

**Social Media Health Information Seeking Behavior and Cyberchondria Severity:
Exploring the Mediating Role of Health Literacy**

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Abstract

In Pakistan, the rapid growth of social media as a source of health information has significantly influenced health communication, yet it has also contributed to a rising trend of cyberchondria—characterized by persistent and excessive online health searches that heighten anxiety and psychological distress. While previous research highlights health literacy as a potential protective factor (Sørensen et al., 2021; Jadoon et al., 2024), limited evidence exists on its role in mediating the relationship between social media health information seeking behavior (SMHISB) and the severity of cyberchondria. This cross-sectional survey involved 601 university Participants and explored two primary aspects: first, the association between social media health information seeking behavior (SMHISB) and cyberchondria severity, and second, the role of health literacy in influencing this connection. The results showed that about two-thirds of the participants (67%) regularly turned to social media for health information. A strong association emerged between excessive health-related searches and disruption in daily life ($p = 0.60$, $p < 001$). Mediation testing further revealed that student with higher health literacy were less affected by the negative outcome of SMHISB, indicating that health literacy acts as a buffering factor. These results emphasize the need to enhance health literacy to encourage responsible online health-seeking and to guide to development of health literacy programs. The study provides valuable insights to digital health communication research and highlights direction for education, health policy, and social media, particularly relevant for low - and middle-income countries.

Keywords: Social Media Health Information Seeking, Cyberchondria Severity, Health Literacy, ehealth Literacy, Mediation Analysis, Student Mental Health

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1. Introduction

Social media health information seeking behavior refers to the deliberate use of platforms such as Facebook, Instagram, WhatsApp, YouTube, tiktok and (Twitter) X to look for, share, or engage with health-related content. This may include checking advice about symptoms reading other people health narrative, following health related video, or engaging with influencer and public health accounts. SMHISB has become widespread because social media provide quick, personalized, and easily accessible content. There are a number of reasons why these platforms are becoming more popular, such as the fact that users can stay anonymous, they are easy to use, and information can be shared quickly (Ali et al., 2022; Smailhodzic et al., 2016).

In Pakistan cyberchondria has become an intensifying concern. The country already grapples with limited healthcare resources, a shortage of partitioners, professionals, and poor infrastructure. Weak health literacy and restricted access to dependable CCare, particularly in rural areas, make the issue worse by delaying diagnosis and reducing treatment quality.

Recent data indicates that around 60% of adults in Pakistan experience anxiety due to online health searches, and about 40% acknowledge that this behavior has adversely affected their mental well-being (Sadi et al., 2025). In this context, health literacy refers to the ability to effectively obtain, comprehend, and utilize health information when making health-related decisions (Nutbeam, 2008.)

A recent study found that 50.4% of academia students in Pakistan taken moderate cyberchondria, while 23.80% had high cyberchondria severity. Women were additional likely to experience cyberchondria than men, with a cruel score of 5.57 compared to 3.15 for men.

Research has known several factors that pay to cyberchondria, including intolerance of uncertainty, anxiety sympathy, and low health literacy. Entities who are intolerant of insecurity may engage in extreme online health material looking for as a way to handle with their worry, which can ultimately exacerbate their health concerns.

2. Research objectives

- i. To investigate the connection between social media health information-seeking behaviour and cyberchondria severity, examining the mediating role of health literacy.
- ii. To explore the frequency of social media use for wellbeing information among Pakistani adults.
- iii. To assess cyberchondria severity among social media users in Pakistan.
- iv. To measure the equal of health knowledge in the population.
- v. To determine the facilitating role of health reading ability in the relationship between SMHISB and cyberchondria.

3. Literature Review

This section elaborates extensively on the existing research about the principal concepts of this study: Social Media Health Information Seeking Behavior (SMHISB), Cyberchondria, and Health Literacy. It delineates global and regional health contexts, examines the psychological and behavioral dynamics of online health information consumption, and underscores significant gaps in the literature, especially within the Pakistani context.

The section concludes by illustrating how the interplay among these variables underscores the necessity for this inquiry.

The World Health Organization (WHO) characterizes health as "a state of comprehensive physical, mental, and social well-being, rather than merely the absence of disease or infirmity." The WHO monitors global health utilizing over 50 indicators aligned with the Sustainable Development Goals (SDGs).

These indicators look at things like life expectancy, the health of mothers and children, non-communicable diseases, mental health, environmental health, and how the health system is paid for. The "World Health Statistics 2024" report has all the information you need about these indicators for all member states.

Neuroticism is an inherited tendency to exhibit dysfunctional behaviors, characterized by a propensity to experience negative emotions, thoughts, and maladaptive actions (McCrae & Costa, 1994). In modern personality theory, the expansive neuroticism domain includes several subordinate facets, including anxiety, hostility, depression, self-consciousness, impulsivity, and susceptibility to stress (Barlow et al., 2014).

Research indicates that neuroticism's vulnerability to emotional responses to stress (DeYoung & Gray, 2009) leads to maladaptive behaviors such as increased sensitivity to threats, inadequate stress responses, behavioral instability, impulsivity, and a tendency towards sensation-seeking

(Allen & DeYoung, 2016; Costa & McCrae, 1992). Extensive, large-scale prospective studies have established that neuroticism functions as a generalized higher-order vulnerability factor for various types of psychopathologies in children (De Bolle et al., 2012), adolescents (Goodwin et al., 2003), and adults (Hampson et al., 20). Starcevic and Berle introduced the idea of cyberchondria in 2013.

They said it was the cycle of health-related anxiety that led to repeated searches for health information online. In the past ten years, researchers have mostly focused on figuring out what this phenomenon is, what causes it, and how to fix it. Nonetheless, a uniform definition has yet to be formulated. Some people say that cyberchondria is when you feel more anxious and then compulsively or repeatedly look for Online Health Information (OHIS). Others say that it is when you look for too much information because you are feeling bad. Both perspectives underscore two fundamental components: anxiety and excessive online health information seeking (OHIS). In research, the assessment of cyberchondria frequently includes the evaluation of excessiveness, compulsion, distress, and reassurance. However, there is a lack of research examining the impacts of underlying factors on these particular dimensions.

4. Psychological Triggers and Their Effects

Starcevic et al. (2020) assert that algorithmic search engines prioritizing alarming or popular content exacerbate this propensity.

a. Improved Health Knowledge:

Social media can help people learn more about health and become more aware of it, especially those who don't have access to traditional healthcare resources (Bundorf et al., 2006).

The outcomes include:

- Increased health anxiety
- Avoidance of necessary healthcare, Overuse of medical services
- Reduced trust in health professionals (Fergus, 2021).

Cyberchondria is becoming more common among young adults and students in Pakistan, especially those who have easy access to the internet and mobile devices. Beneficial effects Keefer, 2017).

b. Positive Effects Empowerment:

Role of mass media in the presentation of political issues and objects and their perception among the audience (Saeed et al., 2020). Social media facilitates health management by providing access to health information, support groups, and other services (Kimmel & Keefer, 2017).

c. Social Support:

Social media can help people connect with others who have had similar health problems, which can be good for their mental and emotional health (Xu, 2023).

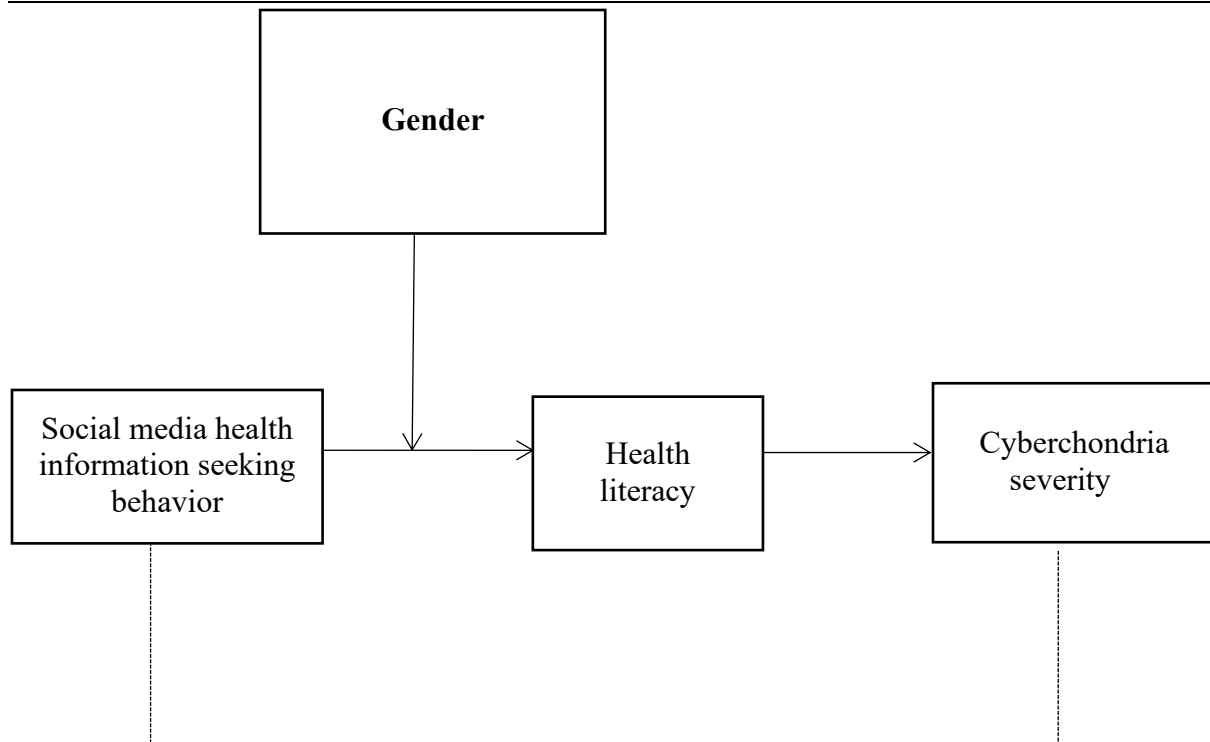
d. Negative Effects Misinformation:

Social media can spread false and misleading information, which can have negative effects on health (Kivitis, 2006).

When people don't trust institutions as much, they may rely on informal networks or unverified sources, which makes them more likely to get false information and increases their risk of cyberchondria (Freeman et al., 2020). In addition to individual literacy levels, broader societal factors, such as the trustworthiness of health authorities and perceptions of information credibility, significantly influence responses to online health content.

5. Hypothesis

- H1: A beneficial correlation exists between SMHISB and the severity of cyberchondria.
- H2: There is an inverse correlation between health literacy and the severity of cyberchondria.
- H3: The relationship between the pursuit of health information on social media and the severity of cyberchondria is influenced by health literacy.



6. Theoretical Framework

6.1. Overview

The theoretic framework of this revision is anchored in double key communication theories: uses and Gratifications (U&G) and Cognitive Load Concept (CLT). These frameworks offer valuable perspectives to understand the motivations behind individual' engagement with social media for healthiness information and the cognitive processes involved in information processing .

This study adopts Uses and Gratification Model (U& G) and cognitive capacity theory (CLT) because these frameworks uniquely capture both the motivational drivers behind social media well being information seeking and the cognitive challenge users face in processing abundant digital health content. Unlike other health communication replicas such as the Lengthy Similar Process Model or Health Belief Model , U&G and CLT together address both the why (motivations) and the how (information processing) relevant to cyberchondria in a digital ecosystem.

6.2. Importance of Understanding Social Media Health Information Seeking Behavior, Cyberchondria Severity and Health Literacy

The internet and social media have become essential sources of health information for many individuals (Kimmel & Keefer, 2017). However, the abundance of health information online can also lead to information overload, anxiety, and cyberchondria (Eastin & Guinsler, 2006). Understanding the factors that influence social media health information seeking behavior, cyberchondria severity, and health literacy is crucial for developing effective health communication strategies and interventions (Nutbeam, 2000).

Uses and Gratification (U&G) Theory



Traits



- User-centric
- Intentionality
- Selectivity
- Proactivity

Categories of Gratification

- Evidence Seeking
- Personal Individuality
- Addition and Social Interaction
 - Performing
 - Personal Expression

Cognitive Load Theory (CLT)**Traits**

- Cognitive Architecture
 - Intrinsic, Extraneous,
 - Germane Load

Thus, this theoretical framework not only guides the study's hypotheses but also informs the methodological approach discussed in the next chapter, where these constructs will be operationalized and empirically tested within the Pakistani context.

7. Methodology**7.1.Method of Data Collection**

This study will employ a measurable research method to collect data through an online survey. The review will be administered to scholars from University of Punjab, University of Central Punjab, Gujarat UCP, Universities of Okara, exploring the association between social media fitness information looking for behavior, cyberchondria severity, and wellbeing literacy.

7.2.Tool of Data Collection

A questionnaire will be created for quantitative research, including closed-ended questions with Likert scale responses. The survey will incorporate validated scales, such as:

- Cyberchondria Severity Scale (CSS) to measure cyberchondria severity
- Health Literacy Scale (HLS) to assess health literacy levels
- Questions to assess social media health material seeking behavior.

7.3.Population of Learning

The people of this study will consist of students from University of Punjab, University of Central Punjab, Gurjrat UCP, Universities of Okara, including:

- Students enrolled in undergraduate or graduate programs
- Students from public or private universities
- Students aged 18-30 years old, as this age range is critical for social media engagement and health information seeking

7.4.Sampling Techniques

A simple chance sampling method will be used to first-rate an example size of 600 respondents from the target population. Individuals aged 18-30 years old, as this is a critical age range for both social media wellbeing information seeking behavior and the cyberchondria severity

7.5.Variable of study

Independent Variable: Social Media Wellbeing Information Seeking Behavior

Dependent Variable: Cyberchondria Severity

Mediating Variable: Health Variables

7.6.Measurement of Variables

"Social media health information seeking behavior will be measured using a self-report questionnaire that assesses the frequency and types of health information sought on social media platforms. The questionnaire will include items such as:

Social Medi information Seeking Behavior: Frequency and types of health information sought on social media

Cyberchondria Severity: Measured using the Cyberchondria Severity Scale (CSS)

Health Literacy: Assessed using the Health Literacy Scale (HLS)

Descriptive and Inferential Statistics

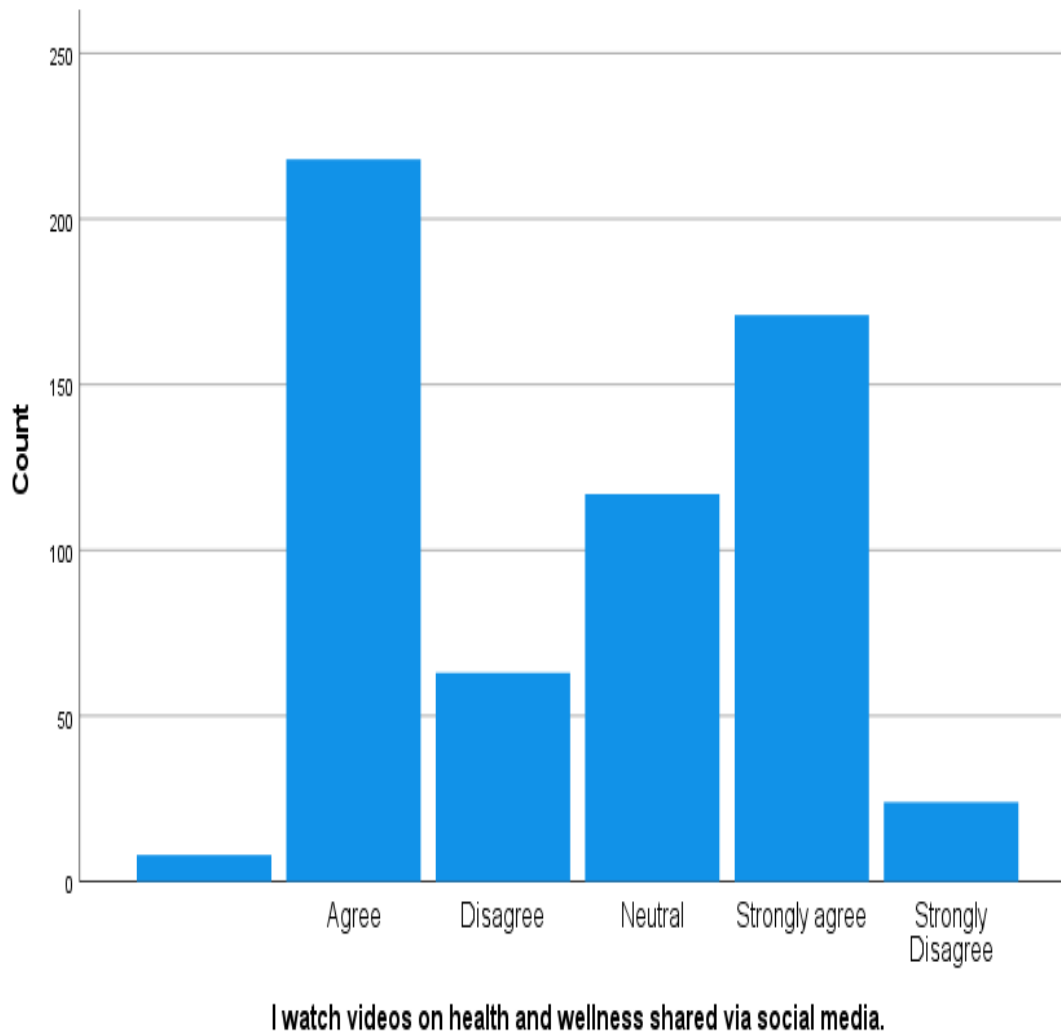
Data analysis will be performed using SPSS version 22.0 for Windows (IBM statistics and Descriptive statistics will be used to summarize demographic characteristics and study variables. Inferential statistics, such as regression analysis, will be used to test the relationships between variables and explore the mediating role of health literacy.

8. Results

8.1.Survey

A survey was conducted among female 350 and male 250 follows Social Media Health Information Seeking Behavior and Cyberchondria Severity: Exploring the Mediating Role Of Health Literacy". The results and findings of survey are given below:

Graph 1

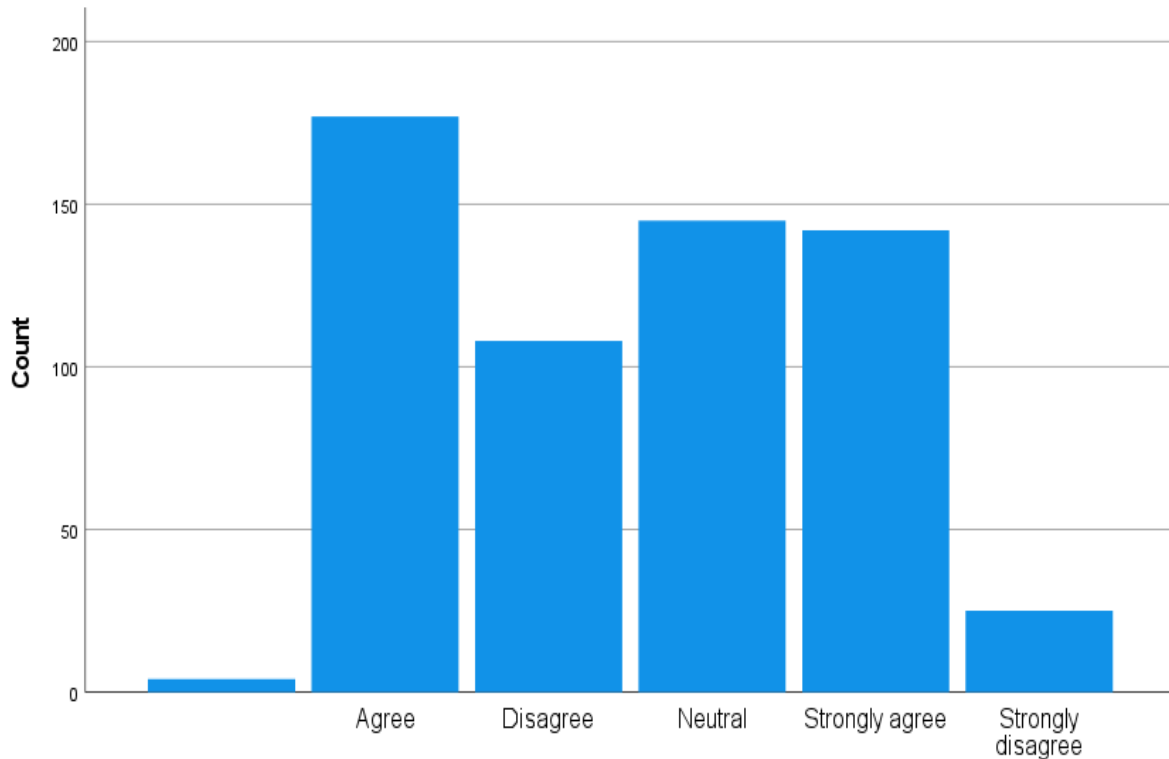


8.1.1. Interpretation

The survey shows that 67.6% of respondents agreed that they follow health-related pages or groups on social media. A smaller but notable 14.1% agreed moderately, while 5.5% strongly agreed.

6.3% remained neutral, and a limited 4.8% disagreed. Only 1.7% strongly disagreed. These results indicate a widespread interest in health content among social media users.

Graph 2



I participate in online discussions about health issues.

8.1.2. Interpretation

A considerable 67.6% admitted to participating in online discussions about health. 9.7% agreed, while 7.8% strongly agreed. A total of 7.8% were neutral, while 5.8% disagreed and 1.3% strongly disagreed. This highlights the role of social media as an interactive health discussion space.

Table 1 *The more time I spend on social media for health info, the more I worry about my health.*

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5	.8	.8	.8
Agree	274	45.6	45.6	46.4
Disagree	69	11.5	11.5	57.9
Neutral	127	21.1	21.1	79.0
Strongly Agree	113	18.8	18.8	97.8
Strongly Disagree	13	2.2	2.2	100.0
Total	601	100.0	100.0	

8.1.3. Interpretation

Here, 45.6% of respondents agreed and 18.8% strongly agreed that spending more time consuming health content on social media tends to increase their personal health anxieties. 21.1% stayed neutral, which may indicated or situational experiences, while 11.5% disagreed and 2.2% strongly disagreed, representing users who feel unaffected or even reassured by frequent exposure to health content.

Table 2 *I often compare my health to others' stories on social media.*

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	22	3.7	3.7	3.7
Agree	200	33.3	33.3	36.9
Disagree	121	20.1	20.1	57.1
Neutral	184	30.6	30.6	87.7
Strongly agree	49	8.2	8.2	95.8
Strongly Disagree	25	4.2	4.2	100.0
Total	601	100.0	100.0	

8.1.4. Interpretation

In this item, 33.3% agreed and 8.2% strongly agreed that they compare their health to other people's experiences shared online. 30.6% remained neutral, perhaps indicating occasional comparison or disinterest, while 20.1% disagreed and 4.2% strongly disagreed. These results suggest that a substantial portion of social media users engage in health-related social comparison, which may influence their self-perception.

Table 3 *I rely on social media to stay updated about health-related news.*

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21	3.5	3.5	3.5
Agree	209	34.8	34.8	38.3
Disagree	89	14.8	14.8	53.1
Neutral	200	33.3	33.3	86.4
Strongly agree	57	9.5	9.5	95.8
Strongly Disagree	25	4.2	4.2	100.0
Total	601	100.0	100.0	

8.1.5. Interpretation

A total of 34.8% agreed and 9.5% strongly agreed that they rely on social media for staying updated on health news. 33.3% maintained a neutral stance, reflecting either balanced use or caution toward such information. 14.8% disagreed and 4.2% strongly disagreed, indicating a meaningful group who likely prefer official health communication channels.

8.2. Correlation

Table A: Social Comparison & Influence

Variable 1	Variable 2	Spearman's ρ (rs)	p-value	N
Influencer content affects perception (Table 6)	Comparing health to others' stories (Table 4)	+ .44	< .001	601
Relying on popular posts vs official sources (Table 9)	Less likely to cross-check sources (Table 10, reverse-coded)	+ .38	< .001	601

8.2.1. Interpretation

- $rs = +.44$: A moderate correlation—individuals influenced by health influencers are more likely to engage in social comparison.
- $rs = +.38$: Suggests that those heavily influenced by popular posts tend to skip cross-verification steps.

Table B: Anxiety and Digital Literacy

Variable 1	Variable 2	Spearman's ρ (rs)	p-value	N
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Feeling distressed when no clear answers found (Table 18)	Confused after searching symptoms (Table 17)	+ .52	< .001	601
Fear of rare disease (Table 19)	Increased anxiety after symptom search (Table 11)	+ .48	< .001	601

8.2.2. Interpretation

- $r_s = +.52$: A strong correlation indicating distress is closely tied to confusion from online health searches.
- $r_s = +.48$: Moderate-to-strong link showing anxiety and fear of rare diseases often co-occur.

9. Discussion

The finding of this research reveal that social media plays a complex role in shaping communication skills, offering both benefits and drawbacks. On one hand it provides a medium for individuals to remain connected express viewpoints rapidly and interact across cultural frontier. Such exposure cultivates adaptability expands awareness of heterogeneous audience and equips people to communicate in more concise and captivating ways. These are valuable assets In a digital era where promptness and inventiveness are highly prized.

Language is another factor that affects how people see things. Native English speakers tend to see more benefits because they can easily switch between formal and informal modes. On the other hand, bilingual users often find it hard to switch between languages, especially in informal online spaces where slang and abbreviations are common. For them, it becomes harder to stay clear and correct with their grammar, which is why they are more cautious.

Finally, the architecture of social media platforms also influences communication practices. Short format like X (formerly Twitter) promote brevity and vernacular while platforms such Facebook facilities more elaborate expression. These structural contracts highlight that it is not merely the duration of online activity that matters but also platforms feature mold linguistic behavior.

10. Conclusion

This result sheds crucial light on the intricate relationship societal mass media health information seeking behaviour cyberchondria severity and the mediating role of health literacy among university students in Pakistan. The result confirm that a significant proportion of youth depend heavily on societal media for well-being related information, often leading to heightened anxiety, excessive worry, and psychological distress clear indication of growing cyberchondria.

However, the research also highlights a crucial protective factor: Health literacy. Students with higher level of health literacy were less likely to experience the adverse psychological effect of excessive online health searches underlined the importance of informed digital health engagement. In a country like Pakistan, where access to credible health care is limited and misinformation is rampant, this study underscores the urgent need for targeted educational interventions.

Prompting health literacy both traditional and digital can empower individual to critical evaluate the vast health content available online recognize misinformation and make informed decision. As a societal mass media continues to dominate public discourse and health communication, equipping user with the tools to navigate it responsibility is no longer optional; it is essential.

Therefore, health policy makers, education, and digital content creator must work collaboratively to develop inclusive ehealth literacy programs, particularly focused on the youth. only by strengthening these capabilities can we reduce the psychological burden of cyberchondria, foster mental health and build a healthier, more resilient digital society in Pakistan.

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