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PREVALENCE OF CYBERCHONDRIA AND ITS RELATION TO HEALTH ANXIETY AMONG PHYSICAL THERAPY STUDENTS IN KARACHI, PAKISTAN: A CROSS-SECTIONAL STUDY

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ABSTRACT

Introduction: *The growing dependency on the internet for retrieving health-related information is thought to elevate anxiety levels and induce cyberchondria. Around 60% to 80% of internet users search for health information online. Students may be particularly susceptible to cyberchondria because of their easy access to medical information and resources.*

Objectives: *The study aimed to identify the prevalence of cyberchondria among physical therapy students and examine its relationship with health anxiety.*

Methods: *This cross-sectional study used convenience sampling to select physical therapy students from institutes in Karachi, Pakistan. Eligible participants were aged 18-25 years and enrolled in a physical therapy program. Students with diagnosed mental health issues, or taking psychiatric medications were excluded. Data was collected through online surveys and hard copy questionnaires. Cyberchondria was assessed through CSSS and health anxiety by using SHAI. The data analysis was done using SPSS 21.0.*

Results: *The mean age of the participants was 21.12 years (SD ±1.666). Out of 614 participants 491 were female and 122 were male. Most participants (531) showed moderate levels of cyberchondria, while 74 had severe and 9 had mild levels. A significant positive relationship was seen between cyberchondria and health anxiety with Pearson correlation coefficient 0.205 ($p<0.01$).*

Conclusion: *Awareness campaigns should be established to educate students about the dangers of excessive internet health searches, and mental health resources should be made available.*

Keywords: *cyberchondria, health anxiety, cyberchondria short severity scale (CSSS), short health anxiety inventory (SHAI).*

INTRODUCTION

Background

With the developing era of digital technology, internet is being used as a place of origin for health related-information (1). The internet is increasingly becoming an important factor in shaping our everyday life.

Health information seeking behavior involves purposeful gathering information about a disease or overall health status, utilized as a mean to manage stress associated with it(2). With a click of single button, individuals have fortune information about health conditions. Online health research comes with an opportunity to build up knowledge which help them to have better apprehension of medical diagnosis and treatment option(3). However, it can also lead to other circumstances characterized by heightened level of health anxiety and cyberchondria. There has been consistent suggestion that health related online searching might further intensify fear in individual who are prone to health anxiety(4). Exploring health information online have positive outcomes like such as adopting healthy lifestyle, however it can also lead to uncertainty about medical conditions due to concern about the accuracy and reliability of online information(5).

Despite the convenience to online information access, drawback like exposure to incorrect, conflicting and outdated data resulting to amplify health anxiety as a significant repercussion(2). Cyberchondria is describes as excessive health related online search that is linked with heightened level of health anxiety(6, 7). As individuals search internet for their common and potentially benign symptoms, they often progress to seeking out more drastic and uncommon symptoms, a development influenced by factors such as how information is ranked, the use of terminology, and the user's preference towards more grave explanations of their ailments(8). Cyberchondria may lead to range of adverse effects including fear, stress, depression of symptoms and increased risk of anxiety(9). Cyberchondria has been correlated with numerous element including age and gender(10). Moreover, the jump in smartphone addiction, its availability worldwide and easy reach to information, is also defined as significant risk factors for cyberchondria(9, 10). Understanding cyberchondria is important to acknowledge how the internet is influencing our mental health and daily life. Cyberchondria could lead to notable public health challenges, interfering with individual's work performance, personal relationships, and utilization of medical and mental resources(11). In contrast, for the majority of people, cyberchondria causes significant health issues such as self-diagnosis, with high risk of self-medication(12). Individuals who spent more time in seeking health related online information may experience heightened distress, encouraging them engage in more online searches in hunt for relief(5). Some studies have indicated simultaneous presence of cyberchondria, health anxiety, distress and depression, there has been insufficient evidence on examining their association with related constructs like "general" anxiety and depression(13). The act of seeking medical information online can lead to distress, which may result in profound outcomes for the users, including internet addiction, heightened anxiety and hypochondria(14).

Anxiety about health can result in persistent fear of being and becoming unwell, this phenomenon is known as hypochondria(15). In the literature, cyberchondria is delineated as a form of hypochondria, characterized by constant, unspecified and intense concern about one's health; consequently, some researches have revealed strong association between cyberchondria and hypochondria (correlation ranging from r=0.33 to 0.62) as well as with overall anxiety and stress level, particularly concerning the general health anxiety index and its components, namely, perceived likelihood of illness and negative ramifications of illness(16). Cyberchondria could also perceived as a novel psychiatric disorder, a distinct form of hypochondriasis, or a specific manifestation of health related anxiety(17). The definition of cyberchondria clearly revolve around the behavior of online information about health issues; it doesn't suggest that cyberchondria is a distinct condition or an independent diagnostic category, and it would be delusive to view it solely as a modern replication of hypochondriasis(18).The eleventh edition of the international classification of disease (ICD-11) mentions that individual experiencing hypochondriasis have a significant inclination to search for medical information online(19). Medical students are thought to be more prone to health anxiety, known as "medical student syndrome," stem from the idea that their exposure to medical information lead to excessive concern about their health, resulting to their vulnerability to mental health conditions, with a predominance of high anxiety level ranging from 40% to 79%(20). Medical students are encounter to vast amount of clinical information, leading them to misunderstand their own symptoms(21).

Cyberchondria is characterized by four main dimension: repeated medical information searching (excessive behavior), increased negative emotions (distress), disarrangement in daily life (compulsive behavior), and provoke reassurance seeking(22). Cyberchondria may constitute a behavior aimed at seeking reassurance, driven by increased level of anxiety close to that seen in anxiety disorder, such as panic disorders or anxiety

disorders(6). Consistently, individual with cyberchondria demonstrate obsessive doubts about their health and an irresistible urge to inordinately search for medical information, with a frequent association with obsessive compulsive behavior(23). Some studies have shown that following the review of health information online, certain amount of individuals experience a sense of empowerment about their personal health, while others may feel agitated and inundated(1). Variety of theories and conceptualization have been created that concentrate on particular elements, including search process itself, cognition, emotional or behavioral repercussion(24). Cyberchondria seems to significantly impact how healthcare services are exercised and its correlation with emotional distress and reduced functioning(25). Cyberchondria severity scale (CSS)(26) was develop by McElroy and Shevlin as a self-administered psychometric tool to assess health anxiety resulting from excessive health related internet searching(27). It was anticipated that cyberchondria severity scale (CSS) is multifaceted, encircling both anxiety and compulsive searching behaviors(26). The scale compromise of 4 subscales; compulsion, distress, reassurance and excessiveness. The validity of cyberchondria severity scale (CSS) was confirms through its convergence and divergence with entrenched measures of anxiety, distress, and depression, showing moderate correlation(28). The validity of CSSS has been confirmed in different population, demonstrating strong reliability with (α = 0.9)(26).

Early researches indicates that seeking health information online might harm doctor patient relationship, probably fostering increased expenses through behavior like “doctor shopping” (29). Some individuals may endeavor to manage stress induced by cyberchondria by staying away from interaction with healthcare professionals, potentially resulting in a failure to follow necessary healthcare and subsequent adverse outcomes(30). There is a negative impact of online searching to patient and clinician relation, the information gain from internet can stand against consultant’s authority which can make a conflict between the patient and consultation which could lead the patient to search for second option(30). Therefore, healthcare professional should be aware of how cyberchondria affects patient behavior and communication, they should also address any misinformation that patient may have found online and offer appropriate counsel and comfort.

Anxiety is the most common mental health issue among young people. It is characterized by misdirected worry and interference with daily functioning. It is defined by muscle tension, exhaustion, poor concentration, sadness, irritability, and restlessness, dry mouth and palpitations are the most common symptoms associated with anxiety(31). Anxiety negatively affects a person's ability to operate and overall wellbeing(32).An ongoing concern for one's wellbeing and the possibility of getting sick is known as health anxiety(33).Though it is typified by fear of illness rather than conviction of illness, health anxiety is related to hypochondriasis(31). In a period when individuals are taking greater ownership of their health monitoring, health anxiety has grown in importance as a clinical and public health concern(33). Significant positive relationships with age and anxiety indicate that anxiety disorders related to health are more common in older persons than in younger adults(34). Health anxiety is typically linked to panic disorders as well(35).

Even though it's currently considered a somatoform disorder, cognitive-behavioral models see hypochondriasis as a more extreme form of health anxiety. They view it as a severe manifestation of worrying about health. The Short Health Anxiety Inventory (SHAI) is a tool that's based on this perspective. It measures health anxiety symptoms at different levels of severity. It's a way to assess and understand how much someone is experiencing health anxiety(35). Primary hypochondriasis is a condition that we don't fully understand yet, and there isn't a widely accepted effective treatment for it. But there's this cognitive-behavioral formulation that helps us understand the psychological processes and factors that contribute to the development and persistence of the condition. This formulation can also explain how health concerns develop in people who don't have hypochondriasis. By modifying these factors, we might be able to find an effective treatment for primary hypochondriasis. Some case studies have shown success with cognitive-behavioral treatment strategies based on this formulation, but more research is needed to evaluate them systematically(36). The idea of health anxiety (HA) can actually help us understand and make sense of the fears that people with chronic diseases often have. It's like a common thread that ties together their worries about their illness getting worse or their symptoms coming back. HA provides a conceptual perspective that

helps us see how these fears are connected and can be addressed. It's a way to understand and support those who are dealing with chronic diseases(37). Studies found that health anxiety is linked to using coping and emotion regulation strategies that aren't so effective, like suppressing emotions. And interestingly, they also found that the behavioral aspects of health anxiety, like constantly seeking reassurance, might actually be a way to compensate for difficulties in using more helpful cognitive coping strategies. It's like a way to try and manage the anxiety, even if it's not the most effective approach(38).

Most definitions of cyberchondria focus on the idea that searching for health information online can lead to increased distress or anxiety. There are two main theories about cyberchondria: one suggests that people seek reassurance by constantly looking up health information, and the other suggests that they have specific beliefs about their thoughts and worries. Cyberchondria is related to health anxiety, problematic internet use, and symptoms of obsessive-compulsive disorder. This has implications for people's daily functioning and how they use healthcare services. There are some suggestions on how to prevent and manage cyberchondria, but they haven't been tested yet. Interest in cyberchondria has been growing, and researchers are trying to figure out if it can be considered its own separate thing. The main thing about cyberchondria is to understand its impact better and come up with effective ways to manage it. It's all about finding evidence-based approaches to help people have better control over their cyberchondria(11).

The internet gives us access to a ton of information and different opinions from all over the world, whenever we want and at a low cost. It's no surprise that more and more people are using it to look up health-related questions. In fact, around 60% to 80% of internet users search for health information online(24). There are definitely some benefits to searching for health information online. It can make us feel empowered and in control of our own health. It also allows us to play a more active role in our relationships with doctors. Plus, it opens up new possibilities for illness prevention and healthcare, like using individual search queries to develop warning systems for conditions like cancer. But, like with anything, there can be some downsides too. Some people may experience increased worries or anxiety after looking up symptoms or illnesses online. And sometimes, it can lead to an increase in using healthcare resources. It's all about finding that balance and using the internet as a tool for information without letting it overwhelm us.

This study aims to bring attention to this most neglected/overlooked condition of cyberchondria and health anxiety in physical therapy students, they might be particularly susceptible to cyberchondria, which is the compulsive search for health related information on the internet because of their easy access to medical information and resources. Their wellbeing and performance may be impacted by this ongoing exposure, which can worsen health concerns. Encouraging balanced information seeking behavior and offering assistance in managing anxiety are critical for this demographic.

Significance of the problem

Physical therapy students may be particularly susceptible to cyberchondria, which is the compulsive search for health related information on the internet because of their easy access to medical information and resources. Their wellbeing and performance may be impacted by this ongoing exposure, which can worsen health concerns. Encouraging balanced information seeking behavior and offering assistance in managing anxiety are critical for this demographic.

Objective of the study

The aim of the study is to:

- To identify the prevalence of cyberchondria among physical therapy students.
- To assess the relationship between cyberchondria and health anxiety.

Hypothesis

- **Null hypothesis (H_0):** There is no significant association between cyberchondria and health anxiety among the physical therapy students.
- **Alternative hypothesis (H_1):** There is significant association between cyberchondria and health anxiety among the physical therapy students.

Operational Definitions

1. **Cyberchondria:** Cyberchondria is describes as excessive health related online search that is linked with heightened level of health anxiety(6, 7).
2. **Hypochondria:** Anxiety about health can result in persistent fear of being and becoming unwell, this phenomenon is known as hypochondria(15).
3. **Health anxiety:** An ongoing concern for one's wellbeing and the possibility of getting sick is known as health anxiety(33).
4. **The Cyberchondria Short Severity Scale (CSSS)**: This is a quick assessment of the severity of excessive online health-related searches, as well as the resulting discomfort and reassurance-seeking activities(26).
5. **Short Health Anxiety Inventory**: The Short Health Anxiety Inventory is a tool for measuring health anxiety, with an emphasis on people's concerns about their health and sensitivity to physical sensations(39).

Methodology

Study Design

This was a cross-sectional study which was conducted from March 2024 to September 2024. It allows the observation of more than one variable at a single point of time.

Study Population/Settings

The data were collected in multiple physical therapy institute in Karachi, including Liaquat National School of Physiotherapy, Jinnah Postgraduate Medical Centre, Indus University, University of Karachi, Dow University of Health Sciences, Ziauddin University, United College of Physical Therapy, Pakistan Institute of Rehabilitation and Medical Sciences.

Sampling Technique

Convenience base sampling technique was used and survey based questionnaire was distributed among physical therapy students.

Sample Size

The estimated sample size was calculated through the WHO sample size calculator. The total sample size calculated was 822. The estimation was based on the prevalence of 26.6% obtained from a reference research(40), with a confidence interval of 95%. As the nature of result was multicenter the margin of error was considered to be 3%. However, total responses collected were 614 out of 822 due to limited availability of time. A total of 350 forms were distributed, out of which 337 forms were collected back and 13 forms were missing and total online responses were 277. Out of these 614 respondents 122 were male and 492 were female.

Inclusion Criteria

The study includes both male and female undergraduate physical therapy students from different physical therapy institutes and the age of the candidates lies in the range between 18 years to 25 years.

Exclusion Criteria

Students who are clinically diagnosed with any chronic medical conditions including all mental illnesses and any condition for which they are taking medications for more than 3 months were excluded from the study.

Study Parameters

The CSSS is an assessment instrument to measure hypochondria results from exaggerated online health searches (McElroy & Shevlin, 2014). The questionnaire consists of 15 questions for evaluating

cyberchondria. The scale compromise of 4 subscales; compulsion, distress, reassurance and excessiveness. The questions of scale are scored on a 5 point Likert- style ranking, ranging from 1= never to 5= always. The increase in score across the scale and its sub scores suggests an increase inclination towards seeking health information and experiencing anxiety, which in turn indicates increase in cyberchondria level. The validity of CSSS has been confirmed in different population, demonstrating strong reliability with ($\alpha = 0.9$)(26).

Short Health anxiety inventory (SHAI) adapted into Polish by Kocjan (2016), was used to measure health anxiety (Salkovskis et al., 2002). The questionnaire consists 18 questions, each presenting four statement from which participants select the one that accurately reflect their behavior towards health. For example: (a) "I don't worry about my health," (b) "I occasionally worry about my health," (c) "I spend much of my time worrying about my heath", (d) "I spend most of my time worrying about my health". The questions of scale are scored on 4 point Likert-style ranking, ranging from 0 to 3. The result will be interpreted by using the total score of the 18 questions where; a score of < 17 indicates no health anxiety, a score of 18 - 24 indicates mild health anxiety, a score of 25 - 30 indicates moderate health anxiety, and a score of > 30 indicates severe health anxiety. The scale has demonstrated good levels of reliability, as reported by the author ($\alpha = 0.93$)(39).

Ethical Considerations

Participants were provided with complete information regarding the study, including the purpose and objectives of the study and were allowed to clear any queries regarding the study either directly or through the emails provided. Participants were asked for their consent before starting the study, which ensures the voluntary participation of the participants. Each participant was assigned a code number to maintain confidentiality of participants. The data will be kept anonymous for analysis, all the information of the participants will remain confidential, and no manipulation will be done on the recorded data.

Data Collection Procedure

All the physical therapy students enrolled in physical therapy institutes in Karachi, Pakistan were approached for this study. Data collection was done through hybrid model including both online surveys and hard copy questionnaires which was distributed according to convenience. The questionnaire consisted of 2 sections which had a total of 33 questions, divided into two sections. Section 1 has 15 questions and section 2 comprises of 18 questions which addresses the objective and research questions. Prior to attending the survey, the participants were asked to record the consent and the demographic details of the participants were collected separately in the demographic section of the questionnaire.

Data Analysis Procedure

SPSS (Statistical Package for Social Science) version 21.0 was used to analyze the data. All the primary data obtained from the questionnaire will be evaluated on the basis of primary analysis including the mean, frequency, percentages, and standard deviation. Further the secondary analysis and hypothesis testing was done by the application of bi-variate Pearson correlation test. The confidence interval was 95% with the p value ≥ 0.05.

Result

Demographic Characteristics

In the study "Prevalence of cyberchondria and its relation to health anxiety among physical therapy students in Karachi, Pakistan" 614 participants were approached, out of which 492 (80.1%) were female participants and 122 (19.9%) participants were male. The participant's age was between 18 years to 25 years reported the mean age of respondents as 21.12 years (SD ±1.666). Majority of students were from first year 160 (26.1%), followed closely by 150 (24.4%) second year students, 120 (19.5%) were from third year, while fourth and fifth year students accounted for 109 (17.8%) and 75 (12.2%) respectively. A significant portion of the participants 319 (52.0%) were from Liaquat National school of physiotherapy which indicates it is the largest contributor of the sample. Other institutes include JPMC with 100 (16.3%), south city institute of physical therapy and rehabilitation with 67 (10.9%), a several others, including UMDC, Ziauddin university, DOW

university of health sciences, Bahria university, and Indus university, which contributed as the smaller percentages to the sample (table 1).

Table 1: DEMOGRAPHIC CHRACTERISTICS OF PARTCIPANTS

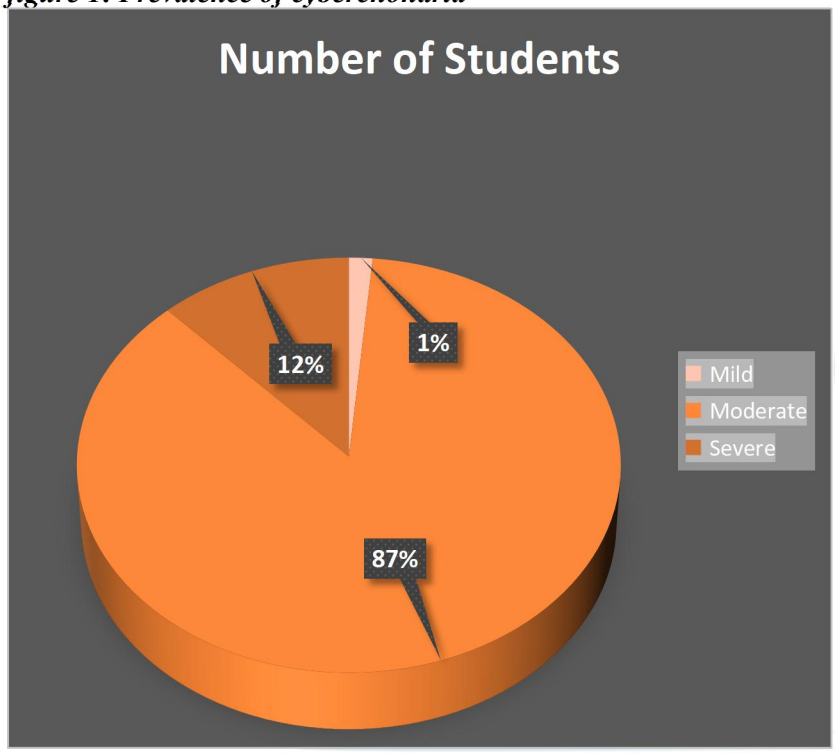
PARTICIPANT CHARACTERISTICS		**FREQUENCY**	**PERCENTAGE**
GENDER	Male	122	19.9%
	Female	492	80.1%
AGE (Years) Mean Age (21.12 years)	18	29	4.7%
	19	91	14.8%
	20	117	19.1%
	21	107	17.4%
	22	132	21.5%
	23	95	15.5%
	24	33	5.4%
	25	10	1.6%
ACADEMIC YEARS	FIRST YEAR	160	26.1%
	SECOND YEAR	150	24.4%
	THIRD YEAR	120	19.5%
	FOURTH YEAR	109	17.8%
	FIFTH YEAR	75	12.2%
INSTITUTES	LNSOP	319	52%
	JPMC	100	16.3%
	UMDC	14	2.3%
	SOUTH CITY	67	10.9%
	INDUS UNIVERSITY	37	6%
	ZIAUDDIN UNIVERSITY	12	2%
	DOW	9	1.5%

	PRIMS	11	1.8%

Prevalence of Cyberchondria

The distribution of cyberchondria severity among 614 participants indicates that the majority 86.5% (531 students) fall into moderate category which shows a widespread moderate level of concern related to online health information. While 12.1% (74 students) experience severe cyberchondria and 1.5% (9 students) have mild cyberchondria levels (Figure 1). These exhibits moderate tendencies towards cyberchondria among most of Physical therapy students, with fewer experiencing extreme or minimal effects.

figure 1: Prevalence of cyberchondria



Association Between Health Anxiety and Cyberchondria

The correlation analysis aimed to examine the association of cyberchondria and health anxiety among physical therapy students which revealed a statistically significant positive relationship with a Pearson correlation coefficient 0.205 ($p<0.01$) (Table 2). With a sample size of 614 participants the result provides strong evidence of an association of these two variables. This suggest that as cyberchondria score increase, health anxiety levels also rise among physical therapy students.

Table 2: Association between health anxiety and cyberchondria

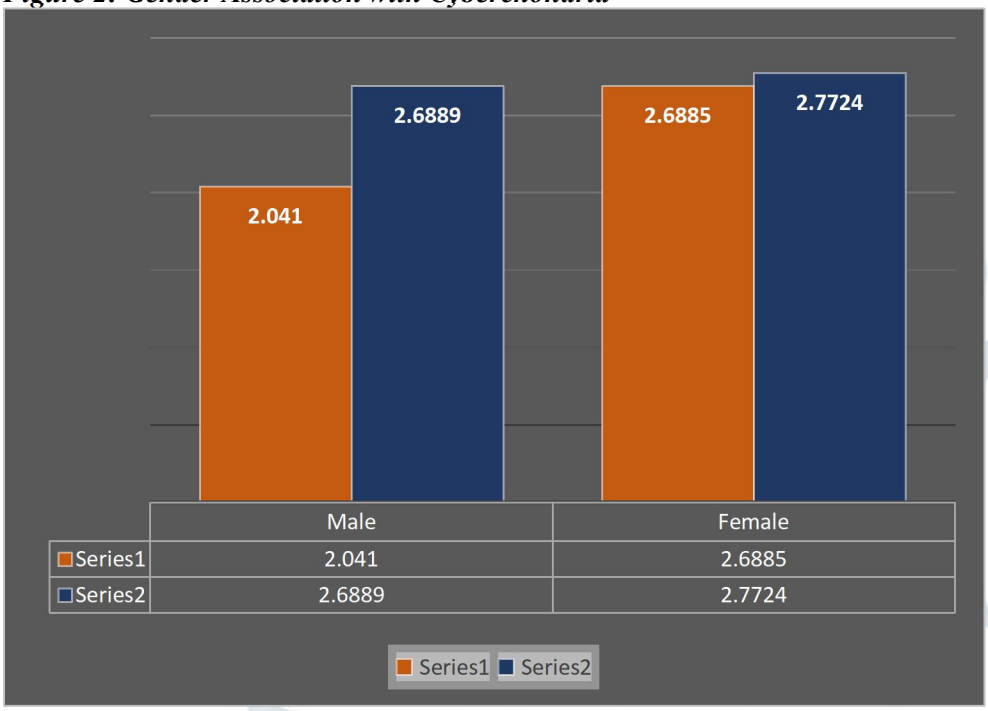
N		Stages of severity of health anxiety				Total	P-VALUE
		No Anxiety (<17)	Mild Anxiety (18-24)	Moderate Anxiety (25-30)	Severe Anxiety (>30)		
Stage of severity of cyberchondria	Mild (<18)	0	6	1	2	9	<0.01
	Moderate (19-45)	0	19	93	419	531	
	Severe	0	0	6	68	74	

	(>45)					
Total		0	25	100	489	614

Gender Association with Cyberchondria

The group statistics reveal differences in cyberchondria and health anxiety scores between male and female physiotherapy students. Males (N=122) had a mean cyberchondria score of 2.041 (SD=±0.32518), while females (N=492) reported a higher mean score of 2.6885(SD=±0.49128). However, the difference in health anxiety scores was not statistically significant (t (612) = -1.608, p=0.108) (Figure 2). The result shows that female students may experience higher level of cyberchondria than the males, while health anxiety levels don't significantly differ by gender.

Figure 2: Gender Association with Cyberchondria



Discussion

Comparison with existing Research

The current study is aimed to investigate to the prevalence of cyberchondria and its relationship with health anxiety among physical therapy students in Karachi, Pakistan. The findings of the study align with existing research showing that excessive health-related internet use can amplify anxiety, additionally higher levels was observed with female gender(27, 41-43).

The study included 614 individuals, with an average age of 21.12 years. The study analyzed that a substantial part of our data suggests moderate levels of cyberchondria (86.5%) in the students while little percentage (12.1%) of students outlined severe cyberchondria and only (1.5%) reported mild levels(41). Most of the students engage with online health information have moderate concern about their health, instead of being extremely anxious or dispassionate about their health.

Along with the high prevalence of moderate cyberchondria, the study uncovered a statistically significant relationship between cyberchondria and health anxiety. The positive correlation (Pearson correlation coefficient = 0.205, $p<0.01$) indicates that as the cyberchondria increase, the level of anxiety may also rise (42, 44). The excessive online health inquiries may exacerbate health-related anxieties, potentially leading to maladaptive behaviors and increased psychological distress.

The study revealed that female students exhibited higher levels of cyberchondria compared to males (2.6885 vs. 2.041)(27, 43). However, there was no significant difference in health anxiety levels between genders. This discrepancy suggests women are more inclined to seek health information online, consistent with previous research. Nonetheless, increased online health searches did not translate to heightened anxiety in women, aligning with prior studies that observed gender differences in health information-seeking behaviors without corresponding anxiety differences. Female students searched online for health information more than males, but this didn't necessarily mean they were more anxious about their health."

Limitations

Several limitations have been acknowledged in interpreting these findings. The study's cross-sectional design restricts causal inferences, meaning we cannot conclude whether cyberchondria leads to health anxiety or vice versa. The sample was also limited to students from Karachi, limiting the generalizability of findings to broader populations of physical therapy students or students in other regions. Additionally, self-reported measures may introduce biases, as participants might underreport or over report their cyberchondria and health anxiety levels.

Strength of the Study

This study has several notable advantages, its large sample size of 614 participants yields reliable data, and the diverse representation from multiple Karachi-based institutions enhances local applicability. The clear research objectives facilitate targeted analysis, while statistical analysis using Pearson correlation coefficient effectively identifies variable relationships. The findings significantly contribute to existing literature, revealing a positive correlation between cyberchondria and health anxiety, and gender differences in cyberchondria levels.

Weakness of the Study

However, the study faces several limitations. The cross-sectional design restricts causal analysis, and geographic confinement to Karachi limits broader applicability. Self-reporting biases, age and profession homogeneity (18-25 years, physical therapy students), and reliance on quantitative data without qualitative context narrow the study's scope. Additionally, the absence of a control group and limited exploration of confounding variables further restrict analysis.

Conclusion and Recommendations

In conclusion, this study highlights a high prevalence of moderate cyberchondria (86.5%) among physical therapy students in Karachi, with a positive correlation between cyberchondria and health anxiety. Additionally, the study found that female students engage more in online health searches than males, though this did not significantly increase their health anxiety.

The study recommends that educational institutions hold workshops and courses to teach students how to critically analyze online health information and promote responsible internet use. Awareness campaigns should be established to educate students about the dangers of excessive internet health searches, and mental health resources should be made available. Clear rules for recognizing reliable internet sources are required, and future research should concentrate on long-term studies in order to comprehend causal linkages. Integrating supporting technology that allows breaks during health-related searches may also assist lessen obsessive behavior.

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Appendix-I CONSENT FORM CODE#_____

TITLE: Prevalence of cyberchondria and its relation to health anxiety among physical therapy students in Karachi, Pakistan: A cross sectional study.

INVESTIGATOR'S DETAILS:

Principal Investigator: Nida Zakir.
Other Investigator: Sadia Iqbal, Yamna, Nadia Lashari.
Department: Liaquat National School of Physiotherapy (LNSOP).

Demographic information:

Name: _____ Age: _____
Gender: Male Female
Institute Name: _____
Academic year: _____
Contact Number: _____

PURPOSE OF THIS STUDY: Physical therapy students are susceptible to cyberchondria because of their easy access to health related information and resources. The purpose of this study is to investigate the prevalence of cyberchondria in physical therapy students and its association to health anxiety.

STUDY PROCEDURE: A questionnaire will be given in which your demographic data and questions of cyberchondria severity shortened scale and short health anxiety inventory scale will be asked.

POTENTIAL RISKS AND DISCOMFORTS: The study will cause no risks during and after the completion of our research.

POTENTIAL BENEFITS: There will be no direct benefit to you for your participation in this study. However, people who participate in this study will have a better understanding of cyberchondria and its association with health anxiety.

CONFIDENTIALITY: every effort will be made by the researcher to preserve your confidentiality. Your participation in this research will be kept anonymous. Furthermore, to keep your identity confidential each participant will be provided with a code number written on each document.

RIGHT TO WITHDRAW: Your participation is completely voluntary. You have a right to ask questions at any given point. Moreover, you have the right to withdraw from this study even after signing the consent form. If you withdraw from the study before data collection is completed, your data will be returned to you or destroyed.

I have read and understood the above provided information. I also understand that my participation is voluntary and I have the right to withdraw at any time. I voluntarily agree to participate in this research program.

PARTICIPANT SIGNATURE AND DATE: _____
INVESTIGATOR SIGNATURE AND DATE: _____

Appendix-II QUESTIONNAIRE

PART 1 CODE#_____

CYBERCHONDRIA SEVERITY SCALE (CSS)	Never	Rarely	Sometime	Often	Always
If I notice an unexplained bodily symptom I will search for it on the internet.					
I am looking for the same symptoms on the internet.					
The internet search for information about symptoms or suspected disease disturbs the search for other online information (e.g. my work, studies, or school)					
The internet search for information about symptoms or suspected disease disrupts my online leisure activities (e.g. streaming movies)					
I attach more importance to my doctor's assessment than my online research.					
I get panicked when I read online that a symptom that I have is a rare or serious condition.					
The internet search for information about symptom or suspected disease disrupts my work on the computer (e.g. writing mails, working on documents or calculation)					
I discuss the results of my online research with my family doctor or pharmacist.					
After looking for information about symptoms or suspected disease, I feel more anxious and stressed than before.					
The internet search information about symptoms or suspected disease leads me to a specialist.					
It soothes me to discuss the online information about suspected disease with my family doctor.					
I trust the diagnosis of my home doctor than my own self-diagnosis.					
When I search for symptoms or disease online, I visit both trustworthy sites and/or lay forums.					
After looking for information about symptoms or suspected disease, I have difficulty falling asleep.					
If my house doctor considers the results of my own online research to be wrong, I stop worrying about it.					

PART 2: SHORT HEALTH ANXIETY INVENTORY (SHAI) **CODE#_____**

Q1: I worry about my health.
- Never
- Occasionally
- Much of the time
- Most of the time

Q2: Compared to other people my age I noticed aches and pains.
- less than most other people
- as much as most other people
- more than most other people
- in my body all the time

Q3: Which statement best describes your awareness of bodily sensations or changes?
- As a rule I am not aware of bodily sensations or changes
- Sometimes aware
- Often aware
- Constantly aware

Q4: I can resist thoughts of illness.
- Without a problem
- Most of the time
- I try to resist thoughts of illness but am often unable to do so
- Thoughts of illness are so strong that I no longer even try to resist them

Q5: I am afraid of having a serious illness,
- Not at all
- Sometimes
- Often
- Always

Q6: I have images (mental pictures) of myself being ill
- Never
- Occasionally
- Frequently
- Constantly

Q7: I have difficulty taking my mind off thoughts about my health
- Never
- Sometimes
- Often
- Always - Nothing can take my mind off thoughts about my health

Q8: If my doctor tells me there is nothing wrong I am
- Lastingly relieved
- Initially relieved but the worries sometimes return later
- Initially relieved but the worries always return later
- Not relieved if my doctor tells me there is nothing wrong

Q9: When I hear about an illness I think I have it myself
- Never
- Sometimes
- Often
- Always

Q10: If I have a bodily sensation or change I wonder what it
- Never
- Sometimes
- Often

- Always

Q11: I usually feel my risk of developing a serious illness is

- Very low
- Fairly low
- Moderate
- High

Q12: I think I have a serious illness

- Never
- Sometimes
- Often
- Usually

Q13: If I notice an unexplained bodily sensation I

- Don't find it difficult to think about other things
- Sometimes find it difficult to think about other things
- Often find it difficult to think about other things
- Always find it difficult to think about other things

Q14: My family or friends would say

- Do not worry enough about my health
- Have a normal attitude to my health
- Worry too much about my health
- Am a hypochondriac

Q15: For the following questions, please think about what it might be like if you had a serious illness of a type which particularly concerns you (such as heart disease, cancer, multiple sclerosis, etc). Obviously you cannot know for certain what it would be like; but please give your best estimate of what you think might happen, basing your estimate on what you know about yourself and serious illness in general. If I had a serious illness I would

- Still be able to enjoy things in my life quite a lot
- Still be able to enjoy things in my life a little
- Be almost completely unable to enjoy things in my life
- Be completely unable to enjoy life at all

Q16: If I developed a serious illness I think the chances that modern medicine would be able to cure me is

- Good
- Moderate
- Small
- No chance

Q17: A serious illness would ruin my life in

- Some aspects
- Many aspects
- Almost every aspects
- Every aspects

Q18: If I had a serious illness I would feel that I had

- Not lost my dignity
- Lost a little of my dignity
- Lost quite a lot of my dignity
- Totally lost my dignity