

**Research Paper**

## **Cyberchondria and Health Anxiety among Adolescents**

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### **ABSTRACT**

This study examines cyberchondria and health anxiety among adolescents. Cyberchondria is conceptualized as a pattern of excessive and recurring online searches for medical information online, which may increase anxiety and distress and reinforcing a cycle of reassurance seeking behaviour. Convenience sampling was used to select 100 adolescents aged 13-19 years who were readily accessible and willing to participate in the study. Health anxiety involves continuous apprehension about possessing or contracting a severe disease, even in the absence of medical support for such concerns. Cyberchondria is positively associated with health anxiety, leading to persistent health concerns without medical evidence, which can impact both the individual and society. The study examined 100 adolescents (ages 13-19) using the cyberchondria severity scale (McElroy and Shevlin, 2016) and the Short Health Anxiety Inventory -18 to assess cyberchondria and health anxiety. Correlation and t-test were employed for statistical analysis. The results demonstrated a statistically significant positive correlation between cyberchondria and health anxiety, and gender wise difference were also found to be significant.

**Keywords:** *Cyberchondria, Health anxiety, Adolescents*

The present study examines the association between cyberchondria and health anxiety among the adolescent population. Cyberchondria refers to a clinical phenomenon in which has been used to describe excessive or repetitive online searching for health-related information that is associated with increased distress or health anxiety (McElroy & Shevlin, 2014). Previous research has statistically significant positive correlation between cyberchondria and symptoms of health anxiety symptoms, although its distinct impact as a public health concern remains uncertain. Health anxiety refers to fears and worries about

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**Received: September 08, 2026; Revision Received: October 08, 2026; Accepted: October 12, 2026**

one's physical health and well-being, cogitation about one's health being at risk, and an overall preoccupation with health (Asumundson, Taylor, Sevgur, and Cox, 2001). In the context of increasing internet use, health related concerns can be accompanied by repeated online searches for information, potentially creating a cycle in which anxiety motivates searching and the information obtained subsequently increases anxiety. Adolescents refer to the developmental period between 10 and 19 years of age (WHO, 2024). Adolescence is a developmental stage that begins with the onset of puberty and progresses toward physiological maturity. Adolescents, who are highly engaged with digital media, may develop irrational fears and heightened distress due to misinformation or over interpretation of symptoms. And in this scenario, it is must to study on it as it leads to 'health anxiety and cyberchondria'.

The relationship between cyberchondria and health anxiety has received increasing attention in psychological research. Agrawal et al. (2024) conducted a study on "The digital health dilemma: Exploring Cyberchondria, well-being and smart phone addiction in medical and non-medical undergraduates" among students aged 18 years or older from Indian universities or colleges. The findings demonstrated that greater severity of cyberchondria was associated with increase smartphone addiction, with this pattern being observed in both groups. Thus, online health searches do not always alleviate concerns, in some cases they can intensify feelings of uncertainty and fear. Repeated searches may then occur in an attempt to obtain greater certainty, resulting in a self-perpetuating cycle of health-related anxiety and information seeking (McMullan et al. 2019; Starcevic & Berle, 2013).

Recent research has begun to examine cyberchondria specifically among adolescents. A population based study of adolescents aged 14-17 years found that online health information seeking was highly prevalent in this age group and that cyberchondria was positively associated with health anxiety, problematic internet use, compulsive behaviour, and intolerance of uncertainty (Jungmann & Dessauer, 2025). Demir et al. (2025) reported that cyberchondria was associated with health anxiety among adolescent high school students, with greater cyberchondria being related to higher level of anxiety. These findings suggest that excessive online health related searching may represent an important psychological concern during adolescence.

Therefore, examining cyberchondria and health anxiety among adolescents represents a timely area of psychological research in the context of increasing digital health information use. In the digital era, adolescents increasingly turn to the internet for health-related concerns. While online resources can enhance awareness, excessive and unregulated health related searches can lead to cyberchondria, a condition characterized by heightened health anxiety due to compulsive internet browsing about medical symptoms. Despite growing global concerns regarding cyberchondria, existing research has primarily focused on other area of population, leaving a significant gap in understanding how this phenomenon affects adolescents which is a group particularly vulnerable to anxiety and information overload. Accordingly, this study investigates the connection between cyberchondria and health anxiety among adolescents, aiming to broaden the present knowledge regarding the psychological consequences of health focused online searching in this developmental stage.

## METHODOLOGY

### *Objectives of the study*

1. To identify the level of health anxiety and cyberchondria among adolescents.
2. To find out the Gender comparison in cyberchondria and health anxiety.

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3. To find out the relationship between cyberchondria and health anxiety.

### *Hypotheses of the study*

- **H1:** There is no significant difference in cyberchondria between males and females.
- **H2:** There is no significant difference in health anxiety between females.
- **H3:** There is no significant correlation between 'cyberchondria and health anxiety'.

### *Sample:*

A sample is a representation of the population. This study consists of 100 students, of which 50 male and 50 female participants aged between 13 to 18 years were included in the study.

### *Measurement tools used in the study:*

- **Sociodemographic data:** Personal details like name, age, gender, place, class, physical and mental challenges were taken.
- **Cyberchondria severity scale:** McElroy and Shevlin developed a 33-item scale of 'cyberchondria named cyberchondria severity scale' (CSS-33), and this was translated in German and then shortened to 15 items which had showed good psychometric properties. The reliability of the internal consistency of the CSS-15 was  $\alpha=.82$  and its split-half reliability as .95.
- **Short Health Anxiety Inventory:** 'Salkovskis, Rimes, Warwick, and Clark' (2002) developed this inventory (HAI 64 items) and a brief version, SHAI: 18 items. Higher scores on this inventory reflect greater levels of health anxiety and stronger beliefs regarding the adverse outcomes of falling ill. Reliability, adequate internal consistency  $\alpha=.86$  is shown, and validity was examined through zero order Pearson correlations.

### *Procedure:*

The study aimed to assess cyberchondria and health anxiety among adolescents. It followed a quantitative approach, using standardized tools, the cyberchondria severity scale (CSS - 15), and shortened health anxiety inventory (SHAI - 18). 100 participants of 50 boys and girls were selected among 13 to 18 years old adolescents through convenient sampling method through online. Informed consent and instructions were conveyed prior to the data collection. Data analysis was done using descriptive statistics, t- test and correlation.

## RESULT AND DISCUSSION

**Table1: Frequency and percentage analysis of cyberchondria among Male and female Adolescents.**

| Cyberchondria        | Male (N= 50) | Female (N=50) |
|----------------------|--------------|---------------|
| <b>Below Average</b> | 9 (18%)      | 24 (48%)      |
| <b>Average</b>       | 7 (14%)      | 10 (20%)      |
| <b>Above average</b> | 34 (68%)     | 16 (32%)      |

Table 1 shows noticeable gender difference in the level of cyberchondria among adolescents. A greater number of male adolescents reported an above average level of cyberchondria (68%) compared to female adolescents (32%), indicating that cyberchondria was more prevalent among male students in the present sample. On the other hand, female adolescents were more likely to have below average levels of cyberchondria (48%) compared to males (18%). Both male and female adolescents showed comparatively lower proportions at the average level, with 14% of males and 20% of female adolescents falling

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within this category. Khazaa et al. (2020) study shows men had slightly higher total cyberchondria scores than women. Distress, compulsion, excessiveness and reassurance seeking subscales, even though the gender-based differences did not reach statistical significance. This outcome aligns with the current study where male adolescents showed a higher proportion of above average cyberchondria. These findings indicate that male adolescents in the present sample demonstrated higher levels of cyberchondria, whereas female adolescents were more frequently represented in the below average category.

**Table 2: Frequency and percentage analysis of level of Health Anxiety among male and female adolescents**

| Health anxiety | Male (N= 50) | Female(N=50) |
|----------------|--------------|--------------|
| Mild           | 45 (90%)     | 39 (78%)     |
| Moderate       | 3 (6%)       | 11 (22%)     |
| Severe         | 2 (4%)       | 0            |

Table 2 shows noticeable gender difference in the level of health anxiety among adolescents. A greater number of male adolescents reported mild health anxiety (90%) in comparison to 78% of female adolescents. Female adolescents showed a higher tendency to report moderate levels of health anxiety (22%) compared to male adolescents (6%). Severe health anxiety was reported by 4% of male adolescents, whereas none of the female adolescents fell under the severe category. These findings indicate that although mild health anxiety was predominant among both male and female adolescents, female adolescents showed a higher proportion of moderate health anxiety, while severe health anxiety was observed only among male adolescents. Carter et al. (2011) reported that pubertal development was associated with higher anxiety symptoms among adolescents and suggested that developmental changes during puberty may represent a period of vulnerability to anxiety. The study also found that higher masculinity was associated with lower anxiety symptoms, indicating that difference in coping and gender role characteristics may influence the expression of anxiety. Therefore, the existence of severe health anxiety among a limited proportion of male adolescents in the present study may reflect individual variations in developmental and psychological factors rather than a general tendency for males to experience higher health anxiety.

**Table 3: Independent samples t-test comparing cyberchondria scores between males and females**

|               | 'Male (50)' |       | 'Female (50)' |       | 't-value' |
|---------------|-------------|-------|---------------|-------|-----------|
|               | Mean        | S.D   | Mean          | S.D   |           |
| Cyberchondria | 25.56       | 7.040 | 20.12         | 9.003 | 3.366*    |

*\*Significant at the .01*

Independent sample t-test was used to evaluate gender difference in cyberchondria, result suggests that there is a significant difference, as male adolescents obtained higher scores in cyberchondria than female adolescents. The descriptive statistics also support this finding, which shows a higher mean score for males ( $M = 25.56$ ,  $SD = 9.003$ ). Jungmann and Dessaur (2025) conducted a cross-sectional study among 159 adolescents aged 14-17 years to examine health related internet use and cyberchondria. These results indicate that gender play a role in the level of cyberchondria among adolescents, highlighting the need for appropriate awareness and supportive interventions to promote health online health information seeking behaviours.

**Table 4: Samples t-test for Determining the Difference Between Males and Females in Health Anxiety**

|                       | ‘Male (N=50)’ |       | ‘Female (N=50)’ |       | ‘t-value’ |
|-----------------------|---------------|-------|-----------------|-------|-----------|
|                       | Mean          | S.D   | Mean            | S.D   |           |
| <b>Health Anxiety</b> | 20.84         | 6.501 | 17.36           | 7.542 | 2.471*    |

*\*Significant at the .05(2 tailed).*

‘Independent sample t-test’ was conducted to determine whether a significant difference in health anxiety existed between male and female adolescents, result showed a significant gender difference in health anxiety, with male adolescents obtaining higher mean score ( $M = 20.84$ ,  $SD = 6.501$ ) than female adolescents ( $M = 17.36$ ,  $SD = 7.542$ ). It indicates that male adolescents reported significantly higher levels of health anxiety compared to female adolescents. The findings of the present study are partially consistent with those of Demir et al. (2025), as studies demonstrate a significant gender difference in health anxiety among adolescents. Where Demir et al. Found higher health anxiety among females. This difference may be related to variations in cultural context, sample characteristics, age distribution, or patterns of health-related information seeking. However, the direction of the difference is opposite, the present study found that male adolescents had significantly higher health anxiety than female. The findings suggest that gender may be associated with difference anxiety among adolescents, highlighting the important of considering gender related factor when understanding and addressing health anxiety during adolescent.

**Table 5: correlation between ‘cyberchondria and health anxiety’ among adolescents (N=100)**

|                      | <b>Health Anxiety</b> |
|----------------------|-----------------------|
| <b>Cyberchondria</b> | .471*                 |

*\*Significant at .01 level*

A correlation analysis was conducted to determine the relationship among “cyberchondria and health anxiety” in adolescents. The analysis yielded a significant positive correlation was found between ‘cyberchondria and health anxiety’, as indicated by the results ( $r = .471$ ,  $p < .01$ ). suggesting that adolescents who scored high on cyberchondria also reported higher levels of health anxiety. This indicates a positive association between the two variables, where the moderate strength of the relationship implies that heightened worries about one’s health may be related to frequent and excessive searching for health-related content on the internet. Jungmann and Dessauer (2025) found a significant positive relationship between cyberchondria and health anxiety among adolescents. promoting healthy digital health information seeking behaviours and developing awareness about the potential psychological consequences of excessive health related internet searching among adolescents are important, as highlighted by these findings.

### **Major findings**

- Cyberchondria levels differed significantly between male and female adolescents.
- Comparatively, the levels of cyberchondria were higher among male adolescents than female adolescents.
- A significant gender-based difference was noted in health anxiety levels among adolescents.
- Comparatively, health anxiety levels were higher among male adolescents than female adolescents.

- Among adolescents, cyberchondria was found to be significantly and positively correlated with health anxiety, suggesting that an increase in cyberchondria is linked to elevated health anxiety.

### CONCLUSION

The present study concluded that cyberchondria was found to be higher in male adolescents compared to females, thereby establishing a significant gender difference in cyberchondria among adolescents. Likewise, male adolescents scored higher on health anxiety than female adolescents, indicating a significant gender difference in health anxiety as well. The study included 100 adolescents in the age range of 13 to 18 years, comprising 50 males and 50 females. Furthermore, a significant positive correlation was observed between cyberchondria and health anxiety, which suggests that adolescents with elevated cyberchondria also experience heightened health anxiety. Therefore, the null hypotheses stating no significant gender difference in cyberchondria and health anxiety, and no significant association between cyberchondria and health anxiety, stand rejected.

The study is highly relevant in the present digital era, as adolescents increasingly use the internet for searching for information about health and illness. Cyberchondria and health anxiety can influence the psychological well-being of adolescents and may contribute to excessive health-related searching and increased health concerns. The findings provide a deeper understanding of cyberchondria, health anxiety, gender differences, and the relationship between these two psychological variables among adolescents.

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### ***Acknowledgment***

The authors sincerely thank everyone who participated in the study and contributed to the successful completion of the research.

### ***Conflict of Interest***

The author(s) declared no conflict of interest.

***How to cite this article:*** Joy, A.M., Ashraf, D.B., Thensiya, K.V. & Soumya, S.C.T. (2026). Cyberchondria and Health Anxiety among Adolescents. *International Journal of Indian Psychology*, 14(4), 150-156. DIP:18.01.015.20261404, DOI:10.25215/1404.015