FROM SYMPTOMS TO SEARCHES: EXPLORING THE CYBERCHONDRIA CONNECTION IN PATIENTS AND HEALTHY CONTROLS

Authors: Ayesha Areej*, Adnan Adil*, Anam Khan**, Aqsa Khalil*, &Uzma Sarwar*

Affiliations: *Department of Psychology, Government College Women University Sialkot
**Department of Psychology, Rawalpindi Women University Rawalpindi

ABSTRACT

Cyberchondria, anxiety driven by excessive online health searches, is a rising issue. While health anxiety and somatic symptoms are known factors, the impact on individuals with chronic conditions versus healthy people remains unclear. This study explores how somatic symptoms affect health anxiety and cyberchondria in both groups. The Cyberchondria Severity Scale-12 (CSS-12; McElroy et al., 2019), The Short Health Anxiety Inventory (SHAI; (Salkovskis et al., 2002), and Somatic Symptom Scale (SSS-8; Gierk et al., 2014) were used to operationalize the focal constructs of the present study on a sample of N = 300 adults of Sialkot. Results found that somatic symptoms had a strong positive impact on health anxiety in both patients and healthy controls. Health anxiety significantly increased cyberchondria in healthy controls but not in patients. Somatic symptoms directly influenced cyberchondria, more so in patients but still notable in controls. An indirect link between somatic symptoms and cyberchondria via health anxiety was significant only for healthy controls.

METHOD

Hypotheses: 1. Somatic symptoms will have positive direct effects on health anxiety and cyberchondria and health anxiety will have a positive direct effect on cyberchondria.
2.Health anxiety will mediate the relationship of somatic symptoms and cyberchondria.
3.The positive association of indirect effect of health anxiety between somatic symptoms and cyberchondria will be stronger in ill adults.
Sample: A purposive sample of 300 adults including 150 patients diagnosed with chronic medical conditions and 150 healthy community controls matched on key demographics was recruited from OPDs of various hospitals and universities in Sialkot city, respectively.
Instruments: The Cyberchondria Severity Scale-12 (CSS-12; McElroy et al., 2019), The Short Health Anxiety Inventory (SHAI; (Salkovskis et al., 2002), and Somatic Symptom Scale (SSS-8; Gierk et al., 2014) were used to operationalize the focal constructs of the present study.
Procedure: Authorization for data collection was sought from the university's governing authority. Informed consent was obtained from each research participant, accompanied by comprehensive information regarding the research's nature. Furthermore, participants were assured that their data will remain confidential and solely used for research purposes.

RESULTS

Path analysis indicated a good fit for the proposed model. After controlling for gender, somatic symptoms were found to have a significant positive direct effect on health anxiety, consistent across both patients and healthy community controls. Health anxiety had a significant positive direct effect on cyberchondria only among the healthy community controls, with no significant effect observed in the patient group. Somatic symptoms also had a positive direct effect on cyberchondria, a relationship that was stronger in the patient group but still significant among community controls. Finally, the indirect effect of somatic symptoms on cyberchondria through health anxiety was significant and positive for healthy community controls, whereas no such indirect effect was observed in the patient group

Figure 1: ***Path Model for Healthy Adults***

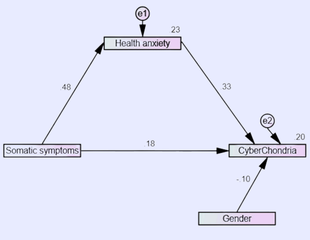
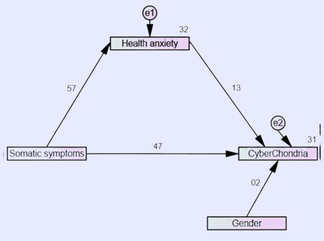


Figure 2: ***Path Model for Ill Adults***



INTRODUCTION

Cyberchondria, or anxiety from excessive online health searches, is a growing concern. While it's known that somatic symptoms and health anxiety contribute to cyberchondria, the differences between individuals with chronic medical conditions and healthy individuals are not well understood. This study examines how somatic symptoms influence health anxiety and cyberchondria in both patients and healthy controls.
Objectives: 1. To investigate the relationship of somatic symptoms with health anxiety and cyberchondria and health anxiety with cyberchondria.
2. To explore the mediating role of health anxiety in the relationship of somatic symptoms and cyberchondria.
3.To explore the moderating role of health status in the mediating relationship of somatic symptoms and cyberchondria through health anxiety.

Table 1. ***Descriptive Statistics and Pearson Correlation of the Study Variables (N = 300)***

Variables	*M*	*SD*	1	2	3
1.Cyberchondria	31.25	8.31	-	.41**	.44**
2.Health Anxiety	18.37	8.02		-	.58*
3.Somatic Symptoms	9.31	6.27			-

**p< .01

Table 2: ***Comparison of Model Fit Across Healthy and Ill Groups (N = 300)***

Models	χ^2	*df*	$\Delta\chi^2$	Δdf	*P*
Unconstrained(Path estimates were freely estimated across groups)	2.29	4	9.84	4	.043
Constrained(Path estimates were	12.13	8			

Table 3: ***Health Status as the Moderator of Direct and Indirect Standardized Effects of Somatic Symptoms and Health Anxiety on Cyberchondria (N = 300)***

Paths	β Healthy	β Ill	Δβ	Δ*p*
Somatic Symptoms → Health Anxiety	.48***	.57***	-.09	.57
Health Anxiety → Cyberchondria	.33***	.13	.20	.04
Somatic Symptoms → Cyberchondria	.18*	.47***	-.29	.04
Gender → Cyberchondria	-.10	.02	-.12	.22
Somatic Symptoms → Health Anxiety→ Cyberchondria	.16**	.07	.09	.04

*p< .05, **p< .01, ***p < .001

DISCUSSION

The results align with previous research, confirming the link between somatic symptoms and health anxiety across populations (Sauer et al., 2023). The direct effect of health anxiety on cyberchondria in community controls reflects findings that anxiety drives online health-seeking, while its absence in patients may indicate differing coping mechanisms. The stronger direct effect of somatic symptoms on cyberchondria in patients supports studies showing greater health-seeking behavior in clinical groups. Finally, the significant indirect effect through health anxiety in community controls, but not patients, highlights distinct psychological pathways in these populations, consistent with prior literature (Lebel et al., 2020).

CONCLUSION

This study provides valuable insights into the complex relationships between somatic symptoms, health anxiety, and cyberchondria in both patients with chronic medical conditions and healthy individuals. Our results underscore the need for tailored approaches to managing cyberchondria, particularly in individuals with chronic health conditions, and suggest that interventions should address both somatic symptoms and health anxiety to reduce the risk of cyberchondria

LIMITATIONS & SUGGESTIONS

1.The study's sociodemographic factors do not represent the broader Pakistani community, highlighting the need for a larger, more diverse sample.
2.The cross-sectional design limits causal inferences whereas a longitudinal approach could better establish causal links and track changes over time.
3.Evaluating participants' digital health literacy may provide information about their capacity to assess online health information critically..