"PREVALENCE OF CYBER-CHONDRIASIS AMONG NURSING STUDENTSIN A SELECTED COLLEGE AT MOODBIDRI, KARNATAKA"

Ms Pooja Karki[1], Mr Sangamesh Baichabal[2], Dr Utalbasha N Dhandargi [3]
Dr Sureshgouda Patil[4]

[1]Lecturer BES Bagalkot College of Nursing Bagalkot, Karnataka
[2]Assistant Professor BES Bagalkot College of Nursing Bagalkot, Karnataka
[3]Principal, BES Bagalkot College of Nursing Bagalkot, Karnataka
[4]Principal, Shanti Institute of Nursing Sciences Bagalkot, Karnataka

Abstract

Background

In today's digital age, easy access to online medical information has transformed the way people learn about health. Numerous websites allow individuals to look up symptoms and diseases, often encouraging self-diagnosis. Cyberchondriasis—a blend of "cyber" (internet) and "hypochondria" (excessive health worry)—refers to the anxiety that arises from repeatedly searching health information online. For instance, a simple search for a stomach ache may lead to alarming results like cancer, increasing unnecessary fear. While some individuals feel more informed, others experience heightened confusion and stress due to unreliable or conflicting data. This pattern resembles compulsive reassurance-seeking, which ultimately worsens anxiety. Cognitive factors such as constant health-related thoughts and behaviors like excessive symptom checking are central to this condition. Understanding the prevalence of cyberchondriasis, especially among nursing students, is vital to assess how internet-based medical information influences their health perceptions and coping behaviors.

Method /Methodology: A descriptive study was conducted using a survey method of research design and descriptive approach. A total of 187 samples were selected.

The investigator obtained the informed consent from the subjects after introducing themselves, purpose and objectives of the study. The tool consisted of two part namely demographic variables and Cyberchondria severity scale (CSS-15). The data was analyzed in terms of objective of the study using both descriptive an inferential statistics

Result: in this cross sectional study was conducted among 187 participants at Alva"s College of Nursing among Nursing students with mean age of the participants is 19 years. Among the participants20.86% are affected by compulsion, 24.60% are affected by distress, 32.08%are affected by excessiveness, 27.27% are affected by reassurance and24.06% are affected by mistrust of medical professionals.

Conclusion : The study concludes that a considerable proportion of nursing students experience various dimensions of cyberchondriasis, including compulsion, distress, excessiveness, reassurance seeking, and mistrust of medical professionals. These findings highlight the growing impact of online health information on students' mental well-being. Awareness programs and digital health literacy initiatives are essential to help

nursing students develop balanced attitudes toward online medical content and responsible health information use.

Keywords: Cyberchondriasis, Compulsion, Nursing students, B Sc Nursing students , Prevalence

Introduction

The internet had become a significant source of health-related information. While it increased awareness and accessibility, it also contributed to a psychological condition known as cyberchondriasis—the excessive searching of online health information that heightened health anxiety. Cyberchondriasis typically began when individuals experienced minor symptoms and searched online for their meanings. The large amount of unverified and often alarming medical information frequently led people to believe they were suffering from serious diseases. Such misinterpretations caused anxiety and resulted in a continuous cycle of reassurance-seeking behavior through repeated online searches.

Individuals with high levels of health anxiety, obsessive tendencies, or limited medical knowledge were found to be more prone to developing cyberchondriasis. The condition was further aggravated by unreliable sources, self-diagnosis websites, and misinformation spread through social media. Psychologically, it manifested as distress, fear, irritability, and difficulty in concentration. In many cases, people either overused healthcare services in search of reassurance or avoided consulting doctors altogether due to the fear of receiving bad news.

The management of cyberchondriasis focused on awareness, professional guidance, and psychological support. Healthcare providers were encouraged to discuss online health searches with patients and to recommend credible, evidence-based websites. Cognitive-behavioral therapy (CBT) was found effective in helping individuals recognize irrational thoughts, manage anxiety, and reduce compulsive checking behaviors. Improving digital literacy also played an important role by enabling individuals to evaluate online medical information critically. The use of online clinical information had become an essential skill for healthcare professionals. Nurses believed that the quality and availability of information influenced patient care and nursing practices. A recent study among the German population revealed that approximately 46% of individuals regularly used the internet to learn about health concerns, while in other countries the rate was even higher (72%). Cyberchondriasis highlighted the double-edged nature of the internet in healthcare. Although online access empowered individuals, excessive or misguided searching often fueled anxiety and distress. Promoting accurate health education and responsible internet use remained essential for sustaining mental well-being in the digital age.

MATERIALS AND METHODS:

Research approach and design: A descriptive study was conducted using a survey method of research design and descriptive approach.

Variables:

- **Dependent Variable**: Cyberchondriasis (level or presence of cyberchondriasis among nursing students)
- **Independent Variable:** Nursing students' characteristics such as: Age ,Gender ,Year of study.

Socio-demographic Variables: Age, gender, family types, income, education and previous knowledge of cybercondriasis

Setting of study: The study was conducted in Alva's nursing college at Moodbidri, Karnataka.

Population

Target population: The target population of the present study is the Basic B Sc Nursing students aged between 19 -21 years in Moodbidri, Karnataka

Accessible population: The accessible population of the present study are the Basic B Sc Nursing students aged between 19-21 years of age and studying in Alva's nursing college at Moodbidri, Karnataka

Sampling technique : In the present study the sample was selected by convenient sampling technique. The researcher conveniently selected the Nursing students in Alva's nursing college at Moodbidri, Karnataka permitting to conduct the study. In the institutions 190 students were selected. All the participants were studying Basic BSc Nursing.

Sampling : Sample of present study were 190 Basic B Sc Nursing students studying in Alva's nursing college at Moodbidri, Karnataka

Sample size estimation: The sample size for present study comprises is 190 B Sc nursing students. The sample size was calculated by using Cochran's formula. data for calculating sample size was used from the findings of the pilot study outcomes.

Sample size = Z value^2 *SD^2/d^2.

Where, Z- is the critical value at 5% level of significant, SD-is the Standard deviation, d-is the margin of error.

Data collection process: To assess the severity of cyberchondriasis, the Cyberchondria Severity Scale (CSS) was used. McElroy and Shevl developed the original 33-item CSS (CSS-33) to aid medical professionals in diagnosing and treating cyberchondriac patients. It was later translated into German and shortened to 15 items (CSS-15), covering five constructs: compulsion, distress, excessiveness, reassurance, and mistrust of medical professionals. Each construct included three questions scored 0–4, except mistrust, which was scored 4–0. Total scores per construct ranged from 0 (lowest) to 12 (highest).

Sample selection criteria:

Inclusion criteria:

The present study includes the Basic B Sc nursing students who are

- Available at the time of data collection.
- Willing to participate in the study.
- Presently not attending any program about CyberChondriasis.

Exclusion criteria:

The present study excludes the Basic B Sc nursing students who are

- Sick at the time of data collection

Description of Tool: Description of Tool:

The instrument consisted of two Sections

- Section A consists of items to assess socio demographic data.
- Section B consists MCQs to assess criteria of cyberchondria severity scale (CSS)-15 of among B Sc nursing students

Permission: Ethical clearance certificate was obtained from institutional ethical committee of Alva's nursing college at Moodbidri, Karnataka

Statistical Analysis: Univariate analysis was conducted with descriptive statistical measure; frequency and percentage distribution, mean, median and standard deviation. The effectiveness of intervention was determined

by paired t test. The association between socio demographic factors and level of stress was determined by Chi square test.

Results: Results of the present study is categorized into 4 sections as follows

Section 1: Frequency and percentage distribution of students according to their socio-demographic Characteristics

Section 2: Table showing association between scores and previous knowledge

Section3 : Table shows Severity of cyberchondriasis in Descriptive statistics.

Results:

Section 1: Frequency and percentage distribution of students according to their socio-demographic Characteristics n=190

Sr.no	Demographic variables	Frequency	Percentage(%)
1	**AGE** <18years 19 years 20 years >=21 years	 27 80 59 21	 14.4 42.8 31.6 11.3
2	**GENDER** a. Male b. Female	 22 165	 11.8 88.2
3	**TYPEOF FAMILY** a. Nuclear family b. Extended family/joint family	 168 19	 89.8 10.2
4	**FAMILYINCOME** a. <=10000 b. 10001-20000 c. 20001-30000 d. >30000	 82 64 20 21	 43.9 34.2 10.7 11.2
5	**Previous knowledge about Cyberchondriasis** a. Yes b. No	 36 151	 19.3 80.7

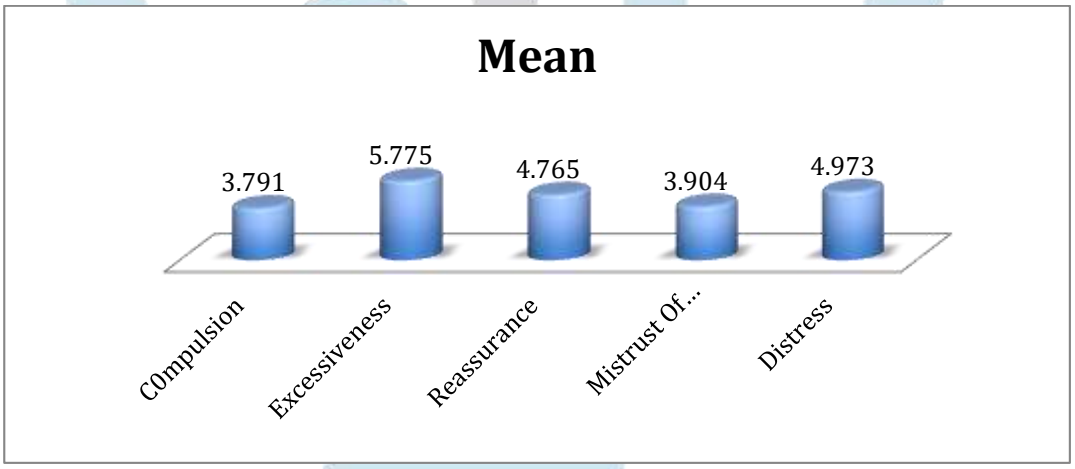
Section 2: Table showing association between scores and previous knowledge n=190

	Previous Knowledge About Cyberchondriasis	N	Mean	S D	T
Compulsion	Yes	36	4.694	2.649	1.938
	No	151	3.576	3.209	P=0.054ns
Excessiveness	Yes	36	6.083	2.430	.185
	No	151	5.702	2.511	P=0.411ns
Reassurance	Yes	36	6.972	3.317	5.225
	No	151	4.238	2.692	P=0.001

	Yes	36	3.306	3.733	1.077
	No	151	4.046	3.703	P=0.185ns
Distress	Yes	36	5.139	2.870	.373
	No	151	4.934	2.986	P=0.71ns
Total	Yes	36	26.194	7.589	2.042
	No	151	22.497	7.670	P=0.01Hs

Section 3 : Table shows Severity of cyberchondriasis in Descriptive statistics. n=190

	Frequency	Minimum	Maximum	Mean	SD
Compulsion	187	.00	12.00	3.791	3.134
Excessiveness	187	.00	12.00	5.775	2.494
Reassurance	187	.00	11.00	4.765	3.014
Mistrust Of Medical Professionals	187	.00	12.00	3.904	3.710
Distress	187	.00	12.00	4.973	2.957



The demographic data of 187 nursing students shows that the majority (42.8%) were 19 years old, followed by 31.6% aged 20 years, 14.4% below 18 years, and 11.3% aged 21 years or above. Most participants were female (88.2%), while only 11.8% were male. A large proportion (89.8%) belonged to nuclear families, and 10.2% were from extended or joint families. Regarding family income, 43.9% had an income of ₹10,000 or less, 34.2% between ₹10,001–₹20,000, 10.7% between ₹20,001–₹30,000, and 11.2% above ₹30,000. Only 19.3% of students reported having previous knowledge about cyberchondriasis, while the majority (80.7%) had no prior awareness of the condition. **(Section 1)**

The analysis shows that students with previous knowledge about cyberchondriasis scored higher across all domains compared to those without prior knowledge. However, significant difference was observed only in the reassurance domain ($p = 0.001$) and the overall total score ($p = 0.01$), indicating a highly significant relationship. Students with prior awareness had a mean total score of 26.19, while those without had 22.49. Other domains such as compulsion ($p = 0.054$)**,** excessiveness ($p = 0.411$)**,** distress ($p = 0.71$)**,** and mistrust of medical professionals ($p = 0.185$) showed no statistically significant difference between the two groups. **(Section 2)**

cyberchondriasis among 187 nursing students. The highest mean score was observed in the excessiveness domain (Mean = 5.77, SD = 2.49), indicating frequent excessive searching for health-related information online. This was followed by distress (Mean = 4.97, SD = 2.96) and reassurance (Mean = 4.77, SD = 3.01), suggesting moderate emotional discomfort and repeated seeking of reassurance. Mistrust of medical professionals (Mean = 3.90, SD = 3.71) and compulsion (Mean = 3.79, SD = 3.13) showed relatively lower scores. Overall, results indicate varying levels of cyberchondriasis components among students. **(Section 3)**

Result: The analysis of the study will show that the majority of subjects will belong to the age group of 19 years (80%), followed by 20 years (59%), less than 18 years (27%), and 21 years or above (21%). In terms of gender, 88.2% of the subjects will be females, while 11.8% will be males. Regarding the type of family, 89.8% of subjects will belong to nuclear families, and 10.2% will come from joint or extended families. Most of the subjects (43.9%) will have a family monthly income of less than or equal to Rs 10,000, 34.2% will have an income between Rs 10,001–20,000, 11.2% will earn between Rs 20,001–30,000, and 11.2% will have a monthly income of Rs 30,000 or more.

The study will reveal that 80.7% of subjects will have no prior knowledge regarding cyberchondriasis, while 19.3% will have awareness about it. It will show that 20.86% of subjects will be severely affected by compulsion, 56.15% moderately affected, and 22.99% unaffected. In terms of distress, 24.60% will be severely affected, 67.38% moderately affected, and 8.02% unaffected. Regarding excessiveness, 32.08% will be severely affected, 65.77% moderately affected, and 2.1% unaffected. The study will indicate that 27.27% of subjects will be severely affected by reassurance, 63.10% moderately affected, and 9.62% unaffected. Lastly, 24.06% will be severely affected by medical mistrust, 49.73% moderately affected, and 26.20% not affected.

Discussion : A cross-sectional study included 104 patients who had searched online for medical information, selected from 155 approached at two orthopedic outpatient clinics over three months. After excluding 41 patients who never searched online and 10 who declined, participants completed the Cyberchondria Severity Scale, Intolerance of Uncertainty Scale, Short Health Anxiety Inventory, pain rating, and demographic questionnaires. Linear regression analyses examined whether intolerance of uncertainty predicted cyberchondria, and whether cyberchondria predicted health anxiety, using causal language to describe statistical mediation despite the observational study design[1].

A study in Israel invited nurses from a general hospital (16.2%), nursing home (21.0%), and geriatric medical center (25.0%) to complete the eHealth Impact Questionnaire ($\alpha = 0.95$) between February and March 2018, with a 40.3% response rate (121/300). Nurses using social media as their primary source for general information showed more positive attitudes toward online medical information than those using other sources. Additionally, nurses' perceptions of the utility of online medical information for personal needs improved with better self-reported health status[2].

A study of 529 participants (M: F 275:254; mean age 36 years) found that 65.2% preferred the internet for health information, mainly regarding treatments, medication side effects, alternative therapies, diets, and others' experiences due to its quick availability and low cost. About 350 participants self-diagnosed, with 84.5% diagnoses ruled out by doctors, yet many sought second opinions. Around 31% adjusted medications, 94.5% tried unreliable therapies, and all followed online dietary advice. Searching increased anxiety in 74% and confusion in 21%, affecting psychological health[3].

An email-based cross-sectional survey was conducted among 205 employees from various IT firms in Chennai. Data were analyzed using k-means cluster analysis to categorize participants based on four sub domains of cyberchondria. The study revealed a 55.6% prevalence of cyberchondria, with excessiveness in online searching and reassurance-seeking as dominant patterns. Cyberchondria was significantly and negatively associated with general mental health (adjusted OR 0.923; 95% CI 0.882–0.967) even after controlling for age, gender, education, and years of service[4]

A questionnaire-based study using the Cyberchondriasis Severity Scale was conducted in three tertiary care hospital emergency departments in Islamabad, Pakistan, from March to May 2019. Of 958 participants, 304 responded (31.4% response rate). Among them, 62.17% reported frequently searching the internet for unexplained bodily sensations, while 11.18% trusted online self-diagnosis over their doctor's opinion. Furthermore, 80.26% experienced panic after online searches, and 10.52% had difficulty sleeping due to anxiety from perceived medical conditions, highlighting the growing concern of cyberchondriasis[5].

A descriptive cross-sectional study among 794 students from a Vocational School of Health Services assessed sociodemographic characteristics, COVID-19 symptoms, the Cyberchondria Scale, and Health Anxiety Inventory. Students who believed they had COVID-19 had lower anxiety scores than those who did not. Another survey of 500 participants confirmed that higher health anxiety led to more frequent, longer, and distressing online searches. A Pune study of 171 engineering students (mean age 19.77) found 75% experienced compulsion, 92% distress, high excessiveness and reassurance, and 19% mistrust of medical professionals[6].

Conclusion:

The youth of today are growing up with new technology and hence they often try to rely on internet for information. The internet is evaluated as the world largest medical library. The internet makes it much easier for people to get health information and hence become more involved in their health care. Young generation is more likely to browse their symptoms on internet than adults. This study was conducted to find the prevalence of cyberchondriasis on nursing students.

Recommendation : Our study sample size was 187 students. The cyberchondriasis is most effected among adolescent and adults for that it need to do more effective for that :

1. Conduct regular workshops and seminars to educate nursing students on responsible online health information use and the risks of excessive self-diagnosis.
2. Integrate digital health literacy into the nursing curriculum to enhance students' ability to assess reliable and unreliable online health sources.
3. Provide counseling services for students experiencing anxiety or compulsive health-related internet searching to support their mental well-being.
4. Organize awareness programs to inform students about cyberchondriasis, its symptoms, and effective coping strategies.
5. Encourage students to consult qualified healthcare professionals instead of depending solely on online health information.
6. Train faculty members to recognize and address signs of cyberchondriasis among students through appropriate guidance and referrals.
7. Promote further research across diverse student populations to identify risk factors and design targeted preventive interventions.

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