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Shorter communication

Long-term follow-up of internet-delivered exposure and mindfulness based treatment for irritable bowel syndrome

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ABSTRACT

We conducted a follow-up of a previously reported study of internet-delivered cognitive behavior therapy (CBT) for IBS, based on exposure and mindfulness exercises (Ljótsson et al. (2010). Internet-delivered exposure and mindfulness based therapy for irritable bowel syndrome – a randomized controlled trial. *Behaviour Research and Therapy, 48*, 531–539). Seventy-five participants from the original sample of 85 (88%) reported follow-up data at 15–18 months (mean 16.4 months) after completing treatment. The follow-up sample included participants from both the original study's treatment group and waiting list after it had been crossed over to treatment. Intention-to-treat analysis showed that treatment gains were maintained on all outcome measures, including IBS symptoms, quality of life, and anxiety related to gastrointestinal symptoms, with mainly large effect sizes (within-group Cohen's $d = 0.78–1.11$). A total of fifty participants (59% of the total original sample; 52% of the original treatment group participants and 65% of the original waiting list participants) reported adequate relief of symptoms. Improvements at follow-up were more pronounced for the participants that had completed the full treatment and maintenance of improvement did not seem to be dependent on further treatment seeking. This study suggests that internet-delivered CBT based on exposure and mindfulness has long-term beneficial effects for IBS-patients.

Introduction

Irritable bowel syndrome (IBS) affects 5–11% of the adult population (Spiller et al., 2007). It is characterized by recurring episodes of abdominal pain or discomfort combined with diarrhea, constipation, and bloating (Longstreth et al., 2006). Compared to normal controls IBS-patients have impaired quality of life (Halder et al., 2004), are more likely to be absent from work (Drossman et al., 1993), and utilize more health care (Talley, Gabriel, Harmsen, Zinsmeister, & Evans, 1995).

Two meta-analyses have demonstrated that psychological therapies generally produce positive effects on IBS symptoms (Ford, Talley, Schoenfeld, Quigley, & Moayyedi, 2009; Lackner, Mesmer, Morley, Dowzer, & Hamilton, 2004). Cognitive behavior therapy (CBT) is considered the most well studied of the psychological interventions (Mayer, 2008) but its availability is limited (Lackner et al., 2008). To increase the availability of treatment a number of recent trials have explored different methods to limit the amount of therapist time. This has been done by reducing the number of sessions or providing therapist contact through the internet or by telephone (Hunt, Moshier, & Milonova, 2009; Lackner et al., 2008; Ljótsson, Falk, et al., 2010; Moss-Morris, McAlpine, Didsbury, & Spence, 2010). These studies show effect sizes comparable with treatments with more intensive treatment contact but have only provided 3–6 month follow-up data. There is also a lack of studies that consistently demonstrate long-term effectiveness of CBT delivered in a traditional manner. We are aware of four studies of CBT for IBS that have included at least 12 month follow-up data. The first (Neff & Blanchard, 1987) was followed up after 2 and 4 years (Blanchard, Schwarz, & Neff, 1988; Schwarz, Taylor, Scharff, & Blanchard, 1990) but studied a protocol

Abbreviations: IBS-QOL, Irritable Bowel Syndrome Quality of Life Instrument; GSRS-IBS, Gastrointestinal Symptom Rating Scale – IBS version; VSI, Visceral Sensitivity Index.

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that has been practically abandoned. The second (van Dulmen, Fennis, & Bleijenberg, 1996) had large variations in the length of the follow-up period (6–48 months) and provided follow-up data for less than 70% of the sample. The third (Boyce, Talley, Balaam, Koloski, & Truman, 2003) also suffered from large attrition with only a 62% response rate at the follow-up, furthermore the study failed to demonstrate meaningful differences between CBT and relaxation training. Finally, one study (Kennedy et al., 2005) failed to show maintenance of treatment gains beyond 3 month follow-up. In summary, the long-term beneficial effects of any kind of CBT for IBS remain undetermined at best and questionable at worst.

To determine the long-term effects of minimal contact CBT for IBS, specifically delivered via internet, we conducted a follow-up on the sample from a previous study by our research group (Ljótsson, Falk, et al., 2010). The internet-delivered treatment in that study was based on exposure and mindfulness exercises and the participants randomized to treatment showed large improvements in IBS symptoms and quality of life compared to a waiting list.

Methods

Participants

Participants were 75 self-referred IBS-patients that had participated in our previous study (Ljótsson, Falk, et al., 2010). They had been randomized to either treatment or waiting list which was subsequently crossed over to treatment. Participants from both groups were followed up simultaneously. The treatment group was followed up 18 months after treatment and the waiting list was follow-up at 15 months after completing the treatment (mean 16.4 months). Inclusion criteria, recruitment procedure and participant characteristics are detailed in the original report (Ljótsson, Falk, et al., 2010). The mean age of participants that provided follow-up data was 35.9 ($SD = 8.9$), they had suffered from IBS symptoms for 15.5 years ($SD = 11.0$), and 65 (86%) were female. This study was approved by the regional ethics committee.

Measures

All self-report measurements in the study were completed online. Online assessment is considered a well-validated form of administration of self-assessments (Ritter, Lorig, Laurent, & Matthews, 2004). The self-report measures used were The Gastrointestinal Symptom Rating Scale – IBS version (GSRS-IBS; Wiklund et al., 2003), The Irritable Bowel Syndrome Quality of Life Instrument (IBS-QOL; Patrick, Drossman, Frederick, DiCesare, & Puder, 1998), and The Visceral Sensitivity Index (VSI; Labus et al., 2004). In accordance to the Rome Guidelines (Irvine et al., 2006) we also included a measure of adequate relief in the follow-up study. The participants were asked: "In the past week, have you had adequate relief from IBS pain or discomfort?" (Mangel et al., 1998). Participants were also asked what type of health care, if any, they had utilized because of IBS symptoms since the treatment had ended.

Procedure

Recruitment

When the participants applied for the treatment they were informed that the study would include a long-term follow-up. Before the follow-up started all 85 participants were contacted by telephone and 75 (88%) agreed to return follow-up data. Fig. 1 displays the participant flow from randomization to participation in the post-treatment and follow-up assessments.

Treatment

The treatment consisted of a 10-week internet-delivered CBT-protocol based on exposure and mindfulness exercises and acceptance of IBS symptoms. The proposed mechanism of our treatment is that 1) mindful exposure to symptoms facilitates extinction of anxiety related to gastrointestinal symptoms, and 2) acceptance instead of avoidance or control of symptoms leads to an increased quality of life. The decrease in symptom-related anxiety and increase in quality of life will in turn lead to a decreased burden of symptoms. The original report contains a detailed description of the treatment program and results (Ljótsson, Falk, et al., 2010).

Assessments

All self-assessments were completed at pre-treatment, post-treatment, and follow-up except the adequate relief question which was only completed at follow-up. The GSRS-IBS scores were calculated as the mean of 3 weekly assessments.

Analysis

Statistical analyses were performed using Statistica 9.1. The pre-treatment, post-treatment and follow-up scores were calculated separately for the treatment and waiting list groups from the

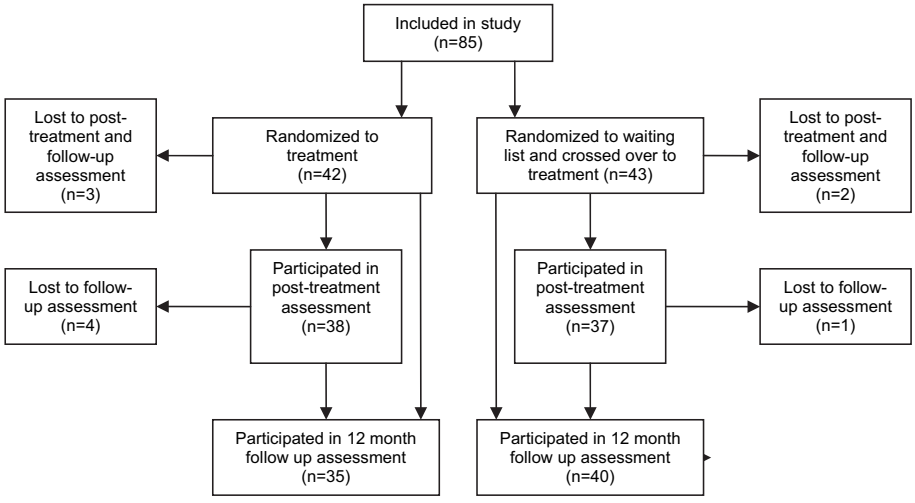

Fig. 1. Patient flow from recruitment to the original study, randomization, and participation in the post-treatment and follow-up assessments.