom and medical condition. The "compulsion" construct includes question 4,5 and 6 examines characteristics associated to electronic searching for health-related issues and taking away from time intended for work and leisure-related activities. The "distress" construct comprises of question 7, 8 and 9 and assesses characteristics associated with anxiety, panic attacks and insomnia. The "reassurance" construct which includes question 10, 11, 12 analyses anxiety-related characteristics that are shown in the desire for reassurance from a more knowledgeable individual, such as a medical practitioner. The last construct i.e mistrust of medical professional involves question 13,14 and 15 and this

concept examines characteristics associated to trusting the diagnosis of medical experts one's own.

### Statistical Analysis

All statistical analysis were carried out using IBM SPSS statistics version 25. To present the descriptive statistics number, percentage, mean and standard deviation were used. The normality distribution of data was performed by using *Kolmogorov Smirnov* test. Independent t-test and one way analysis of variance was used to compare the cyberchondria score between two and more than two independent variables respectively.  $p < 0.05$  was considered to be statistically significant.

## RESULTS

The current study comprised of 243 software professionals with 130 (53.5%) males and 113 (46.5%) females who completed the questionnaire and were selected for analysis. The mean age of the population was found to be  $29.82 \pm 6.67$ . According to the educational status, 64.6% individuals possess

bachelor degree while 35.4% had a masters degree. 77.4% of people didn't suffer from any underlying medical illness as most of the study participants are younger adults (79% <35 years). It was found that 55.6% of people had the habit of using internet  $\geq 5$  hours during the day apart from other work while 50.6% of them used internet  $\geq 1$  hour during night. According to the study findings 56.4% of people had the fear and anxiety visiting a health care professional. High cost of medical or dental care was the major issue (46.9%) for the people not visiting any health care set-up. 86.4% of people are interested in gaining the health information from other sources while 85.6% people agreed that looking for health information online increased after COVID-19 pandemic. Table 1 represents the sociodemographic information of the participants.

The frequency of the responses to each item of CSS were presented in Table 2. Using median (44) as the cut off score, the cyberchondria prevalence was found to be 46.5% and the mean CSS score of all study subjects was found to be  $43.80 \pm 10.62$ . Table 3 represents the distribution of the people according to four domains

Table 1. Sociodemographic characteristics of study population

	n	Percentage
<i>Do you have cyberchondria</i>		
Yes	113	46.5
No	130	53.5
<i>Age group</i>		
$\geq 35$ years	51	21.0
<35 years	192	79.0
<i>Gender</i>		
Male	130	53.5
Female	113	46.5
<i>Educational status</i>		
Bachelor Degree	157	64.60
Masters Degree	86	35.4
<i>Having underlying medical illness</i>		
Yes	55	22.6
No	188	77.4
<i>Having any family member suffering from any medical illness</i>		
Yes	149	61.3
No	94	38.7
<i>Time spent in the usage of internet during the day (apart from work)</i>		
$\geq 5$ hours	135	55.6
< 5 hours	108	44.4
<i>Time spent in the usage of internet during the night (after 9 pm) for reasons apart from work</i>		
$\geq 1$ hour	123	50.6
< 1 hour	120	49.4
<i>Having a medical/dental check-up in the last year</i>		
Yes	121	49.8
No	122	50.2

	n	Percentage
<i>Having any healthcare professional in the family</i>		
Yes	103	42.4
No	140	57.6
<i>Taken any medication without prescription of a doctor/ dentist in the last year</i>		
Yes	131	53.9
No	112	46.1
<i>Believe in any other forms of medicine other than allopathy? (Ayurveda, homeopathy, etc.)</i>		
Yes	163	67.1
No	80	32.9
<i>Fear or anxiety to visit doctor or dentist</i>		
Yes	137	56.4
No	106	43.6
<i>Having any negative dental/medical experience in the past</i>		
Yes	82	33.7
No	161	66.3
<i>Hesitation in visiting a medical or dental set-up because of:</i>		
High cost of medical/dental care	114	46.9
Time consuming	76	31.3
Both	53	21.8
<i>Interested in gaining health related information from other resources like TV, radio, magazine articles, newspapers</i>		
Yes	210	86.4
No	33	13.6
<i>Seeking for health information online increased after the COVID-19 pandemic</i>		
Yes	208	85.6
No	35	14.4

Table 2. Cyberchondria severity scale responses

Questions	Never (%)	Rarely (%)	Sometimes (%)	Often (%)	Always (%)
1. If I notice an unexplained oral sensation or symptom, I will search for it on the internet.	16 (6.6)	25 (10.3)	54 (22.2)	97 (39.9)	51 (21.0)
2. I am looking for the same symptoms on the internet.	21 (8.6)	28 (11.5)	71 (29.2)	64 (26.3)	59 (24.3)
3. When I search for symptoms or disease online, I visit both trust worthy sites and or lay forums.	20 (8.2)	25 (10.3)	51 (21.0)	86 (35.4)	61 (25.1)
4. The internet search for the information about the symptoms or suspected diseases in the oral cavity or mouth disrupts the search for other online information (e.g my work, studies or school)	27 (11.1)	59 (24.3)	64 (26.3)	61 (25.1)	32 (13.2)
5. The internet search for the information about the symptoms or suspected diseases in the oral cavity or mouth disrupts my online leisure activities. (e.g streaming movies)	39 (16.0)	64 (26.3)	60 (24.7)	56 (23.0)	24 (9.9)
6. Internet search for information about symptoms or suspected disease in the oral cavity or mouth disrupts my work on the computer (e.g writing mails, working on documents or calculation)	48 (19.8)	62 (25.5)	58 (23.9)	63 (25.9)	12 (4.9)
7. I get panicked when I read online that a symptom that I have is rare or serious condition.	18 (7.4)	40 (16.5)	47 (19.3)	91 (37.4)	47 (19.3)
8. After looking for information about symptoms or suspected disease of oral cavity, I feel more anxious and stressed than before.	22 (9.1)	31 (12.8)	51 (21.0)	89 (36.6)	50 (20.6)
9. After looking for information about symptoms or suspected disease of oral cavity, I have difficulty falling asleep.	34 (14.0)	67 (27.6)	68 (28.0)	52 (21.4)	22 (9.1)
10. I discuss results of my online research with my dentist or pharmacist.	50 (20.6)	66 (27.2)	58 (23.9)	46 (18.9)	23 (9.5)
11. The internet search for information about symptoms or suspected disease leads me to a specialist of dentistry	36 (14.8)	62 (25.5)	69 (28.4)	46 (18.9)	30 (12.3)
12. It soothes me to discuss the online information about suspected disease with my dentist.	57 (23.5)	62 (25.5)	47 (19.3)	45 (18.5)	32 (13.2)
13. I attach more importance to my dentist assessment than my online research.	27 (11.1)	25 (10.3)	26 (10.7)	52 (21.4)	113 (46.5)
4. I trust the diagnosis of my dentist than my own online self-diagnosis	30 (12.3)	27 (11.1)	21 (8.6)	50 (20.6)	115 (47.3)
15. If my dentist considers the results of my own online research to be wrong, I stop worrying about it.	27 (11.1)	20 (8.2)	30 (12.3)	45 (18.5)	121 (49.8)

Table 3. Distribution of the proportion of the people according to four domains of CSS and subgroup scores

Constructs	Score 3 (Not affected)	Score 4-9 (Moderately affected)	Score 10-15 (Severely affected)
Excessiveness	9 (3.7%)	59 (24.3%)	175 (72%)
Compulsion	20 (8.2%)	127 (52.3%)	96 (39.5%)
Distress	10 (4.1%)	84 (34.6%)	149 (61.3%)
Reassurance	22 (9.1%)	140 (57.6%)	81 (33.3%)
Mistrust	79 (32.5%)	109 (44.9%)	55 (22.6%)

of CSS and subgroup scores. It was observed that the majority of people (72%) were severely affected by the excessiveness, whereas almost half of people (52.3%) were moderately affected by the compulsion. Similarly, in distress construct the proportion of the people getting affected severely was 61.3% while in reassurance most of the people were moderately affected (57.6%). The 5<sup>th</sup> construct which is based on the mistrust of medical professionals showed that 44.9% people were affected moderately.

According to the current study findings, persons under the age of 35 had mean CSS scores (44.06±10.97) greater than those whose age is ≥ 35 years (42.82±9.22) even though this was not significant (Table 4).

It was also found that individuals who spent ≥1 hour in the internet other than work during the night after 9pm had significantly higher mean CSS

scores (45.60±18.80) than those who spent less than that (41.96±10.14) ( $p=0.007$ ). People with fear and anxiety had significantly higher mean CSS scores (45.08±9.05) than those who did not have any fear and anxiety in visiting a health care professional (42.15±12.20) ( $p=0.032$ ). The mean CSS scores of participants gaining health related information from other resources like TV, radio, magazine, articles, newspapers (44.86±9.68) were significantly higher than those who were not interested (37.06±13.65) ( $p<0.001$ ). The mean CSS scores were significantly higher (44.80±10.04) among those who felt that their online search had increased after the COVID 19 pandemic for gaining health related information than those who did not agree to this statement (37.86±12.13) ( $p<0.001$ ) (Table 4).

Table 4. Comparison of cyberchondria scores of study subjects with sociodemographic characteristics

Variables	n	CSS Score (mean ± SD)	p value
<i>Age</i>			
≥35 years	51	42.82 ± 9.22	0.458
<35 years	192	44.06±10.97	
<i>Gender</i>			
Male	130	43.87±11.88	0.912
Female	113	43.72±9.01	
<i>Educational status</i>			
Bachelor degree	157	43.22±10.87	0.253
Masters degree	86	44.86±10.11	
<i>Having underlying medical illness</i>			
Yes	55	43.98±9.87	0.890
No	188	43.75±10.85	
<i>Having any family member suffering from any medical illness</i>			
Yes	149	44.36±10.54	0.305
No	94	42.92±10.74	
<i>Time spent in the usage of internet during the day (apart from work)</i>			
≥ 5 hours	135	43.80±9.31	0.991
< 5 hours	108	43.81±12.10	
<i>Time spent in the usage of internet during the night (after 9 pm) for reasons apart from work</i>			
≥ 1 hour	123	45.60±10.80	0.007*
< 1 hour	120	41.96±10.14	
<i>Having a medical/dental check-up in the last year</i>			
Yes	121	44.19±10.62	0.576
No	122	43.42±10.65	
<i>Having any healthcare professional in the family</i>			
Yes	103	42.82±11.09	0.217
No	140	44.52±10.24	
<i>Taken any medication without prescription of a doctor/dentist in the last year</i>			
Yes	131	43.90±10.21	0.872
No	112	43.68±11.12	

<i>Believe in any other forms of medicine other than allopathy?</i> (Ayurveda, homeopathy, etc.)			
Yes	163	43.87±11.03	0.883
No	80	43.66±9.79	
<i>Fear or anxiety to visit doctor or dentist</i>			
Yes	137	45.08±9.05	0.032*
No	106	42.15±12.20	
<i>Having any negative dental/medical experience in the past</i>			
Yes	82	44.52±10.20	0.453
No	161	43.44±10.84	
<i>Hesitation in visiting a medical or dental set-up because of high cost of medical/dental care</i>			
Time consuming	114	43.21±10.23	0.219
Both	76	43.13±11.16	
	53	46.05±10.55	
<i>Interested in gaining health related information from other resources like TV, radio, magazine articles, newspapers</i>			
Yes	210	44.86±9.68	0.0001*
No	33	37.06±13.65	
<i>Seeking for health information online increased after the COVID-19 pandemic</i>			
Yes	208	44.80±10.04	0.0001*
No	35	37.88±12.13	

\*Statistically Significant, SD-Standard Deviation

Table 5. Mean CSS scores per construct wise

	N	Minimum	Maximum	Mean ± SD
Excessiveness	243	3.00	15.00	10.63±2.97
Compulsion	243	3.00	15.00	8.6±3.20
Distress	243	3.00	15.00	9.75±2.95
Reassurance	243	3.00	15.00	8.30±3.36
Mistrust	243	3.00	15.00	6.51±3.94

SD-Standard Deviation

Construct wise mean CSS scores are presented in Table 5. Mean CSS score for excessiveness construct was greatest (10.63±2.97) followed by distress (9.75±2.95) and the least was for mistrust (6.51±3.94).

## DISCUSSION

The results of this study indicated that 46.5% of the subjects had some degree of cyberchondria. The CSS scale had five constructs and the percentage of people who were impacted by each construct was calculated. The prevalence of cyberchondria was computed using the median as the threshold since there is no specific cut off value to declare people to be cyberchondriac. The responses to each CSS item were recorded using a five-point Likert scale, so a person may receive a minimum of 15 points and a maximum of 75 points. The mean CSS score for the entire study population was found to be 43.80±10.62, suggesting that software professionals may suffer from cyberchondria to some

extent. A study conducted by *Gandla et al.* on medical students found mean CSS scores to be 30.86 ± 9.44 [9]. Since the present study has been conducted upon those who have unrestricted internet access mean cyberchondria scores were higher than the other population. By comparing the construct wise mean scores, a study performed by *Gandla et al.* found reassurance construct scores to be highest followed by excessiveness while in our study excessiveness construct scores were highest followed by distress [9].

The prevalence of cyberchondria in the current study was 46.5% whereas a study conducted by *Makarla et al.* found prevalence to be 55.6% [15]. *Kanganolli et al.* who performed a study on undergraduate medical students found prevalence to be 37.5% [11]. As the study focused on employees who work in Information Technology sectors, other populations may not experience cyberchondria at the same rate as this cohort.

The results of the current study indicate that, among the five constructs, excessiveness (72%) and distress (61.3%) are the two that most affected, followed by compulsion (39.5%) and reassurance (33.3%). The mistrust of medical professionals construct (22.6%) had the least influence. Despite gaining information from the internet, they trusted health professional's diagnosis and advice to be more trust worthy. A study conducted by *Dagar et al.* reported that individuals affected severely with excessiveness and reassurance construct were greater in comparison to distress and compulsion construct whereas mistrust construct had the least impact [6]. Due to unrestricted internet access, software professionals spend more time continuously searching for health-related symptoms, which can overestimate the severity of the disease. This may have an impact on the person's mental health, causing them to be more anxious than usual.

In the current study 96.3% of people have agreed that they search frequently for getting health related information which was similar to the findings of the study conducted by *Dagar et al.* [6] where 100% of people reported the same. Similar findings have been reported by the study conducted by *Malik et al.* where more than 90% of people had the habit of checking for online health related information [16]. Proportion of the people getting affected by compulsion construct was relatively high in the current study (91.7%) as compared to the other study findings [6,16]. The current study sample chosen is Information Technology professionals and their excessive internet use overwhelms them with information. In the current study, 95.8% of participants reported that checking up the same symptoms online made them feel more worried and anxious. These findings are in agreement to the findings of the other studies [6, 16, 20]. Searching for information about disease state and health are positively correlated with anxiety. Almost 90.94% of people in the present study got reassured after discussing their online health research with their medical professional and these findings are in agreement to the findings of the previous studies [6,16] while a study conducted by *Makarla et al.* [15] have found relatively lesser amount of people getting reassured by the same. Current study found that 47.3% of people completely trust the diagnosis of the dentist which is similar to the findings of the study conducted by *Makarla et al.* [15]. But these findings are contradicting the findings of the study conducted by *Malik et al.* who reported that only 8.8% of people trust the diagnosis of the health care professional than that of own [16].

Age was found to inversely affect the CSS scores. The present study found that the cyberchondria score declines with increase in age and similar findings have also been reported by *Uzun et al.* [23] who conducted

a study on university students. Today's youth are more technically savvy since they spend most of the time on social networking sites like Twitter, Facebook, and telegrams as well as online gaming [12]. Therefore, cyberchondria is more common among younger adults.

When compared to people who use the internet for less than an hour, the mean CSS scores of those who spend more than an hour online during night were shown to be significantly higher. Even the study conducted by *Kanganolli et al.* and *Uzun et al.* also reported the same [11, 23]. Additionally it has also been discovered that those who spent more time online looked for more health-related information online. A study conducted by *Thackeray et al.* reported that younger age groups are more inclined to use different social networking sites with good online ranking and reviews for gaining health related information [21]. *Rice et al.* who has conducted a survey on internet health related searching also revealed similar facts [19].

Participants in the present study who reported feeling anxious or frightened when seeing a dentist or doctor had significantly higher mean CSS scores than those who reported no anxiety at all. People with past negative medical or dental experience might act as an influencing factor in such situations. A study performed by *Aoun et al.* stated that now-a-days people have the habit of checking for health-related websites to resolve the acute symptoms first which could help them manage their condition by avoiding a visit to a doctor [3]. So, the professionals with fear and anxiety probably rely more on web-based information due to the ease of internet access thereby avoiding a visit to the health care provider [14].

As per the findings of the current study, people who were interested in learning about health-related topics from media sources including television, magazines, newspapers, and articles had significantly higher mean CSS scores and these findings have been confirmed by the results of other investigations [23]. Mass media plays an active role in influencing the opinions and sometimes the knowledge of people. The transmission of health-related programmes on television and over-the-top platforms, as well as the publication of news and other health-related information in a variety of health periodicals, might encourage internet use [10]. Health programmes today place a greater focus on the idea that individuals, not the government or any other system, are in charge of their own health conditions. Thus, making cyberchondria more likely.

After the COVID-19 outbreak, more people are looking for health information online and mean CSS scores of these people are significantly higher. Due to increased time spent at home, fear of visiting health setups, barriers to face-to-face communication and a lack of indoor activities, internet usage has

significantly increased during the pandemic and this is expected to be more in case of software professionals. Additionally, they have the option of working from home rather than travelling to their place of employment, which might increase their tendency for cyberchondria.

People may believe they can conduct their own assessment using search results, which could have an impact on the internet-using habit and delay the need for professional assistance. Sometimes information gleaned from various health-related websites might mislead people by exaggerating the seriousness of the ailment, increasing people's anxiety and fear.

### Strength and limitations

As far as we are aware, no studies have measured prevalence of cyberchondria in this geographic location. Additionally in comparison to previous studies numerous potential cyberchondria-related characteristics that had not before been investigated were assessed in this investigation. However, this study has a few limitations. Since the study was based on Information Technology professionals who use internet as a part of their profession, other population may not have the same prevalence of cyberchondria as this study set. Further investigations involving other population is required to ascertain the specific impacts of cyberchondria.

## CONCLUSIONS

This study has discovered a significant prevalence of cyberchondria among those working in Information Technology industry in Bhubaneswar. Few variables have been identified through this research which might influence the level of cyberchondria. It was discovered that several cyberchondria constructs, of varying degrees of severity, impact software professionals. Among which, excessiveness and distress are the two constructs that had significant impact. When dealing with internet addicts, health care providers should exercise patience and calmness to reassure them that the information they are searching for is accurate or not. People should be made aware of how excessive internet use for health-related information might harm mental health, resulting in panic attacks and anxiety disorders. To determine the precise effects of cyberchondria, more research involving diverse populations is needed. Once this information is obtained, community-level prevention and treatment measures can be implemented. It is also important to ensure that internet sites are curated by involvement of health professionals to increase the authenticity of health information.

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## ANNEX

### Cyberchondria severity scale (CSS-15) questions

1.	If I notice an unexplained oral sensation or symptom, I will search for it on the internet.
2.	I am looking for the same symptoms on the internet.
3.	When I search for symptoms or disease online, I visit both trust worthy sites and or lay forums.
4.	The internet search for the information about the symptoms or suspected diseases in the oral cavity or mouth disrupts the search for other online information (e.g my work, studies or school)
5.	The internet search for the information about the symptoms or suspected diseases in the oral cavity or mouth disrupts my online leisure activities. (e.g streaming movies)
6.	The internet search for information about symptoms or suspected disease in the oral cavity or mouth disrupts my work on the computer (e.g writing mails, working on documents or calculation)
7.	I get panicked when I read online that a symptom that I have is rare or serious condition.
8.	After looking for information about symptoms or suspected disease of oral cavity, I feel more anxious and stressed than before.
9.	After looking for information about symptoms or suspected disease of oral cavity, I have difficulty falling asleep.
10.	I discuss results of my online research with my dentist or pharmacist.
11.	The internet search for information about symptoms or suspected disease leads me to a specialist of dentistry.
12.	It soothes me to discuss the online information about suspected disease with my dentist.
13.	I attach more importance to my dentist assessment than my online research.
14.	I trust the diagnosis of my dentist than my own online self-diagnosis.
15.	If my dentist considers the results of my own online research to be wrong, I stop worrying about it.



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