



Impact Of Cyberchondria On Psychological Well-Being: A Systematic Review

¹Vibha Chaudhary,²Dr. Ram Kumar Gupta

¹M.Sc. Nursing Final year student, ²Assistant Professor,
Mental Health (Psychiatric) Nursing, College of Nursing,
G.S.V.M Medical, College, Campus, Kanpur, Uttar Pradesh

***Corresponding Author:**

Vibha Chaudhary

M.Sc.(N) Final Year Student, Mental Health (Psychiatric) Nursing,
College of Nursing G.S.V.M Medical, College, Campus, Kanpur, Uttar Pradesh, India

Type of Publication: Original Research Paper

Conflicts of Interest: Nil

Abstract

Introduction: The widespread use of the internet has transformed health information-seeking behaviour among students. Excessive online searching for health-related information, known as cyberchondria, is associated with increased anxiety and psychological distress.

Aim: To systematically review the evidence on the prevalence, risk factors, and psychological, behavioural, and academic effects of cyberchondria among students.

Method: A systematic review was conducted following PRISMA guidelines. Studies were identified through Google Scholar, PubMed, and ResearchGate. Ten studies meeting the inclusion criteria were included. Data on study design, participants, assessment tools, and key findings were extracted and synthesized.

Results: Cyberchondria prevalence ranged from 10% to 40%, with higher rates among medical, nursing, and university students. It was consistently associated with anxiety, stress, depression, psychological distress, compulsive symptom checking, reassurance-seeking, sleep disturbances, reduced concentration, poor academic performance, internet addiction, and COVID-19-related anxiety. Intolerance of uncertainty, anxiety sensitivity, and perfectionism were common risk factors. The Cyberchondria Severity Scale (CSS) was the most frequently used assessment tool.

Conclusion: Cyberchondria is an emerging public mental health concern among students. Early identification, digital health literacy, and cognitive-behavioural interventions are recommended, while further longitudinal research is needed.

Keywords: Cyberchondria, Students, Anxiety Stress, Psychological Distress, Internet Addiction

Introduction

The internet has become one of the most accessible and widely used sources of health-related information worldwide. Students, particularly those in medical, nursing, and other health science disciplines, increasingly rely on online platforms to obtain information about symptoms, diseases, treatments, and preventive measures. While access to digital health information can improve health awareness and promote informed decision-making, excessive and repeated searching for health-related information may

have unintended psychological consequences. One such emerging phenomenon is cyberchondria, characterized by excessive online health searches that increase health anxiety rather than alleviate it. With the rapid growth of digital technology and easy access to health information, cyberchondria has become an important public health and mental health concern among students.

The rapid expansion of internet access has significantly changed how individuals, especially students, obtain health-related information. Globally, billions of users now rely on online platforms for medical information, with studies reporting that a large proportion of young adults frequently engage in health-related searches. Among students, particularly medical, nursing, and university populations, this behaviour has become routine due to easy accessibility, anonymity, and convenience. However, multiple studies consistently show that excessive online health searching is associated with increased anxiety, stress, and psychological distress. This behaviour is clinically described as Cyberchondria, a condition where repeated internet-based symptom checking intensifies rather than reduces health concerns. Comparative findings from systematic and cross-sectional studies indicate that between 10% and 40% of students may exhibit moderate to severe cyberchondria symptoms, depending on population and measurement tools. Across multiple student-based studies, cyberchondria has been strongly linked with internet addiction, health anxiety, and psychological distress. Evidence also shows that COVID-19 further intensified this cycle, as uncertainty, isolation, and increased online exposure led to higher levels of compulsive health searching among nursing and medical students. Studies consistently report that students with higher health anxiety tend to engage more frequently in online symptom checking, which further worsens anxiety and creates a reinforcing cycle of distress. Behavioural outcomes of cyberchondria among students include increased anxiety, depression, reduced academic concentration, sleep disturbance, and poor quality of life. Additionally, students often misinterpret normal bodily sensations as signs of serious illness, which increases reassurance-seeking behaviour and unnecessary medical consultations. Individual vulnerability factors such as intolerance of uncertainty, anxiety sensitivity, and perfectionism further increase susceptibility to cyberchondria. These psychological traits, combined with unrestricted access to online health information, make students a high-risk population. To measure this phenomenon, the Cyberchondria Severity Scale (CSS) developed by McElroy and Shevlin is widely used and validated across studies to assess excessiveness, distress, compulsion, and reassurance-seeking behaviour associated with online health searches.

Need for the Review

Although several primary studies have investigated cyberchondria among different student populations, their findings vary regarding prevalence, associated psychological factors, behavioural outcomes, and academic consequences. Existing evidence is scattered across different settings and populations, making it difficult to obtain a comprehensive understanding of the overall impact of cyberchondria among students. Furthermore, limited systematic reviews have specifically synthesized evidence focusing on students, particularly integrating psychological, behavioural, academic, and internet-related outcomes. Therefore, a systematic review is needed to consolidate the available evidence, identify common risk factors and consequences, highlight research gaps, and provide evidence-based recommendations for prevention, early identification, digital health literacy, and future research.

Despite growing evidence, integrated research examining cyberchondria alongside internet addiction, anxiety, and academic impact remains limited, particularly in developing countries. Therefore, this systematic review aims to synthesize existing evidence on the effects of cyberchondria among students and to highlight its psychological, behavioural, and academic consequences for better intervention planning and digital health literacy improvement.

Objective:

The main objective of this systematic review is to examine research that explores the association between Cyberchondria and its effects on students' psychological, behavioural, and academic outcomes. In addition, it aims to identify the factors that explain this relationship, such as mediators (e.g., health anxiety, internet addiction), as well as those that influence its strength and direction, such as moderators (e.g., gender, frequency of internet use, and level of health literacy).

Method:

This study is a systematic review conducted to synthesize existing evidence on the effects of Cyberchondria among students. The review follows standard guidelines such as the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework.

Search Strategy:

A comprehensive and systematic search of the literature was conducted to identify relevant studies on Cyberchondria among students. Electronic databases including Google Scholar, PubMed, and ResearchGate were searched.

Inclusion criteria:

1. Studies conducted among students (school, college, or university level).
2. Studies examining Cyberchondria or its associated effects.
3. Studies reporting outcomes related to psychological, behavioural, academic, physical, or social effects.
4. Primary research studies (e.g., cross-sectional, observational, analytical designs).
5. Articles published in the English language.
6. Studies published between 2013–2026

Exclusion criteria:

1. Studies not focused on cyberchondria or not reporting its effects.
2. Review articles, systematic reviews, meta-analyses, editorials, letters, and case reports.
3. Studies with insufficient or incomplete data.
4. Duplicate publications or repeated data.

Selection strategy

1. Records identified through database searching (Google Scholar, PubMed, ResearchGate) = 4434
2. Duplicates removed = 34
3. Records after duplicates removed = 4400
4. Titles and abstracts screened = 4400
5. Records excluded (irrelevant topic, non-student population, review articles) = 4300
6. Full-text articles assessed for eligibility= 100
7. Full-text articles excluded (with reasons) = 90
8. Studies included in final systematic review= 10

Data extracted

From each study Author and year of publication, Study population, Study design and methods, Sample size, Assessment tools used (e.g., Cyberchondria Severity Scale), Key findings related to cyberchondria.

Result

A total of 10 studies were included in this systematic review on Cyberchondria among students.

The findings indicate that cyberchondria is highly prevalent and is associated with increased anxiety, stress, and depressive symptoms.

1. Prevalence of Cyberchondria among Students (2013–2026)

Across the included studies, prevalence ranged from 10% to 40%, varying by population and measurement tools. Studies by Santi NS & Sahoo J (2023), Sabir S & Naqvi I (2023), and Geetha G et al. (2025) reported higher prevalence among medical, nursing, and college students. Early conceptual work by Starcevic V (2013) also supports its increasing occurrence.

2. Psychological Effects (2022–2026)

Most studies, including Abu Khait A et al. (2022) and Akpinar CV et al. (2023), reported significant psychological impacts such as health anxiety, stress, and depression. Students engaging in frequent online health searches experienced persistent worry and fear of illness. Similar findings were observed in Hidayatullah HT et al. (2025).

3. Behavioural Effects (2022–2025)

Studies by El-Zoghby SM et al. (2024) and McElroy E & Shevlin M (2014) highlight strong associations with compulsive internet use, repetitive symptom checking, and reassurance-seeking behaviour. Many students relied heavily on online sources for self-diagnosis, reducing trust in healthcare professionals.

4. Academic Impact (2022–2026)

Research by Patanapu SK et al. (2022) and Budhiraja JK (2026) reported negative academic outcomes, including poor concentration, reduced productivity, sleep disturbances, and decreased academic performance. Students with higher cyberchondria showed increased distraction during studies.

5. Associated Risk Factors (2013–2024)

Key risk factors identified across studies include intolerance of uncertainty, anxiety sensitivity, perfectionism, and pre-existing health anxiety. Studies by Fergus TA (2013) and Abu Khait A et al. (2022) emphasize that these traits significantly increase vulnerability to cyberchondria.

6. Relationship with Internet Addiction and COVID-19 (2020–2024)

A strong positive association between cyberchondria, internet addiction, and COVID-19 anxiety was reported in studies by Akpinar CV et al. (2023) and El-Zoghby SM et al. (2024). Increased internet use during the pandemic amplified compulsive health searching and psychological distress among students.

7. Measurement of Cyberchondria (2014–Present)

Most studies used the Cyberchondria Severity Scale (CSS) developed by McElroy E & Shevlin M (2014). This tool measures key dimensions such as excessiveness, distress, compulsion, and reassurance-seeking behaviour, and has demonstrated reliability across different student populations.

Discussion

1. Overall Findings

The findings from included studies consistently indicate that cyberchondria is a growing mental health concern among students. Medical, nursing, and university students frequently engaging in online health searches show higher levels of anxiety, stress, and psychological distress. Across studies excessive health-related searching is strongly associated with worsening mental well-being.

2. Cyberchondria and Psychological Impact

Cyberchondria is strongly linked with increased anxiety, stress, and emotional instability. Students who repeatedly search for symptoms online often experience heightened fear of illness instead of reassurance. Studies also report associations with depression, sleep disturbance, and reduced quality of life, indicating a significant psychological burden.

3. Internet Addiction and Reinforcing Cycle

A consistent finding across studies is the strong relationship between cyberchondria and internet addiction. Excessive online searching creates a reinforcing cycle where anxiety leads to more searching, which further increases anxiety, worsening psychological distress over time.

4. Academic and Behavioural Effects

Cyberchondria negatively affects students' academic performance and daily functioning. reported reduced academic concentration, while other studies highlight poor sleep patterns, increased reassurance-seeking behaviour, and unnecessary medical consultations.

These behavioural changes interfere with learning and productivity.

5. Role of COVID-19 and Digital Exposure

The COVID-19 pandemic significantly intensified cyberchondria due to uncertainty, isolation, and increased reliance on digital platforms. Nursing and medical students were particularly affected due to increased exposure to health-related content and online learning environments, leading to greater vulnerability to anxiety and compulsive searching.

6. Psychological Risk Factors

Individual traits such as intolerance of uncertainty, anxiety sensitivity, and perfectionism contribute to higher risk of cyberchondria. These cognitive vulnerabilities increase misinterpretation of normal bodily sensations and strengthen maladaptive online health searching behaviour.

7. Measurement and Assessment

The Cyberchondria Severity Scale (CSS) remains the most widely used tool for assessing cyberchondria. It evaluates excessiveness, distress, compulsion, and reassurance-seeking behaviour. However, variability in study methods leads to differences in reported prevalence across populations.

8. Research Gaps and Future Directions

Most available studies are cross-sectional, limiting causal interpretation. There is also a lack of longitudinal and intervention-based research, especially in developing countries. Future studies should focus on preventive strategies, digital health literacy, and cognitive-behavioural interventions.

Implication:

1 Mental health screening in students

Findings suggest cyberchondria is strongly linked with anxiety, stress, and psychological distress among students. Therefore, early screening for health anxiety and compulsive online searching should be included in university mental health services.

2. Need for digital health literacy programs

Students often misinterpret online health information, increasing anxiety. Educational institutions should implement structured digital health literacy training to improve evaluation of online medical content.

3.Integration into nursing and medical curriculum

Cyberchondria is more prevalent among health science students due to repeated exposure to medical content. Curriculum-based interventions should include awareness of cyberchondria and safe internet use.

4. Psychological counselling and CBT interventions

Cognitive-behavioural approaches are effective in reducing maladaptive online health searching behaviour. Counselling services in colleges should focus on anxiety reduction and uncertainty tolerance.

5. Control of internet addiction behaviour

Cyberchondria is closely associated with internet addiction and smartphone overuse. Strategies to reduce screen time and promote healthy digital behaviour should be implemented.

6.Academic performance support

Studies show cyberchondria reduces concentration, increases distraction, and affects academic performance. Academic support systems should identify students with high anxiety and provide guidance.

7. Mental health policy development

Universities and health institutions should include cyberchondria as an emerging mental health concern in student wellness policies.

8. Early intervention in adolescents

Adolescents are highly vulnerable due to developmental and cognitive factors. School-based mental health interventions are essential for prevention.

9.Awareness campaigns

Public awareness programs should educate students about the risks of excessive online symptom checking and misinformation.

10. Future research direction: There is a need for longitudinal and interventional studies to better understand causality and effectiveness of preventive strategies.

Conclusion

cyberchondria negatively impacts students' mental well-being, academic performance, and quality of life.

Therefore, early identification and targeted interventions, including digital health literacy programs and psychological support strategies, are essential to reduce its effects. Strengthening awareness among students and integrating preventive measures within educational settings may help in mitigating this growing public health concern.

Recommendation:

Integrate Digital Health Literacy

1. Educational institutions should include digital health literacy programs in their curricula.
2. Help students critically evaluate online health information.
3. Reduce reliance on unverified online sources.

Provide Training on Safe Internet Use

1. Conduct training sessions on safe internet use.
2. Teach students how to identify credible medical information.
3. Prevent excessive and misleading online symptom searches.

Strengthen Mental Health Awareness

1. Enhance mental health awareness programs in schools, colleges, and universities.
2. Increase awareness about cyberchondria and its psychological consequences.

Improve Counselling Services

1. Ensure regular counselling services are available for students.
2. Identify early signs of cyberchondria, anxiety, and internet addiction.
3. Train school and college counsellors to manage health-related anxiety caused by online symptom searching.

Educate Students Through Healthcare Professionals

1. Healthcare professionals should educate students about the risks of excessive online symptom checking.
2. Encourage appropriate help-seeking behaviour instead of self-diagnosis through the internet.

Promote Multidisciplinary Collaboration

1. Encourage collaboration among educators, psychologists, and healthcare providers.

2. Develop structured intervention and prevention strategies.

Encourage Healthy Internet Usage

1. Promote healthy internet usage habits among students.
2. Teach effective time management strategies.
3. Conduct awareness campaigns on the psychological effects of excessive online health searches.

Promote Future Research

1. Conduct large-scale longitudinal studies, especially in developing countries.
2. Examine the long-term psychological, behavioural, and academic effects of cyberchondria.
3. Develop evidence-based prevention and intervention strategies.

References

1. Santi NS, Sahoo JP. Cyberchondria in medical students: an observational study. *Natl J PhysiologicalPharmPharmacol* 2023;13(1):1. doi:10.5455/njppp.2023.13.05224202202062022
2. Sabir S, Naqvi I. Prevalence of cyberchondria among university students: an emerging challenge of the 21st century. *J Pak Med Assoc.* 2023;73(8):1634–1639. doi:10.47391/JPKMA.7771
3. Geetha G, Shaji HJC, Arivukarasi A, Gangeshwari TK, Dhivya S. Prevalence of cyberchondria among students in selected colleges: a cross-sectional study. *J Neonatal Surg.* 2025;14(4s):861–866. Available from: <https://www.jneonatalurg.com/index.php/jns/article/view/1882>
4. El-Zoghby SM, Zaghloul NM, Tawfik AM, Elsherbiny NM, Shehata SA, Soltan EM. Cyberchondria and smartphone addiction: a correlation survey among undergraduate medical students in Egypt. *Middle East Curr Psychiatry.* 2024;99(1):7. doi:10.1186/s42506-024-00154
5. Akpınar CV, Mandiracioglu A, Ozvurmaz S, Kurt F, Koc N. Cyberchondria and COVID-19 anxiety and internet addiction among nursing students. *Curr Psychol.* 2023;42(3):2406–2414. doi:10.1007/s12144-022-04057-z
6. Abu Khait A, Mrayyan MT, Al-Rjoub S, Rababa M, Al-Rawashdeh S. Cyberchondria, anxiety sensitivity, hypochondria, and internet addiction: implications for mental health professionals. *Curr Psychol.* 2022;1–12. doi:10.1007/s12144-022-03815-3
7. Hidayatullah HT, Setiyowati AJ, Ramli M, Wahyuni F. Cyberchondria and adolescent mental health: school counseling interventions. *Bisma J Couns.* 2025;9(1):36–45. doi:10.23887/bisma.v9i1.90115.
8. Budhiraja JK. Impact of cyberchondria on anxiety and stress among students. *Int J Sci Res (IJSR).* 2026;15(2):179–183. doi:10.21275/SR26202205136.
9. Yao Z, Qin N, Shi S, Li X, Zhong Z. Cyberchondria among college students and associated factors: a latent profile analysis. *Sci Rep.* 2026;1067. doi:10.1038/s41598-026-44658-3
10. Patanapu SK, Sreeja CS, Veeraboina N, Reddy KV, Voruganti S, Anusha P. Prevalence and effect of cyberchondria on academic performance among undergraduate dental students: an institutional based study. *Ind Psychiatry J.* 2022;31(2):228–234. doi: 10.4103/ipj.ipj_27

Summary Of Included Studies

S. No.	Authors (year)	Title of the study	Population	Measurement/ Method	Key finding
1.	Santi NS & Sahoo JP (2023)	Cyberchondria in medical students	Medical students	Cyberchondria-related questionnaire	High online searching linked with increased anxiety and distress

2.	Sabir S & Naqvi I (2023)	Prevalence of cyberchondria among university students	University students	Cyberchondria Severity Scale (CSS)	Moderate to high prevalence; increased health anxiety
3.	Geetha G et al. (2025)	Prevalence of cyberchondria among college students	College students	Structured questionnaire	Significant proportion showed cyberchondria symptoms
4.	El-Zoghby SM et al. (2024)	Cyberchondria and smartphone addiction	Medical students	Survey scales (addiction + cyberchondria)	Strong link between smartphone addiction and cyberchondria
5.	Akpinar CV et al. (2023)	Cyberchondria and COVID-19 anxiety	Nursing students	Standard anxiety & internet addiction scales	COVID-19 anxiety increased cyberchondria levels
6.	Abu Khait A et al. (2022)	Cyberchondria , anxiety sensitivity, internet addiction	University students	Psychological assessment scales	Positive correlation between anxiety sensitivity and cyberchondria
7.	Hidayatullah HT et al. (2025)	Cyberchondria and adolescent mental health	Adolescents	Counselling-based assessment tools	Cyberchondria affects mental health, academic behaviour
8.	Budhiraja JK (2026)	Impact of cyberchondria on anxiety and stress	Students	Online survey tools	Significant increase in anxiety and stress levels
9.	Yao Z et al. (2026)	Cyberchondria among college students	College students	Latent profile analysis	Identified risk profiles linked with severe cyberchondria
10	Patanapu SK et al. (2022)	Effect of cyberchondria on academic performance	Dental students	Questionnaire-based assessment	Cyberchondria negatively affected academic performance

IDENTIFICATION OF STUDIES THROUGH DATA BASE

