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Efficacy of CBT in the Management of Cyberchondria: A Comparative Study

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ABSTRACT

Aim of the Study: This study investigated the efficacy of Cognitive Behavioral Therapy (CBT) in alleviating cyberchondria among young adults, comparing it with problem-solving-based psychoeducation.

Methodology: Twenty participants (4 men, 16 women) were purposively sampled and randomly assigned to either CBT or psychoeduation, involving six online group sessions. Participants, aged 18-35 years (Mean = 25.80; SD = 4.48), were assessed using the Short Health Anxiety Inventory (SHAI; Salkovskis et al., 2002), Whiteley Index (WI; Pillowsky, 1967), and Cyberchondria Severity Scale (CSS; McElroy et al., 2019) before and after therapy.

Findings: Results revealed a significant post-treatment difference between the two groups. The CBT group exhibited noteworthy reductions in CSS, SHAI, and WI scores, indicating its efficacy in managing cyberchondria. Controlling for covariates demonstrated statistically significant differences in participants' scores on outcome measures, affirming the overall efficacy of both interventions in improving cyberchondria.

Conclusion: This study holds substantial implications for developing targeted strategies to address the growing concern of cyberchondria.

Keywords: Cyberchondria, CBT, Psychoeducation, Problem Solving, Young Adults.

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Introduction

In the contemporary digital landscape, the internet serves as a pivotal channel for disseminating medical information. However, this accessibility poses the potential to instigate anxiety in individuals lacking medical expertise, who resort to it as a diagnostic tool. Cyberchondria, characterized by repetitive and excessive online health research, embodies the anxiety-amplifying impact of such behavior. Coined from the fusion of "cyber" and "hypochondria," cyberchondria represents unwarranted apprehension regarding serious diseases or illnesses in the digital age. Those afflicted with cyberchondria exhibit maladaptive behavioral patterns and emotional states, engaging in excessive and repetitive online searches for health-related symptoms. The construct of cyberchondria is multidimensional, encompassing repetition, increased distress, disruption of daily functioning, and the elicitation of further reassurance-seeking behaviors (Starcevic, 2017).

Theoretical models have conceptualized cyberchondria in connection with reassurance-seeking, specific metacognitive beliefs, uncertainty intolerance, and its correlation with health anxiety. Within cyberchondria, the online pursuit of health-related information is identified as a maladaptive coping mechanism to counter health anxiety. This behavior sets in motion a detrimental cycle for the individual (Starcevic & Berle, 2013). Negative metacognitive beliefs revolve around a sense of losing personal control over one's behavior and the perceived harm of this excessive and repetitive pattern. Stronger negative metacognitive beliefs amplify the perceived threat of online health research (Fergus & Spada, 2017). Prospective uncertainty intolerance, involving anxious anticipation of the future and a desire for expectedness in forthcoming events, has been identified as a potential risk factor for cyberchondria (Norr et al., 2015). Numerous studies have corroborated significant correlations between cyberchondria and health anxiety, framing cyberchondria as a manifestation of health anxiety in the digital era (McMullan et al., 2019; Fergus & Spada, 2017; Fergus, 2014).

Cognitive Behavioral Therapy (CBT) emerges as a psychotherapeutic modality wherein individuals acquire essential skills to identify and modify distressful or maladaptive thought patterns impacting their emotions and behaviors. Rooted in the cognitive model, CBT posits that the perception of an event, rather than the situation itself, shapes individuals' feelings and behaviors. The cognitive triad consists of core beliefs, dysfunctional assumptions, and negative automatic thoughts (Fenn & Byrne, 2013). Behavior techniques in CBT draw from classical and operant conditioning theories, postulating that behavior is learned through association and consequences (positive or negative reinforcement) (Fenn & Byrne, 2013). The CBT model of health anxiety, conceptualized by Furer et al. (2007), contends that illness-related thoughts are triggered by internal or external stimuli, leading to heightened attention and concern about bodily sensations. These sensations are construed as indicators of serious illness, prompting safety behaviors, reassurance-seeking, checking, or avoidance. However, the relief gained from these behaviors is short-lived, perpetuating a vicious cycle. The cognitive and behavioral techniques of CBT can effectively address the excessive and repetitive online checking pattern characteristic of cyberchondria.

Psychoeducation adopts a versatile approach, combining educational and therapeutic techniques. The educational component disseminates detailed information and strategies for addressing various aspects of a disorder, while the therapeutic component provides safety, structure, feedback, and an opportunity to assimilate complex information. Psychoeducation can be administered individually or in a group setting, fostering mutual social support through the exchange of stories and knowledge. Problem-solving, a valuable skill facilitating the resolution of complex issues, is conceptualized in therapy protocols incorporating psychoeducation based on the problem-solving approach. This study employed such a therapy protocol for managing health anxiety, treating it as part of everyday problems. Participants were guided through a structured process of identifying, defining, and ultimately solving problems (Buwalda et al., 2006). Various theories, including the gestalt theory and Frederiksen's (1984) link between problem-solving, creativity, schema formation, and pattern recognition, contribute to understanding the construct of problem-solving.

To date, limited empirical studies have investigated the differential efficacy of therapeutic interventions for cyberchondria, evaluating their clinical significance. Specifically, an outcome study examining the efficacy of CBT in managing cyberchondria within the indigenous context of Lahore, Pakistan, remains absent in existing literature. Therefore, this research endeavor seeks to fill this knowledge gap through a randomized controlled trial, aiming to compare the therapeutic effects of CBT and psychoeducation in the management of cyberchondria. Such insights can prove valuable in designing effective therapies for individuals grappling with cyberchondria, especially in the absence of extensive literature on the subject.

Hypotheses

Based on the presented empirical and theoretical arguments, the following research hypotheses were formulated:

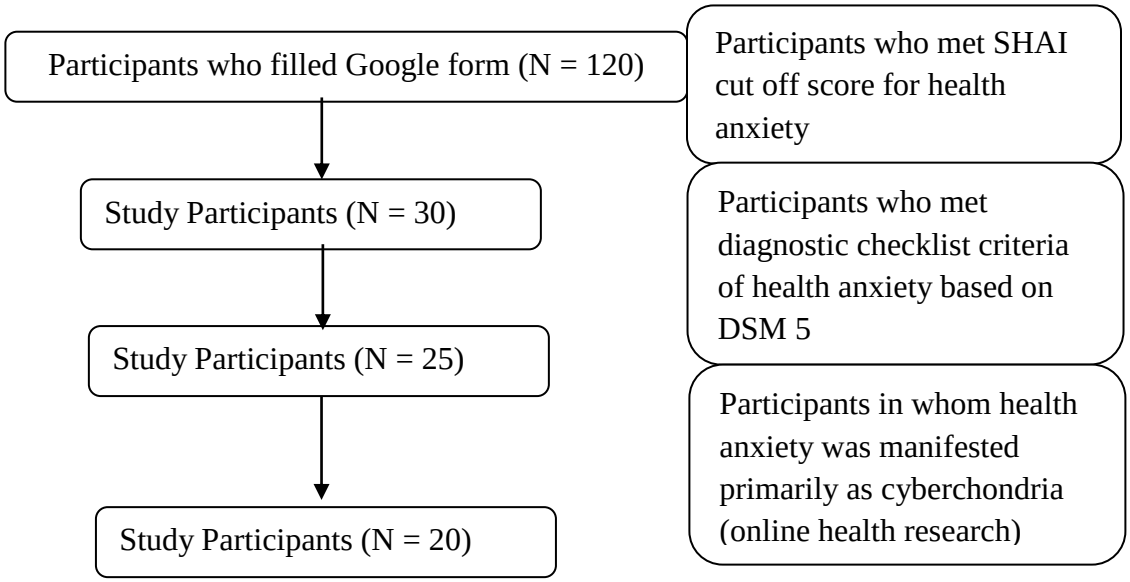
1. Both CBT and psychoeducation based on problem-solving are likely to result in a reduction in cyberchondria severity scores among individuals affected by cyberchondria.

2. There is a likelihood of differential effectiveness between CBT and psychoeducation based on problem-solving, with CBT demonstrating a greater reduction in cyberchondria severity scores.

Method

The research design employed a between-groups experimental approach, utilizing purposive sampling. Twenty participants were included and randomly assigned to two treatment conditions: one group receiving six sessions of internet-delivered CBT, and the other undergoing online psychoeducation based on problem-solving. The screening process, as illustrated in Figure 1, outlined the participant selection.

Figure 1: *Flowchart Representing the Screening Process*



Sample and Sampling

In the selection of participants, the study focused on young adults falling within the age bracket of 18 to 35 years, as outlined by Petry in 2002. Criteria for inclusion involved a primary diagnosis of health anxiety, specifically somatic symptom disorder or illness anxiety disorder, as per the DSM-5 guidelines. Individuals with additional diagnosed psychological disorders or physical disabilities were excluded from participation. Moreover, those who reported concurrent psychological treatment for cyberchondria or had undergone Cognitive Behavioral Therapy (CBT) in the past year were also excluded. After the screening process, a total of twenty participants were identified for the study, comprising sixteen females and four males, with an average age of twenty-five years. The demographic details are presented in Table 2.1, which not only highlights the comparability of demographic characteristics between both groups but also underscores the random assignment of participants.

Table 1: *Demographic Characteristics of the Sample (N= 20)*

Variables	**CBT Group**		**Psychoeducation Group**	
	***M* (*SD*)**	***f* (%)**	***M* (*SD*)**	***f* (%)**
Age	25.90	(4.48)	25.70	(4.72)
Gender		Males: 2(20)		Males: 2 (20)
		Females:8(80)		Females: 8 (80)
Last Completed Degree				

Intermediate	2(20)	2 (20)
Graduation	5(50)	5 (50)
Masters	3(30)	3(30)
Monthly Family Income	174000 (81130.90)	179000(97348.17)
Family System		
Nuclear	6 (60)	6(60)
Joint	4 (40)	4(40)
Occupational status		
Employed	4 (40)	4(40)
Unemployed	6 (60)	6(60)
Marital status		
Single	7 (70)	7(70)
Married	3 (30)	3(30)

Note: *N*= 300, *M*= Mean, *SD*= Standard Deviation, *f*= frequency, %= percentage

Measures

Diagnostic Checklist. Participants underwent an informal checklist based on DSM 5 criteria for illness anxiety or somatic symptom disorder to confirm their eligibility for the study (APA, 2013).

Demographic Information Sheet. Participants disclosed key demographics, including age, gender, marital status, family system, occupational status, monthly income, and education. They were also queried about a diagnosis of another psychological disorder or physical disability, concurrent psychotherapy, and any prior experience of CBT within the past year.

Short Health Anxiety Inventory (SHAI). This scale measured the severity of health anxiety symptoms over the past week. It is a self-report questionnaire with eighteen items, examining cognitive and behavioral features. The scale demonstrated sensitivity to treatment and good psychometric properties, including internal consistency, test-retest reliability, and construct validity. Participants rated items on a four-point scale ranging from 0 (I do not worry about my health) to 3 (I spend most of my time worrying about my health) (Salkovskis et al., 2002).

Whiteley Index (WI). This questionnaire measured attitudes and behaviors related to health anxiety using a five-point Likert scale. It consisted of fourteen items and was proposed to be a composite of three factors: bodily preoccupation, disease phobia, and disease conviction. The scale demonstrated high test-retest reliability, convergent validity, and the ability to distinguish those with severe health anxiety (Pillowsky, 1967).

Cyberchondria Severity Scale (CSS-12). This scale had four subscales - excessiveness, distress anxiety, reassurance, and compulsion - each with three items. It measured anxiety induced by excessive online searching of health-related information. The total score was obtained by summing all items on a five-point Likert scale ranging from 1 (never) to 5 (always). The CSS-12 was found to be reliable, concise, and valid for measuring anxiety induced by online health searches (Mc Elroy, et al., 2019).

Interventions. The therapy protocol by Warwick et al. (1996) was used, involving a combination of cognitive and behavioral techniques for alleviating and managing health anxiety symptoms. During the first session of cognitive-behavioral therapy (CBT), the focus was on understanding the role of symptom monitoring and excessive online health research in the maintenance of cyberchondria. This involved a comprehensive review of the case formulation. In the second session, the therapeutic goals shifted towards cognitive therapy components, which included educating the individual about the cognitive model, cognitive distortions, and introducing thought monitoring. Homework tasks for this session included engaging in thought monitoring exercises. The third session delved into cognitive restructuring, emphasizing the examination of evidence, modification of dysfunctional assumptions, and the development of alternative rational thoughts, with corresponding homework tasks involving the

completion of dysfunctional thought records. The fourth session incorporated behavioral experiments to test fears, encouraging exposure to previously avoided illness-related situations. Homework for this stage involved engaging in exposure exercises. Session five introduced response prevention techniques to address repeated online checking and the prevention of reassurance-seeking behaviors, with corresponding response prevention exercises as homework. The penultimate session focused on relapse prevention, including a thorough review of the relapse prevention plan.

A psychoeducational module of therapy based on the problem-solving approach (Buwalda et al., 2006) was also applied. In the first session, the focus was on introducing the clinical picture of cyberchondria and the utilization of a problem-solving approach, accompanied by a review of the problem-solving strategy. Subsequent sessions involved a step-by-step progression through the problem-solving process. In session two, participants engaged in describing the problem and setting specific goals, utilizing a designated problem-solving worksheet. Session three emphasized the identification of resources available to solve problems, again utilizing the problem-solving worksheet. The fourth session involved the active generation of potential solutions to the identified problem. Session five guided individuals in the critical process of choosing and applying a solution from the generated options, while session six encouraged the formulation of a personalized problem-solving model. Throughout the protocol, homework tasks consisted of completing the problem-solving worksheet, fostering practical application and reinforcement of the acquired problem-solving skills.

Procedure

Permission was obtained from the university's research review board to conduct the study. The board approved the study, and permission was also sought from the respective authors of the questionnaires. A Google form for screening cyberchondria was sent to social media groups. The form collected participants' email, contact numbers, and demographic information. Informed consent was obtained from participants via email for their inclusion in the research. A total of twenty participants were randomly assigned to two treatment conditions - CBT and psychoeducation. Both groups had ten participants each and underwent a six-week online treatment with one session per week of their respective treatment condition. The pre-treatment session involved formal and informal assessments, including screening participants against DSM V criteria of health anxiety. In the post-treatment session, participants were formally assessed through the CSS-12, WI, and SHAI instruments.

Ethical Considerations

Ethical considerations were diligently addressed during the research. Participants were informed about the nature of the study, the usage of results, and their right to withdraw at any point. Assurance was provided regarding the privacy and confidentiality of the obtained data.

Results

The data underwent analysis using the Statistical Package for Social Sciences (Version 22). As presented in Table 2, the sampling distribution exhibited an approximate normal distribution, with skewness and kurtosis values falling within the acceptable range of ± 1.96. The reliability analysis indicated that Cronbach alpha values for all scales demonstrated acceptable to excellent reliability.

Table 2: *Psychometric Properties of Major Study Variables in the Sample (N = 20)*

Variables	***k***	***M***	***SD***	***α***	***Skewness***	***Kurtosis***
SHAI	18	31.1	8.52	.95	.54	-1.17
Whiteley Index	14	9.35	2.74	.80	-.17	-1.32
CSS	12	35.5	9.00	.90	.19	-.98
Excessiveness	3	9.15	2.52	.66	-.17	-.22
Distress	3	9.30	3.18	.90	.08	-.79

Reassurance	3	8.10	3.00	.94	.35	-.98
Compulsion	3	7.63	2.76	.90	-.39	-.70

Note: *k*= total number of items, *M*= Mean, *SD*= Standard Deviation, *α*= Cronbach's alpa, *SHAI:* Short Health Anxiety Inventory, *CSS:* Cyberchondria Severity Scale

Separate independent t-tests were conducted to calculate mean differences for both Cognitive Behavioral Therapy (CBT) and problem-solving groups concerning pre-treatment and post-treatment scores. Table 2 displays the results.

Table 3: *Independent Sample T-test Comparing SHAI, WI, CSS, and its Subscale Scores of CBT and Problem Solving Groups at Pre and Post Treatment Level (N = 20)*

	CBT Group (n=10)		***Problem Solving Group (n=10)***				***95% CI***		
Variables	***M***	***SD***	***M***	***SD***	***t(18)***	***P***	***LL***	***UL***	***Cohen's d***
SHAI									
Pre	29.70	8.73	31.00	8.15	-.34	.74	-9.24	6.64	.15
Post	18.40	4.88	26.70	7.50	-2.93	.01	-14.24	-2.36	1.31
Whitely Index									
Pre	9.30	2.75	9.40	2.88	-.08	.94	-2.74	2.54	.04
Post	4.30	2.31	6.50	2.17	-2.19	.04	-4.31	-.09	.98
CSS Total									
Pre	33.10	8.63	37.90	9.15	-1.21	.24	-13.16	3.56	.54
Post	23.70	6.43	33.90	8.54	-3.02	.01	-17.30	-3.10	1.35
Excessiveness									
Pre	8.00	2.58	10.10	2.81	-1.74	.10	-4.63	.43	.78
Post	6.20	2.49	8.70	2.67	-2.17	.04	-4.92	-.08	.97
Distress									
Pre	8.40	2.95	10.20	3.29	-1.29	.21	-4.74	1.14	.58
Post	5.90	2.38	9.20	3.23	-2.60	.02	-5.96	-.64	1.16
Reassurance									
Pre	7.80	3.39	8.80	2.25	-.78	.45	-3.71	1.71	.35
Post	5.40	2.59	7.90	2.08	-2.38	.03	-4.71	-.29	1.06
Compulsion									
Pre	8.90	3.18	8.80	2.62	.08	.94	-2.64	2.84	.03
Post	6.20	2.70	8.10	2.13	-1.75	.10	-4.19	.39	.78

Note: *SHAI*= Short health anxiety inventory, *WI*= Whitely Index, *CSS*= Cyberchondria severity scale

For pre-treatment, the mean score differences of both groups were non-significant, supporting the assumption of equal scores on each measure before therapy. However, post-treatment scores revealed a statistically significant difference in health anxiety scores (SHAI, WI, CSS) between the CBT and problem-solving groups. The experimental group exhibited a significantly greater reduction in mean scores, indicating the distinct efficacy of CBT in managing cyberchondria. This was reflected in the decrease in mean scores of cyberchondria subscales, including excessiveness, distress, reassurance, and compulsion. Participants' scores on the Whitely Index and CSS also showed a significant difference, with a large Cohen's d indicating a substantial treatment effect. Notably, in the compulsion subscale of the CSS, no significant difference was found between the CBT and problem-solving groups.

A repeated measures t-test examined significant differences in scores for each group before and after treatment. Assumptions of normality were met. Results for the CBT and problem-solving groups are shown in Tables 2 and 3, respectively.

Table 4: *Repeated Measures T-test Comparing SHAI, WI, CSS and its Subscale Scores before and after treatment for CBT group (n = 10)*

					95% CI		Cohen's d
Variables	***M***	***SD***	***t(9)***	***p***	***LL***	***UL***	
SHAI	11.30	4.37	8.17	<.001	8.17	14.43	2.59
Whiteley Index	5.00	1.15	13.69	<.001	4.17	5.83	4.35
CSS Total	9.40	3.06	9.71	<.001	7.21	11.59	3.07
Excessiveness	1.80	1.69	3.38	.008	.59	3.01	1.07
Distress	2.50	1.27	6.23	<.001	1.59	3.41	1.97
Reassurance	2.40	.97	7.86	<.001	1.71	3.09	2.47
Compulsion	2.70	1.89	4.52	.001	1.35	4.05	1.43

Note: *SHAI*= Short health anxiety inventory, *WI*= Whitely Index, *CSS*= Cyberchondria severity scale

In the CBT group, significant improvement was observed in participants' SHAI, Whiteley Index, and CSS scores after therapy, with large effect sizes indicating a substantial treatment effect.

Table 5: *Repeated Measures T-test Comparing SHAI, WI, CSS and its Subscale Scores before and after treatment for Problem Solving Group (n = 10)*

					95% CI		Cohen's d
Variables	***M***	***SD***	***t(9)***	***p***	***LL***	***UL***	
SHAI	4.30	.95	14.33	<.001	3.62	4.98	4.53
Whiteley Index	2.90	1.45	6.33	<.001	1.86	3.94	2.00
CSS Total	4.00	1.41	8.94	<.001	2.99	5.01	2.84
Excessiveness	1.40	.97	4.58	.001	.71	2.09	1.44
Distress	1.00	.47	6.71	<.001	.66	1.34	2.13
Reassurance	.90	.32	9.00	<.001	.67	1.13	2.81
Compulsion	.70	1.06	2.09	.07	-.06	1.46	.66

Note: *SHAI*= Short health anxiety inventory, *WI*= Whitely Index, *CSS*= Cyberchondria severity scale

Similarly, the problem-solving group showed a significant difference in SHAI, WI, and CSS scores before and after therapy, with large Cohen's d values indicating a substantial treatment effect. However, the compulsion subscale of the CSS showed a non-significant difference, with a moderate effect size.

To assess statistically significant differences in participants' scores post-treatment, ANCOVA analysis was conducted while controlling for pre-treatment scores. Results are detailed in Table 5.

Table 6: *ANCOVA Comparing Two Groups at Post-Treatment on SHAI, WI, CSS and its Subscales while Controlling the Pre-Treatment Levels as Covariates (N=20)*

Groups	***M(SD)***		***F(df)***	***p***	η^2
Post SHAI			63.39(1)	<.001	.79
CBT	18.40	4.88			
Problem solving	26.70	7.50			
Post WI			20.41(1)	<.001	.55
CBT	4.30	2.31			
Problem solving	6.50	2.17			
Post CSS Total			51.87(1)	<.001	.75
CBT	23.70	6.43			
Problem solving	33.90	8.54			

Post Excessiveness			1.41(1)	.25	.08
CBT	6.20	2.49			
Problem solving	8.70	2.67			
Post Distress			17.93(1)	.001	.51
CBT	5.90	2.38			
Problem solving	9.20	3.23			
Post Reassurance			69.21(1)	<.001	.80
CBT	5.40	2.59			
Problem solving	7.90	2.08			
Post Compulsion			11.21(1)	.004	.40
CBT	6.20	2.70			
Problem solving	8.10	2.13			

Note: *SHAI*= Short health anxiety inventory, *WI*= Whitely Index, *CSS*= Cyberchondria severity scale

Significant differences were found in participants' SHAI, WI, and CSS scores post-treatment, with large to moderate partial eta square values indicating considerable treatment effects. However, the excessiveness subscale of the CSS displayed a non-significant difference, with a small partial eta square value indicating a minor treatment effect.

Attrition

Both groups did not experience attrition, with ten participants remaining in each group from the beginning to the end of therapy. All twenty participants actively participated in all stages of therapy, including pre-treatment assessment, therapy sessions, and post-treatment assessment.

Therapist Competence and Treatment Adherence

The Young and Beck (1980) scale assessed treatment adherence and therapist competence at mid and end-treatment. Two senior consultant clinical psychologists rated various domains of adherence and competence. Results of the rating indicated that the therapist obtained mean scores of 4 (good) and 5 (very good) in various domains, reflecting an overall satisfactory level of performance.

Discussion

The results obtained in the present study underscore a substantial distinction in mean scores between the two groups at the post-treatment stage, revealing a significantly greater reduction in cyberchondria outcome measures within the Cognitive Behavioral Therapy (CBT) group, indicative of its heightened efficacy in managing cyberchondria (Newby et al., 2018). The Independent sample t-test analysis further elucidates the distinctive therapeutic impact of CBT, as reflected in considerably lower mean scores for the CBT group post-treatment, compared to the problem-solving group (Newby et al., 2018).

These findings align with earlier research, such as Newby et al. (2018), who investigated online CBT for health anxiety and psychoeducation, reporting a marked improvement in the CBT group compared to psychoeducation at the post-treatment level. The present study's results corroborate these findings, indicating reductions in cyberchondria severity, health anxiety, and Whitely Index scores in both CBT and problem-solving groups, emphasizing the therapeutic effects of both CBT and psychoeducation (Tyrer et al., 2017; Buwalda & Bouman, 2008; Buwalda & Bouman, 2009).

The substantial treatment effect observed in the CBT group in this study aligns with Cooper et al.'s (2017) meta-analysis, affirming CBT's efficacy for health anxiety across diverse control conditions, including psychoeducation, waiting lists, medication, and other therapies. Olatunji et al.'s (2014) meta-analysis further supports CBT's superiority over control conditions on health anxiety measures post-therapy and at follow-up, with larger effect sizes associated with greater pre-treatment severity. Similarly, Nakao et al. (2011) found a significant decrease in health anxiety scores in the CBT group compared to the control group, with higher initial anxiety levels predicting greater reductions in health anxiety scores.

The role of psychoeducation, as emphasized by studies such as Buwalda and Bouman (2008) and Newby et al. (2018), is supported by the present study, demonstrating the effectiveness of psychoeducation based on problem-solving in alleviating cyberchondria severity (Buwalda & Bouman, 2008; Newby et al., 2018). The participants' positive response to brainstorming solutions aligns with the general problem-solving theory's emphasis on information processing for developing efficient problem-solving heuristics, reflecting their effective problem-solving experiences (Tuma & Reif, 1980).

Participants in the current study identified cognitive restructuring, response prevention, and behavior experiments as the most effective CBT techniques for reducing cyberchondria severity. This aligns with cognitive-behavioral theories emphasizing catastrophic misinterpretation and catastrophizing of ordinary body changes, leading to functional impairment (Rachman, 2012). Cognitive restructuring's efficacy lies in identifying and challenging cognitive distortions related to health anxiety, replacing them with rational thoughts. Safety-seeking behaviors such as information seeking, avoidance, checking, and reassurance seeking are addressed by the effective response prevention technique, targeting reassurance seeking and avoidance (Salkovskis & Warwick, 2001). Behavior experiments, as suggested by Wells (2000), contribute to experiential learning, allowing the testing and rejection of maladaptive beliefs in favor of adaptive beliefs based on experimental findings (Bennett-Levy et al., 2004). Thus, behavior experiments play a pivotal role in alleviating cyberchondria by facilitating the testing and replacement of maladaptive beliefs with adaptive ones (Wells, 2000; Salkovskis & Warwick, 2001).

Strengths of the Study

- Comparison of two therapy approaches: CBT and psychoeducation based on problem-solving
- Conducted a randomized controlled trial
- Highlighted the benefits of teletherapy as a novel mode of therapy
- Translated therapy material may benefit researchers and trainee clinical psychologists

Limitations and Suggestions

- Lack of follow-up sessions; future studies should assess the long-term impact of CBT on cyberchondria management
- Connectivity issues during online therapy delivery; future research may explore face-to-face therapy with enhanced technological support
- Mixed marital status in the sample; future studies could focus on specific demographics to enhance external validity and minimize confounding variables

Conclusion

This research contributes significantly to the empirical understanding of cyberchondria and its therapeutic interventions. Through a randomized controlled trial comparing CBT and psychoeducation based on problem-solving, both approaches were found effective in improving cyberchondria scores. However, CBT demonstrated a notably superior therapeutic effect compared to psychoeducation alone, underscoring its effectiveness as a treatment for cyberchondria.

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Conflict of Interest

Authors declared no conflict of interest.

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