The relative contribution of health cognitions and metacognitions about health anxiety to Cyberchondria: a prospective study

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Abstract

Objectives

Cyberchondria involves the excessive and compulsive use of the Internet to search for health information. The present study investigated the relative contribution of health cognitions and metacognitions about health anxiety to prospective Cyberchondria scores, controlling for health anxiety and hours spent online per day.

Methods

A convenience sample of 221 participants was recruited for the purpose of this study with a final sample totaling 125 participants (58.4% females, Mage 34.51 years) who completed the full survey at baseline (T_0) and a measure of Cyberchondria after thirty days (T_1).

Results

The results of the study showed that metacognitions about health anxiety relating to beliefs about the uncontrollability of thoughts were the only significant predictor of prospective Cyberchondria scores when controlling for health anxiety.

Conclusions

These results offer further support to the role of beliefs about the uncontrollability of thoughts in Cyberchondria. The implications of the findings are discussed.

Keywords: Cyberchondria; health anxiety; health cognitions; metacognitions about health anxiety.

Introduction

Cyberchondria

According to a recent study by the European Commission (2014), 75% of the European population have been involved in researching for information about their health on the Internet, with only 19% turning to health experts, including nurses and medical practitioners (Hone, Palladino & Filippidis, 2016). Online researching allows easy access to information regarding health conditions of interest (AlGhamdi & Moussa, 2012), offering the potential for an instant reassurance about one's own current health status and a feeling of being better informed about it (Starcevic & Berle, 2013). However, researching information about one's health online can lead to compulsive checking for health-related symptoms and self-diagnosis which are associated with increased levels of health anxiety (White & Horvitz, 2009; Bailer, Kerstner, Witthöft, Diener, Mier & Rist, 2016).

Health anxiety is characterised by intrusive preoccupations regarding one's health and the fear of suffering from a disease (Asmundson & Taylor, 2005) and has been found to be associated with researching health-related information online (Doherty-Torstrick, Walton & Fallon, 2016). The relationship between health anxiety and researching health-related information online is likely to be bi-directional (Starcevic & Berle, 2015). Hypothetically, researching symptoms online could be caused by the presence of health anxiety. Conversely, health anxiety could be a product of online researching that triggers even a simple curiosity about health or an appearance of a new symptom (Starcevic & Berle, 2015). This vicious interactive process, when occurring excessively and compulsively (regardless of the resultant distress caused), has been termed 'Cyberchondria' (Fergus, 2013).

Cyberchondria is a pattern of repetitive and compulsive behaviors aimed at checking one's health status online, which leads to functional impairments in daily life (Doherty-Torstrick, Walton & Fallon, 2016). The first definitions of Cyberchondria focused mainly on

the anxious manifestations following researching health-related information online (Belling, 2006; Harding, Skritskaya, Doherty & Fallon, 2008; Ryan & Wilson, 2008), as well as on the self-perpetuating tendency of this behavior which, in the short term produces a temporary reduction in anxiety and worry, but in the long term becomes a maladaptive habitual response pattern (Taylor & Asmundson, 2004). White and Horvitz (2009) have highlighted how online researching of the clinical meaning of common symptoms can determine an escalation in the search for more severe clinical conditions. In this regard, it is evident that, in the presence of Cyberchondria, the tendency to carry out continuous online researching determines a progressive increase in symptoms of anxiety related to health (Starcevic & Berle, 2013). Through an integration of these features, McElroy & Shevlin (2014) described Cyberchondria as a multidimensional construct, characterized by the unwanted nature of online researching (compulsion), the anxious emotional states associated with this process, the distrust of the medical practitioner, and the excessive need for reassurance.

A variety of studies have also shown that Cyberchondria is related to problematic internet use (PIU) (Starcevic & Berle, 2013; Fergus & Dolan, 2014; Fergus & Spada, 2017). PIU has been defined as the inability to control engagement with the internet, which can lead to a general impairment at psychological, social, and working levels (Spada, 2014). The overlap between Cyberchondria and PIU is quite apparent: both are characterized by the difficulty in controlling the use of the internet, which can lead to negative consequences in one's psychosocial well-being (Fergus & Dolan, 2014). For this reason, some studies have argued that Cyberchondria is a specific domain of health-related form of PIU (Fergus & Dolan, 2014; Fergus & Spada, 2017). For the purposes of the current study, we used hours spent online per day as a proxy of PIU.

Health cognitions

In the cognitive model of health anxiety proposed by Warwick and Salkovskis (1990), health anxiety is purported to arise from health cognitions, i.e., the combination of catastrophizing and distorting the meaning of symptoms as signs of a serious pathology, and the associated activation of maladaptive coping strategies (e.g., reassurance seeking). In support of this view, health cognitions have been found to be associated to the overestimation of symptom severity (Sullivan, Bishop & Pivik, 1995) and excessive self-focused attention, health-related worry, and reassurance-seeking (Wells & Hackmann, 1993). Several studies have also showcased how individuals with health anxiety are more prone to misinterpret their body sensations and to hold inaccurate cognitions regarding their health status (Rief, Hiller & Margraf, 1998; Marcus, 1999; Marcus & Church, 2003). Within this cognitive framework, Cyberchondria could be construed as a safety-seeking behavior prompted by health anxiety (Fergus, 2014, Fergus & Dolan, 2014; Starcevic, 2017). Accordingly, individuals with increased health anxiety may likewise constantly look for health-related information online (Hadjistavropoulos, Craig & Hadjistavropoulos, 1998) in order to obtain reassurance and psychological well-being (Baumgartner & Hartmann, 2011; Singh, Fox & Brown, 2016). Nonetheless, the reassurance gained is likely to be transitory thus encouraging further searches for health-related information online resulting in a strengthening of health cognitions (Kobori & Salkovskis, 2012). No research to date, however, has investigated whether health cognitions are associated with Cyberchondria. It would be plausible to assume that they should be in consideration of the fact that Cyberchondria could be construed as a further form of maladaptive coping strategy driven by such cognitions.

Metacognitions about health anxiety

Metacognitions are beliefs that one holds about their thoughts. They are typically separated into two dimensions: positive and negative. Positive metacognitions reflect beliefs

about the benefits of controlling thinking and negative metacognitions reflect beliefs about the dangers or uncontrollability of thinking (Wells, 2000). Bailey and Wells (2015) elucidated three sets of metacognitions linked to health-related cognitions (i.e., metacognitions about health anxiety). These are higher-order beliefs that individuals have about their health cognitions, including biased thinking beliefs (e.g., "Worrying about my health will help me cope"), thought-illness fusion beliefs (e.g., "Worrying about illness is likely to make it happen"), and beliefs about the uncontrollability of thoughts (e.g., "Dwelling on thoughts of illness is uncontrollable"). Metacognitions about health anxiety have emerged as independent predictors of health anxiety over and above other related constructs, including neuroticism, catastrophic misinterpretations, somatosensory amplification, and cognitions (Bailey & Wells, 2013; 2016; Melli, Carraresi, Poli, & Bailey, 2016). Moreover, metacognitions relating to the uncontrollability of thoughts have been found to be related to health anxiety across several studies (Bailey & Wells, 2013; 2016; Melli et al., 2016; Melli, Bailey, Carraresi, & Poli, 2018).

In recent research, Fergus and Spada (2017) found positive correlations between each of the three sets of metacognitions about health anxiety and Cyberchondria, while also finding that these beliefs had incremental explanatory power in relation to Cyberchondria when statistically accounting for previously identified relevant content-based beliefs (i.e., anxiety sensitivity and intolerance of uncertainty). Fergus and Spada (2018) and Marino and colleagues (2020) have argued for the central importance of metacognitions about health anxiety in initiating and maintaining self-regulatory strategies (e.g., worrying, rumination, thought suppression) about health symptoms, which are likely to increase threat and, in turn, lead to Cyberchondria as an attempt to avert threat. According to this view, Cyberchondria can be described as a maladaptive self-regulatory strategy for intrusive thoughts about health, triggered by metacognitions (Fergus & Spada, 2018).

Purpose of the present study

In view of the above findings, the purpose of the present study was to compare the role of health cognitions and metacognitions about health anxiety in prospective Cyberchondria scores. It was hypothesized that hours spent online per day, health anxiety, health cognitions and metacognitions about health anxiety would be positively correlated to prospective Cyberchondria scores. It was also hypothesized that both health cognitions and metacognitions about health anxiety would predict prospective Cyberchondria scores independently of hours spent online per day and health anxiety.

Methods

Participants

A convenience sample of 221 participants was recruited for the purpose of this study. Twenty-six participants did not fully complete the questionnaire set as required and 70 participants reported having at least one confirmed diagnosis of psychological disorder according to the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5; American Psychiatric Association). The latter, being an exclusion criterion to participate in the study, meant the final sample totaled 125 participants (58.4% females, M_{age} 34.51 years, SD = 14.08, range 19-68). Participants were predominantly employed (56.8%) or students (25.6%) with at least a high school qualification (53.6%) or bachelor's degree (28.0%). Most of the participants reported being of White European origin (90.3%), with the remaining participants reporting to be Latino-Hispanic (4.0%), Asian (1.6%), from other ethnic backgrounds (2.4%), or preferred not to disclose (1.6%).

The participants also reported owning a PC/laptop (95%), a smartphone (100%), and being registered on at least one social media platform (93.3%). Furthermore, participants also reported hours spent online per day in one of four categories: between 0 and 2 hours (35.0%), between 2 and 4 hours (33.6%), between 4 and 6 hours (23.6%), and more than 6 hours (7.9%).

Procedure

The sample was recruited through the publication of posts and announcements on various social media sites. Data was collected through an online questionnaire platform. After consent was sought, participants were asked to respond to socio-demographic questions, a question about hours spent online per day, and the self-report measures described in detail in the next section. Successful completions were associated with an identification number for each participant. After a month, at time T_1, a personalized link was sent to those who took part in the first phase of the study ($T_{0)}$. This process was carried out by guaranteeing the anonymity of the participants. The second questionnaire administered at follow-up included an initial briefing recalling the purpose of the research and, subsequently, the self-report measure relating to the assessment of Cyberchondria. The current study received formal ethical approval from the Division of Psychology Ethics Committee at London South Bank University, United Kingdom.

Self-report Measures

Cyberchondria Severity Scale (CSS; McElroy & Shevlin, 2014). The CSS has 33 items rated on a 5-point Likert frequency scale. The CSS has five sub-scales, as follows (1) Compulsion, which indicates how the behavior of continuing to look for symptoms online compromises normal daily functioning (e.g., "Researching symptoms or perceived medical conditions online interrupts my offline work activities"); (2) Distress, which indicates the degree of health anxiety related to online searches (e.g., "I find it hard stop worrying about symptoms or perceived medical conditions that I have researched online"); (3) Excessiveness, which indicates repeated and excessive online searching for perceived symptoms (e.g., "I read different web pages about the same perceived condition"); (4) Reassurance, which indicates the search for reassurance from medical professionals for a serious concern arising from the consultation of websites on health (e.g., "Discussing online info about a perceived medical

condition with my GP reassures me"); and (5) Mistrust of medical professionals, which indicates distrust in a doctor's diagnosis compared to the results of online searches (e.g., "Take opinion of GP more seriously than online research"). According to recent research, the latter factor appears not to be as relevant in the assessment of Cyberchondria as the other CSS factors (Fergus, 2014; Norr, Allan, Boffa, Raines & Schmidt, 2015). For this reason, the present study provided for the omission of mistrust items. Higher scores indicate higher levels of Cyberchondria. In this study the CSS has excellent internal consistency (α = .94).

Health Anxiety Inventory (HAI; Salkovskis, Rimes, Warwick, & Clark, 2002). The short-adapted version of the HAI has 14 items – instead of 18 – and was used for the present study to reduce the timing of administration. Each item comprises of a group of four statements, rated on a 4-point Likert frequency scale, concerning intrusive health-related thoughts (e.g., "I spend most of my time worrying about health") and fear of developing a serious physical disease (e.g., "If I hear about an illness I always think I have it myself"). Higher scores indicate higher levels of health anxiety. In this study the HAI had excellent internal consistency (α = .95).

Health Cognitions Questionnaire (HCQ; Hadjistavropoulos, Janzen, Kehler, Leclerc, Sharpe & Bourgault-Fagnou, 2012). The HCQ has 20 items rated on a 5-point Likert frequency scale. The HCQ has four sub-scales: (1) the likelihood of illness (e.g., "I feel I am likely to experience health problems"); (2) the awfulness of illness (e.g., "Having a serious health condition would be awful"); (3) difficulty in coping (e.g., "I am not sure that I can handle any serious health problem that I might develop in the future"); and (4) medical service inadequacy (e.g., "I do not have confidence in the health care system"). Higher scores indicate higher levels of health cognitions. In this study the HAI had adequate internal consistency (α = .79).

Metacognitions Questionnaire-Health Anxiety (MCQ-HA; Bailey & Wells, 2015). The MCQ-HA has 14 items rated on a 4-point Likert frequency scale. The MCQ-HA has three sub-

scales: (1) metacognitions about biased thinking (e.g., “Worrying about illness is likely to make it happen”); metacognitions about thought illness fusion (e.g., “If I think positively about physical symptoms, I will be caught off guard”); and (3) metacognitions about the uncontrollability of thoughts (e.g., “I have no control over thinking about my health”). Higher scores indicate higher levels of metacognitions about health anxiety. In this study the MCQ-HA had adequate internal consistency ($\alpha = .77$).

Data Analysis

A preliminary analysis was conducted to inspect descriptive statistics and bivariate correlations between the independent variables and the dependent variable. Secondly, and on the basis of the obtained outcomes, a hierarchical linear regression analysis was performed to evaluate the relative contribution of the potential predictors of prospective Cyberchondria scores. Statistical analyses were performed with SPSS version 26.0 (IBM Corp, 2019).

Results

Descriptive statistics of the selected variables are presented in Table 1. An examination of kurtosis and skewness revealed that variables were broadly normally distributed. A bivariate Pearson's Product-Moment correlation was conducted to establish the degree of association between the predictor variables and prospective Cyberchondria scores. Table 2 shows that the majority of the variables under investigation were positively correlated with the outcome variable. The variables most strongly correlated with prospective Cyberchondria scores were metacognitions about the uncontrollability of thoughts ($r = .49$, $p < .01$), followed by health anxiety ($r = .34$, $p < .01$), metacognitions about biased thinking ($r = .23$, $p < .05$), and health cognitions relating to coping ($r = .22$, $p < .05$) and medical service inadequacy ($r = .19$, $p < .05$). Hours spent online per day and the two factors belonging to health cognitions (the likelihood and the awfulness of illness) were not significantly correlated with prospective Cyberchondria scores.

A hierarchical linear regression was carried out to evaluate whether the variables positively correlated with prospective Cyberchondria scores could have a predictive relationship, while controlling for health anxiety. Health anxiety was entered in the first block of the hierarchical regression analysis as a control variable. Health cognitions were entered into the second block. Metacognitions about health anxiety were entered in the third block. The hierarchical linear regression outcomes can be found in Table 3. These showed that the model predicted 30% of the variance in prospective Cyberchondria scores. An inspection of the final step of the equation indicates that only metacognitions about the uncontrollability of thoughts remained ($B = 2.226$, C.I. = 1.318 – 3.134, $p < .001$) as statistically significant predictor as opposed to all other variables, which lost predictive power.

Discussion

The present study aimed to investigate the relative contribution of health cognitions and metacognitions about health anxiety to prospective Cyberchondria scores, controlling for health anxiety and hours spent online per day as these factors have been found to predict Cyberchondria. The results supported most of the hypotheses relating to the association between the predictor variables and the outcome variable. Specifically, health anxiety, two sub-scales of health cognitions, and all metacognitions about health anxiety were positively correlated to prospective Cyberchondria scores. Hours spend online per day and the remaining sub-scales of health cognition were not found to be positively correlated with prospective Cyberchondria scores. A multiple hierarchical regression analysis indicated that a considerable degree of variance emerged from the final model (approximately 30%) with beliefs about the uncontrollability of thoughts emerging as the only significant predictor of prospective Cyberchondria scores.

These findings confirm that metacognitions about health anxiety predict prospective Cyberchondria scores, offering further support to the metacognitive theoretical model of

Cyberchondria by Fergus and Spada (2018). In addition, the findings show the lack of predictive power of health cognitions when juxtaposed to metacognitions about health anxiety. Although other research has shown significant correlations between health cognitions and online compulsive symptom-seeking behaviour online (Brown, Skelly & Chew-Graham, 2019; McMullan, Berle, Arnáez, & Starcevic, 2019), the results of our study would appear to suggest that these constructs could, possibly, be non-causal dimensions in understanding Cyberchondria. In other words, 'content of cognition' relating to health (i.e., beliefs about the likelihood of illness, the awfulness of illness, and difficulty in coping and medical service inadequacy) may have an impact on prospective Cyberchondria scores through beliefs about the uncontrollability of thoughts (metacognitions). This might be because these metacognitions are linked to the activation of maladaptive forms of self-regulation, such as worry, rumination and thought suppression, which are likely to exacerbate the impact of health cognitions leading to an escalation of negative affect and a greater likelihood of engaging in Cyberchondria as a means of cognitive-affective self-regulation (Fergus & Spada, 2017; 2018). In this sense, metacognitions can be construed as a 'bridge' from disturbing, but manageable, thoughts about health to the escalation of threat to such levels that Cyberchondria is employed as a means of reducing this threat. Over time, beliefs about the uncontrollability of thoughts are likely to become reinforced through the emergence of Cyberchondriac behaviour, locking the person into increasing levels of psychological distress.

The findings of this study confirm that Metacognitive Therapy (Wells, 2009) may be of value in tackling metacognitions about health anxiety. This form of therapy has found success in the treatment of many anxiety disorders (Normann & Morina, 2018). It focuses on challenging metacognitions through Socratic questioning and utilising strategies such as detached mindfulness and attention training to develop metacognitive distancing from one's thoughts (e.g., health cognitions, in our example). These strategies, combined with the

postponement of engaging in perseverative thinking styles, such as worry and rumination, are believed to bring significant improvements in cognitive-affective states.

Limitations

This study has several limitations that need to be acknowledged. First, the sample comprised of self-chosen participants online and future studies ought to replicate our efforts by utilizing an arbitrarily selected sample, including those reporting difficulties with Cyberchondria. Second, the sample was relatively small. Future studies should engage a larger number of participants to confirm our observations. Third, while data with respect to the hours spent online per day was collected, PIU as not assessed. In view of the important role played by this variable in predicting Cyberchondria, future studies should control for it using standardised measures. Fourth, the generality of the outcomes would be additionally upheld by looking at different gatherings of network respondents, such as a group of participants who look for symptoms online and report hindrances encompassing those online searches (Norr, Oglesby, Raines, Macatee, Allan & Schmidt, 2015). Fifth, the sample comprised mostly of Caucasian participants. Finally, our study design does not account for the possible change, over time, of scores on the predictor variables and how this change may be associated to scores on Cyberchondria at T_1. Future studies will need to focus on regional and ethnic differences in the prediction of Cyberchondria. Finally, in spite of the fact that the self-report measures employed in this study have strong psychometric properties, they remain subject to bias.

Conclusions

Limitations notwithstanding, the current outcomes offer considerable support for the conceptualization of Cyberchondria in terms of metacognitions about health anxiety. Future research will help address in further detail the viability of a metacognitive conceptualisation of Cyberchondria and lead to refinements in treatment. In order to accomplish this, it is conceivable to recommend that such research focus on choosing participants dependent on their

repeated behaviours of researching for online health-related information or different levels of Cyberchondria. Assessing a Cyberchondria severity range would also help to expand statistical power and limit data loss (Fergus & Spada, 2018).

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Table 1: Means, standard deviations and range of study variables.

	Mean	S.D.	Range
1. Hours spent online per day	2.03	.91	1 to 4
2. HAI	25.69	6.08	16 to 47
3. HCQ Factor 1	24.26	4.04	9 to 33
4. HCQ Factor 2	10.87	2.23	4 to 16
5. HCQ Factor 3	9.93	3.74	4 to 20
6. HCQ Factor 4	13.25	2.71	5 to 18
7. MCQ-HA Factor 1	10.70	4.00	5 to 20
8. MCQ-HA Factor 2	7.63	2.25	5 to 16
9. MCQ-HA Factor 3	7.33	2.51	4 to 16
10. CSS	49.14	11.55	29 to 96

Note: N = 125; HAI = Health Anxiety Inventory; HCQ Factor 1 = Health Cognitions Questionnaire: Difficulty in coping; HCQ Factor 2 = Health Cognitions Questionnaire: Likelihood of illness; HCQ Factor 3 = Health Cognitions Questionnaire: Awfulness of illness; HCQ Factor 4 = Health Cognitions Questionnaire: Medical service inadequacy; MCQ-HA Factor 1 = Metacognitions Questionnaire-Health Anxiety: Metacognitions about biased thinking; MCQ-HA Factor 2 = Metacognitions Questionnaire-Health Anxiety: Metacognitions about thought illness fusion; MCQ-HA Factor 3 = Metacognitions Questionnaire-Health Anxiety: Metacognitions about the uncontrollability of thoughts; CSS = Cyberchondria Severity Scale; ** $p < .01$.

Table 2: Bivariate correlations of study variables.

	1	2	3	4	5	6	7	8	9	10	11
1. Gender											
2. Age	-.02										
3. Hours spent online per day	-.16	-.51**									
4. HAI	.04	-.02	.14								
5. HCQ Factor 1	.15	.13	-.22*	-.22*							
6. HCQ Factor 2	.13	.11	-.02	-.03	.32**						
7. HCQ Factor 3	-.03	.01	.09	.49**	.10	.12					
8. HCQ Factor 4	.18	-.23*	.22*	.33**	.20*	.23**	.35**				
9. MCQ-HA Factor 1	-.03	.04	-.00	.14	.04	.11	.18*	.03			
10. MCQ-HA Factor 2	-.20*	.08	-.00	.39**	.05	.03	.30**	.20*	.19*		
11. MCQ-HA Factor 3	.04	.24*	-.12	.48**	-.01	.15	.41**	.12	.21*	.52**	
12. CSS (T1)	.12	.09	.03	.34**	-.08	.15	.22*	.19*	.23*	.18*	.49**

Note: N = 125; Gender: Gender of participant; Age: Age in years; HAI = Health Anxiety Inventory; HCQ Factor 1 = Health Cognitions Questionnaire: Difficulty in coping; HCQ Factor 2 = Health Cognitions Questionnaire: Likelihood of illness; HCQ Factor 3 = Health Cognitions Questionnaire: Awfulness of illness; HCQ Factor 4 = Health Cognitions Questionnaire: Medical service inadequacy; MCQ-HA Factor 1 = Metacognitions Questionnaire-Health Anxiety: Metacognitions about biased thinking; MCQ-HA Factor 2 = Metacognitions Questionnaire-Health Anxiety: Metacognitions about thought illness fusion; MCQ-HA Factor 3 = Metacognitions Questionnaire-Health Anxiety: Metacognitions about the uncontrollability of thoughts; CSS (T1) = Cyberchondria Severity Scale Time 1; *$p < .05$; **$p < .01$.

Table 3: Hierarchical logistic regression statistics with Cyberchondria at Time 1 as the outcome variable.

Coefficients[a]

Model	R^2	Change in R^2	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
			B	Std. Error	β	t	Sig.	Lower Bound	Upper Bound
1 (Constant)	.118	.111**	32.360	4.243		7.627	.000	23.962	40.758
HAI			.653	.161	.344	4.064	.000	.335	.972
2 (Constant)	.127	.106**	28.774	5.612		5.127	.000	17.664	39.884
HAI			.561	.188	.295	2.987	.003	.189	.993
HCQ Factor 3			.144	.308	.047	.467	.641	-.466	.754
HCQ Factor 4			.342	.394	.080	.868	.387	-.438	1.122
3 (Constant)	.300	.264**	21.792	5.601		3.890	.000	10.699	32.884
HAI			.271	.185	.143	1.469	.144	-.094	.637
HCQ Factor 3			-.242	.290	-.078	-.834	.406	-.815	.332
HCQ Factor 4			.608	.362	.142	1.681	.095	-.108	1.324
MCQ-HA Factor 1			.432	.230	.150	1.882	.062	-.023	.887
MCQ-HA Factor 2			-.813	.477	-.158	-1.704	.091	-1.757	.132
MCQ-HA Factor 3			2.226	.458	.484	4.855	.000	1.318	3.134

Note: N = 125; HAI = Health Anxiety Inventory; HCQ Factor 3 = Health Cognitions Questionnaire: Awfulness of illness; HCQ Factor 4 = Health Cognitions Questionnaire: Medical service inadequacy; MCQ-HA Factor 1 = Metacognitions Questionnaire-Health Anxiety: Metacognitions about biased thinking; MCQ-HA Factor 2 = Metacognitions Questionnaire-Health Anxiety: Metacognitions about thought illness fusion; MCQ-HA Factor 3 = Metacognitions Questionnaire-Health Anxiety: Metacognitions about the uncontrollability of thoughts.