Long-term consequences of severe health anxiety on sick leave in treated and untreated patients: Analysis alongside a randomised controlled trial

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ABSTRACT

Health anxiety (HA) is prevalent and costly for health services. However, little is known about the full societal burden of HA. Based on complete register data, we (1) compared weeks on sickness-related benefits (SB) in untreated patients with severe HA ($n = 126$) with a matched population sample ($n = 12,600$); and (2) tested whether Acceptance & Commitment group Therapy (ACT-G) ($n = 63$) reduced weeks on SB during the first year after randomisation compared to a waitlist ($n = 63$). We found that (1) HA patients showed a six-monthly increment of 2 weeks on SB compared with the general population ($p < 0.0001$), and (2) that ACT-G and the waitlist showed no difference in their ability to reduce SB during the first year ($p = 0.246$). We conclude that HA is associated with a considerable societal burden. A possible beneficial effect of psychotherapy on SB needs further investigation.

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1. Introduction

Health anxiety (HA) (also known as hypochondriasis or illness anxiety disorder) is a prevalent but under-treated condition (Fink et al., 2004; Gureje, Ustun, & Simon, 1997; Sunderland, Newby, & Andrews, 2012). In recent years, the DSM-IV hypochondriasis diagnosis has been criticised for being too restrictive (Gureje et al., 1997), neither satisfying clinical nor nosologic validity requirements and the empirical foundation for the criteria has been found poor (Fink et al., 2004). In the present paper, we use the empirically based positive diagnostic criteria for HA, in which severe HA is characterised by exaggerated rumination with intrusive worries about harbouring serious illness and a persistent preoccupation with one's health leading to significant impairment and a decrease in quality of life (Fink et al., 2004). In the diagnostic criteria for HA, the DSM-IV's much criticised reassurance criterion (Gureje et al., 1997; Fink et al., 2004) and the six-month duration criterion (Barsky, Wyshak, Klerman, & Latham, 1990; Fink et al., 2004) have been removed. Furthermore, the HA criteria are found to be rather similar to the DSM-V Illness anxiety disorder, the difference between the two primarily being that the DSM-V diagnosis does not include the rumination symptom which is the key criteria of the HA diagnosis, and furthermore the DSM-V diagnosis contrary to Fink et al.'s (2004) excludes patients with moderate and severe somatic symptoms.

Severe HA may be persistent and poses a major burden on sufferers and on health services in terms of direct costs such as medical consultations and investigations (Barsky, Ettner, Horsky, & Bates, 2001; Fink, Ørnbøl, & Christensen, 2010; Hedman et al., 2012; Sunderland et al., 2012).

However, the societal consequences of severe HA are only partly elicited. Whilst there is some evidence that patients with severe HA report more disability days than medical outpatients (Barsky, Fama, Bailey, & Ahern, 1998) and the general population (Gureje et al., 1997; Martin & Jacobi, 2006; Sunderland et al., 2012), a recent systematic review stressed that more extensive research on sick leave as well as long-term perspectives is needed (Konnopka et al., 2012).

Cognitive behavioural therapy (CBT) reduces symptoms of illness worry in patients with severe HA (Bouman, 2014; Hedman et al., 2014; Thomson & Page, 2007; Tyrer et al., 2014). A study based on the same patient sample as the current one showed that a treatment approach derived from CBT, Acceptance and Commitment group Therapy (ACT-G), reduced illness worry and secondary

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outcomes in patients with HA compared to a waitlist control at 6- and 10-month follow-up (Eilenberg, Fink, Jensen, Rief, & Frostholm, 2015). Only one study has reported effect of psychological treatment on sick leave (Hedman et al., 2012). Surprisingly, this study found a substantial increase in costs of sick leave from pre- to post-treatment and at 1-year follow-up. However, due to the study design, a long-term treatment effect could not be estimated. Moreover, sick leave was based on self-reports.

To our knowledge, no previous studies have used objective, observer-independent prospective registration of sickness-related benefits in order to explore the societal consequences associated with clinically relevant HA and the long-term effects of psychological treatment for this condition.

Sickness-related benefits (SB) are registered in a national database for all citizens in Denmark. The register has shown superiority to self-report measures (Hjollund, Larsen, & Andersen, 2007) and allows comparison of specific groups with large general population samples without information-, recall-, or response bias.

In the current study, we aimed to (1) compare weeks on SB in a group of HA patients enrolled in an RCT (ACT-G) 5 years pre-enrolment to weeks on SB in a matched general population sample, (2) test whether ACT-G reduced weeks on SB during the first year after randomisation (i.e. until 8 months after treatment completion) compared to a waitlist control group, and 3) in an uncontrolled design test change in number of weeks on SB in ACT-G from before enrolment to 2-year follow-up (20 months after treatment completion).

2. Materials and methods

2.1. Study design, population and procedure

The present study included two different populations: (1) a cohort of 12,600 population controls matched on gender and age (proportion of 100 to 1); and (2) a cohort of 126 patients who were consecutively referred to The Research Clinic for Functional Disorders and Psychosomatics at the Head-Neuro Centre of Aarhus University Hospital, Denmark between March 2010 and April 2012, fulfilling the diagnostic criteria for severe HA (Fink et al., 2004) as primary diagnosis. Other inclusion criteria were: age 20–60 years and moderate to severe impairment. Patients were included in a pragmatic randomised controlled trial (clinicaltrial.gov NCT01158430) with two parallel arms and equal block-randomisation comparing ACT-G with a waitlist (see Fig. 1). For details see (Eilenberg, Kronstrand, Fink, & Frostholm, 2013; Eilenberg et al., 2015). All patients underwent a thorough clinical assessment using a modified version of the semi-structured psychiatric interview, Schedules for Clinical Assessment in Neuropsychiatry (SCAN) (Fink et al., 2004; WHO, 1998) and were given information about the nature, course and treatment options for their symptoms. The DSM-IV and the HA diagnoses were established based on the SCAN diagnostic algorithms (for details see (Eilenberg et al., 2015)). Moreover, the patients' primary care doctors were informed of the patients' diagnosis(/-ses) together with a summary of the medical history. There were no restrictions as to which psychological or pharmacological interventions enrolled patients could receive, or on referrals to other secondary care services (Eilenberg et al., 2015). We obtained separate written informed consent for entry to the trial from all participating patients before their enrolment. Each time 18 eligible patients had given informed consent, they were equally block-randomised (stratified by gender) to ACT-G or a waitlist by means of a computer algorithm that used predefined concealed random numbers. All enrolled patients were followed for 10 months after enrolment with questionnaires. The study was approved by the Danish Data

Protection Agency and the local research ethics committee. The main results of the RCT are reported elsewhere (Eilenberg et al., 2015).

2.2. Intervention

2.2.1. ACT-G

Patients allocated to ACT-G received 10 group-sessions of manualised (Eilenberg et al., 2013, 2015; Hoffmann, Halsboe, Eilenberg, Jensen, & Frostholm, 2014) psychotherapy based on an acceptance and commitment therapy approach (Hayes, Strosahl, & Wilson, 1999). Sessions were each of 3 h duration and treatment were delivered in seven groups of nine participants between December 2010 and October 2012 by two psychologist trained in ACT. The focus in ACT-G was at empowering the patients in coping with difficult illness-related thoughts and emotions using an acceptance-based approach. The therapy did not focus on enhancing work ability or reducing sick leave. The therapists did not directly intervene in terms of the patients' work status, but may have given recommendations as to work or sick leave in the discharge letter. Details about ACT-G have been reported previously (Eilenberg et al., 2013, 2015; Hoffmann et al., 2014), and the manual is available at www.functionaldisorders.dk

2.2.2. Waitlist

Patients allocated to waitlist continued usual care with their primary care doctor during the 10-month waitlist period. For ethical reasons, patients randomised to waitlist were offered non-manualised ACT group therapy after the 10-month period. With a mean duration of 12 months after enrolment, 53 of the former 63 waitlist patients started treatment, and therefore the waitlist patients could no longer be seen as an untreated control group. The therapy delivered to the waitlist group was inspired by the ACT-G manual, but was not applied with the same intensity as in the groups randomised to ACT-G. In the (former) waitlist groups, the group treatment ranged from 6 to 10 sessions.

2.3. Outcomes measure

2.3.1. Sickness-related benefits (SB)

Data on social benefit payments, such as SB (e.g. due to sick-leave) and unemployment benefits, were obtained from the Danish Register for Evaluation of Marginalisation (DREAM) database (Hjollund et al., 2007) for 5 years before and up to 2 years after enrolment to the RCT for the 126 patients. Furthermore, data for the same time period were retrieved for a randomly sampled population control group ($n = 12,600$) matched on gender and age (proportion of 100 to 1). DREAM is administered by the Danish Labour Market Authority and includes weekly information on social benefit payments for all citizens in Denmark since July 1991. DREAM contains information regarding sickness benefits, flexible job (job created for persons with limited working capacity), disability pension and unemployment benefits, amongst others. In case of sick leave, employers are responsible for the financing of sickness benefits for at least the first two weeks of a sick leave period. Sick leave beyond two weeks can be financed by public authorities, which means that short-term sick leave is not registered in DREAM. However, if sick leave continues for more than two weeks, the full period is registered. Benefit payments are registered on a weekly basis, which means that a full week is registered in DREAM if a person has received benefits for at least one day during this week. That is, if a person returns to work on the third day in the fourth week, the two days in the fourth week will count as a full week in the register. Persons who are not included in DREAM are not supposed to have received any social benefits since July 1991 and are hence considered