Journal of Anxiety Disorders 24 (2010) 931–935

Contents lists available at ScienceDirect

Journal of Anxiety Disorders

Mindfulness-based cognitive therapy for hypochondriasis, or severe health anxiety: A pilot study

David A. Lovas[a,b,c,*], Arthur J. Barsky[a,1]

[a] Department of Psychiatry, Harvard Medical School, Boston, MA, United States
[b] Cambridge Health Alliance, Cambridge, MA, United States
[c] Massachusetts General Hospital, Boston, MA, United States

ARTICLE INFO

Article history:
Received 24 November 2009
Received in revised form 18 June 2010
Accepted 19 June 2010

Keywords:
Hypochondriasis
Health
Anxiety
Cognitive therapy
Mindfulness

ABSTRACT

In spite of the existence of evidence-based treatments for hypochondriasis, or severe health anxiety, recovery rates are low and morbidity is high. Therefore, more treatment options are needed for this prevalent condition. Mindfulness-based cognitive therapy (MBCT) interventions have been gaining research and clinical attention for the treatment of mood, and more recently anxiety disorders. A small, uncontrolled pilot study of an 8-week group MBCT intervention for hypochondriasis was conducted. Ten subjects (five females and five males) with a mean age of 35.6 (range = 25–59) recruited from an academic community health network met criteria and completed the study. There were significant improvements in measures of health anxiety, disease-related thoughts, somatic symptoms, and mindfulness at the end of treatment, and these benefits were sustained at 3-month follow-up. Participants evidenced high treatment satisfaction, with no drop-outs or adverse events. These findings provide the basis for a larger, more rigorous, controlled trial of this promising treatment approach.

1. Introduction

Researchers have been increasingly conceptualizing health anxiety as existing on a spectrum (Abramowitz & Braddock, 2008; Taylor & Asmundson, 2004). On the mild end, it is an adaptive signal that helps to promote survival-oriented behaviors. However, in the case of severe health anxiety, or hypochondriasis, as it is defined in the DSM-IV-TR (APA, 2000), benign bodily sensations trigger anxiety that reaches a dysfunctional level in which fears and beliefs persist in spite of medical reassurance to the contrary. This can in turn lead to maladaptive checking and reassurance-seeking behaviors, which, at their worst, can be associated with iatrogenic harm. Hypochondriasis affects approximately 5% of primary care patients (Barsky, Wyshak, & Klerman, 1990; Faravelli et al., 1997), and is associated with significant impairment (Mykletun et al., 2009). Although there are several large randomized control trials (RCT) demonstrating the efficacy of cognitive behavioral therapy (CBT) and selective-serotonin reuptake inhibitor antidepressants (Barsky & Ahern, 2004; Clark et al., 1998; Greeven et al., 2007), a recent systematic review revealed that the recovery rate from hypochondriasis is only 30–50% (olde Hartman et al., 2009), and drop out rates from treatment are as high as 25% (Greeven et al., 2007). Thus, more treatment options are needed.

The majority of CBT interventions for hypochondriasis are based on an empirically grounded cognitive-perceptual model of the disorder (e.g., Abramowitz, Schwartz, & Whiteside, 2001; Taylor & Asmundson, 2004). This model postulates that patients with significant health anxiety hold dysfunctional beliefs about health and misinterpret innocuous bodily sensations as dangerous. This leads to a cascade of anxiety and heightened physiological arousal which creates more symptoms and an intensification of pre-existing ones. Thus, prior CBT interventions have sought to decrease this arousal through relaxation training, and to change dysfunctional beliefs through cognitive restructuring. However, there is evidence that severe health anxiety is associated not only with abnormal beliefs, but also with dysfunctional cognitive processing, including a propensity for attentional biases (Rassin, Muris, Franken, & van Straten, 2008), and for rumination (Marcus, Hughes, & Arnau, 2008).

Mindfulness-based cognitive therapy (MBCT) interventions have been gaining research and clinical attention for the treatment of mood (Segal, Williams, & Teasdale, 2002; Teasdale et al., 2000), and more recently, anxiety disorders (Evans et al., 2008). These interventions differ from traditional CBT in that they do not attempt to change dysfunctional beliefs, but rather to change the thought process. Studies have shown that mindfulness-based interventions are associated with decreased ruminative thoughts (Jain

* Corresponding author. Present address: Department of Psychiatry, Massachusetts General Hospital, 55 Fruit St, YAW 6A, Boston, MA 02114, United States. Tel.: +1 617 724 6300; fax: +1 617 726 9136.
E-mail address: dlovas@partners.org (D.A. Lovas).
[1] Present address: Massachusetts General Hospital, United States.

0887-6185/$ – see front matter © 2010 Elsevier Ltd. All rights reserved.
doi:10.1016/j.janxdis.2010.06.019

et al., 2007). Additionally, emerging evidence suggests that mindfulness meditation, the central technique in mindfulness-based interventions, is associated with adaptive changes in attention (Jha, Krompinger, & Baime, 2007), and in areas of the brain associated with interoception (Lazar et al., 2005).

Thus, it was hypothesized that MBCT might be a beneficial intervention for patients with hypochondriasis, or severe health anxiety. Specifically, it was hypothesized that teaching MBCT in this population would result in decreased overall hypochondriacal symptoms, with specific reductions in the frequency and believability of health-related ruminations. It was also hypothesized that there would be improvements in quality of life after the intervention. Lastly, it was hypothesized that improvements in the primary outcome measure of health anxiety would be correlated with improvements in mindfulness.

2. Method

2.1. Participants

Participants were recruited from an academic community hospital setting via posted notices around the hospital and primary care clinics, and via email announcements to the primary care medicine and psychiatry faculty. A senior psychiatry resident screened interested subjects for inclusion and exclusion criteria using the Mini International Neuropsychiatric Interview (MINI; Sheehan et al., 1998). Inclusion criteria were (a) over 18 years of age, (b) English speaking, (c) medical stability, (d) meeting criteria for significant health anxiety, as determined by a mean per item score on the Whiteley Index of greater than 3, and a diagnosis of "hypochondriasis" based on DSM-IV-TR criteria. Consistent with prior MBCT studies of anxiety (Evans et al., 2008), and prior CBT studies of hypochondriasis (e.g., Barsky & Ahern, 2004), the following were set as exclusion criteria: comorbid, current, moderate–severe major depression (as assessed by BDI score); current psychoactive substance abuse or dependence; psychosis; pregnancy; and ongoing, symptom-contingent, disability determinations, workers' compensation proceedings, or litigation. Suicide risk was assessed by the MINI suicide module, and individuals scoring in the moderate and high range were also excluded.

2.2. Procedure

At baseline, end of treatment, and at 3-month follow-up, participants completed self-report measures of health anxiety, disease-related thoughts, somatic symptoms, somatosensory amplification, general anxiety and mood, and quality of life. A measure of mindfulness, the predicted mediator of effect, was also collected. MBCT was administered in a group format with eight 2-h sessions at weekly intervals. The group was led by a senior psychiatry resident who had completed training in MBCT and had several years of clinical experience.

The intervention was educational in focus, and was based on the pre-existing models of Mindfulness-Based Stress Reduction (MBSR) and MBCT, by Kabat-Zinn (1990) and Segal et al. (2002), respectively. Participants were taught mindfulness meditation, including body scan, mindful breathing, and mindful movement practices. While these prior models emphasized the theoretical mechanisms underlying stress and depression-relapse, respectively, the current treatment focused on the putative cognitive-perceptual mechanisms involved in the production and maintenance of hypochondriacal symptoms. Each session followed an agenda and highlighted a different element of this model, along with specific formal and informal mindfulness practices. Many experientially learned concepts were generic to all mindfulness interventions, such as the ability to de-center from one's thoughts, and realize that "thoughts are just thoughts—not facts". Other concepts were more specific to hypochondriasis, such as noticing the relationship between the quality of one's attention – worried attention versus mindful attention – and amplification of symptoms. Most learning was experiential via the mindfulness practices, and the group process facilitated shared experience, discussion, and trouble-shooting regarding the techniques. Participants were provided guided meditation CDs and were asked to practice the formal meditations at least 30 min every day and to record their practice.

2.3. Measures

2.3.1. Whiteley Index (WI)

The primary outcome measure was the WI due to its wide use in assessing health anxiety and hypochondriacal attitudes and beliefs. Reliability, validity, and sensitivity to change of this 14-item self-report questionnaire is well established (Pilowsky, 1967, 1978). Each item was Likert scored from 1 to 5, and participants' scores are shown as the mean of these 14 ratings, producing a score of 1–5. The Whiteley Index does not have clearly defined clinical cut-offs, but in unpublished data of one of the authors (AJB), it was found that 120 subjects meeting DSM-III-R criteria for hypochondriasis had a mean WI score of 3.3, with a S.D. of 0.7. Therefore, a cut-off score of 3 was chosen as an even number that is within 1 S.D. of the mean, with the aim of providing a sufficiently stringent cut-off to detect a clinically significant population, but not be overly exclusive to limit the sample size.

2.3.2. Health Anxiety Inventory (HAI)

The HAI is a 14-item, self-report questionnaire measuring health anxiety that is minimally influenced by presence of major medical illness and has good validity, internal consistency, and reliability (Salkovskis, Rimes, Warwick, & Clark, 2002). Each item was Likert scored from 0 to 3, and participants' scores are shown as the mean of these 14 ratings, producing a score of 0–3. The additional illness attitude, avoidance, and reassurance-seeking scales within this questionnaire were scored separately, and were not added to the total HAI score, as is customary for this scale. The illness attitude section is composed of 4 items, which were each Likert scored from 0 to 3, and participants' scores are shown as the mean of these 4 ratings, producing a score of 0–3. The avoidance section is composed of 10 items, which were each Likert scored from 0 to 8, and participants' scores are shown as the mean of these 10 ratings, producing a score of 0–8. The reassurance-seeking section is composed of 10 items, which were each Likert scored from 0 to 8, and participants' scores are shown as the mean of these 10 ratings, producing a score of 0–8. The authors are not aware of clinical cut-offs for the HAI.

2.3.3. Hypochondriacal Cognitions Questionnaire (HCQ)

Frequency and believability of hypochondriacal thoughts were assessed with the HCQ. It is a self-report questionnaire that asks respondents to rate the frequency of 18 disease-related thoughts on a Likert scale of 1–5. Participants' scores are shown as the mean of these 18 ratings, producing a score of 1–5. It also asks respondents to rate the believability of these thoughts as a percentage from 0 to 100%, and the scores are shown as the mean of these 18 rating, producing a score of 0–100. The HCQ has been used previously in a large RCT of CBT for hypochondriasis (Barsky & Ahern, 2004). There are no clinical cut-offs for the HCQ.

2.3.4. Patient Health Questionnaire-15 (PHQ-15)

PHQ-15 (Kroenke, Spitzer, & Williams, 2002) is a 15-item self-report measure of the subjective severity of somatic symptoms, with established validity and reliability in somatoform disorder and primary care populations. It has been widely used as an index