



## Guided self-help via internet for panic disorder: Dissemination across countries

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### ABSTRACT

Guided self-help via Internet is a promising way of treating panic disorder (PD). The present study examined the effects of a self-help program via Internet with weekly therapist contact for PD after disseminated to a new country. Predictors of outcome were also examined. The study was an open trial with 27 participants with PD with or without agoraphobia as their primary diagnose. Medium to large effects on PD-symptoms were reported after treatment and at 6 months follow-up, with smaller effects on secondary outcome measures, i.e. depression, interpersonal problems, and sleep problem. The attrition rate of 30% in present study was higher than in Swedish studies. Predictor analysis showed that participants with longer duration of PD-symptoms had less improvement on all outcome measures, whereas higher age predicted more improvement. The guided self-help program remained effective when disseminated to a new country, but the high attrition rate needs to be addressed in future studies.

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### 1. Introduction

Panic disorder (PD) have a lifetime prevalence at nearly 5% in the adult population (Kessler et al., 2006a), resulting in substantial costs both for those with the diagnosis and for society (Deacon, Licke, & Abramowitz, 2008; Kessler et al., 2006b). There are several effective treatments for PD, but there is a challenge to make these available for those in need of treatment (Collins, Westra, Dozois, & Burns, 2004; McManus, Grey, & Shafran, 2008). Guided self-help treatment based on Cognitive Behavioural Therapy (CBT) delivered through the Internet is a promising way of helping those with PD (Kaltenthaler, Parry, & Beverley, 2004; Titov, 2007).

The effects of a CBT-based guided self-help program for PD developed by the Swedish research group led by Andersson and Carlbring have been reported in four randomized controlled trials (Carlbring, Ekselius, & Andersson, 2003; Carlbring, Westling, Ljungstrand, Ekselius, & Andersson, 2001; Carlbring et al., 2005, 2006). Within-group effect sizes on primary outcome measures in these studies are reported to be medium to large, and when compared with therapist delivered therapy between-group effect sizes are reported to be small (Carlbring et al., 2005). The primary aim of pres-

ent study was to examine effects of the guided self-help program for PD developed by Andersson and Carlbring when disseminated to a new country (from Sweden to Norway). The second aim of the study was to examine effects on symptoms and problems additional to the targeted PD-symptoms. Effects on depressive symptoms and quality of life from this treatment have been reported (Carlbring et al., 2003, 2006), but outcome on sleep and interpersonal problems should also be of interest, as these are two domains in which those who suffers from PD often report problems (Hoffart, Hackmann, & Sexton, 2006). The third aim of the study was to examine possible predictors of outcome. There are few consistent findings regarding predictors of outcome in the novel field of guided self-help via Internet, and more research on predictors is needed (Andersson, Carlbring, & Grimund, 2008).

### 2. Methods

#### 2.1. Recruitment and inclusion

Participants were recruited through an ad in the local newspaper and 87 persons responded during the recruitment period (3 days). Initially, telephone screening based on the following criteria was used to select persons for face-to-face interview: (1) positive on two of three opening questions on the Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) (First, Spitzer, Gibbon, & Williams, 1995), (2) regularly access to Internet, (3) able to attend the face-to-face

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interview, (4) consulted general practitioner for physical complaints if relevant, and (5) not use anxiety reducing medication more than an average of once a month, and then only for special occasions (e.g. dentist or travel by plane). A total of 38 persons (13 men) fulfilled the screening-criteria and 36 attended the face-to-face interview, conducted by four experienced clinical psychologists, all involved in the pilot study. Inclusion criteria were: (a) PD according to Structured Clinical Interview for DSM-IV, (b) PD-symptoms with a severity of at least four on the Clinical Severity Rating (CSR; Brown, DiNardo, & Barlow, 1994), (c) had PD for at least 6 months, (d) PD was the main problem, (e) age 18–65 years of age, (f) no other disorder in acute need of treatment, (g) total score on Beck Depression Inventory (BDI; Beck, Erbaugh, Ward, Mock, & Mendelsohn, 1961) less than 26 and maximum one at item nine concerning suicidal ideation, (h) if antidepressant medication was used, it have had to be stable for the last 3 months, and remain on a stable dose during the treatment period. Flow-chart of participants are presented in Fig. 1.

## 2.2. Materials

**Guided self-help program.** The program was mainly based on Clark's (1986) cognitive model for PD (Carlbring et al., 2001). The program comprised ten modules with an average of 13.4 pages (range 5–25) of text and pictures. Participants accessed a new module every week on the following topics: psychoeducation, exercises for breathing and hyperventilation, cognitive restructur-

ing, interceptive exposure, exposure in vivo, and relapse prevention. At the end of each module participants were asked to explain the most important part of the module they had just read, and write down the experience and result of the exercises. A multiple choice quiz was also included at the end of each module. The program was translated into Norwegian by professional translators and further edited by the research group. Before inclusion, all participants were informed about the length and scope of the self-help program, what the modules comprised, and how much time (suggested 3–5 h) they were expected to spend on the modules on a weekly basis.

**Therapist guidance.** The program was introduced by the therapist. The therapist then telephoned the participants on a weekly pre-scheduled basis. The aim was to answer questions regarding the modules, to give feedback, and for participants to bring up additional problems. Telephone calls were done according to written guidelines and were to be approximately 10 min. Due to restriction given by Norwegian laws, the present study did not involve an online discussion group for the participants or email-contact with the therapist, as used in the Swedish studies. The therapists attended a 1-day work-shop on guided self-help via Internet by Carlbring prior to the study.

**Outcome measures.** The participants were assessed at T1: pre-treatment, T2: post-treatment, T3: at 6-month follow-up.

**Primary outcomes.** The Agoraphobic Cognitions Questionnaire (ACQ; Chambless, Caputo, Bright, & Gallagher, 1984) consists of 19 items rated on a five-point scale and measures catastrophic cognitions as a consequence of experiencing anxiety. The reliability of ACQ, estimated by Cronbach's alpha, was T1: 0.69.

The Body Sensations Questionnaire (Chambless et al., 1984) have 16 items rated on a five-point scale and measures fear of bodily sensations associated with autonomic arousal. Cronbach's alpha; T1: 0.81.

The Mobility Inventory-Alone (MI-A; Chambless, Caputo, Jasin, Gracely, & Williams, 1985) have 24 items rated on a five-point scale and measures agoraphobic avoidance behaviour in relation to different situations when alone. Cronbach's alpha; T1: 0.87.

**Secondary outcomes.** Beck Depression Inventory (BDI; Beck et al., 1961) have 21 items and measures depressive symptoms during the last week. Cronbach's alpha; T1: 0.87.

The Bergen Insomnia Scale (BIS; Pallesen, Bjorvatn, Nordhus, Siversten, & Hjørnevik, 2008) have six items rated on a eight-point scale and measures sleep-problems and related day-time functioning during the last week. Cronbach's alpha; T1: 0.87.

Inventory of Interpersonal Problems 64 (IIP-64; Horowitz, Rosenberg, Baer, Ureño, & Villaseñor, 1988; Monsen, Hagtvat, Havik, & Eilertsen, 2006) have 64 items rated on a five-point scale, based on a circumplex model for interpersonal problems. Cronbach's alpha of IIP-64; T1: 0.95.

## 2.3. Baseline predictors of outcome

**Socio-demographic factors.** Age and level of education.

**History and severity of PD-symptoms.** Duration of PD and clinician rated severity (CSR).

**Comorbidity.** Depressive symptoms (BDI), sleep-problems (BIS), and interpersonal distress (IIP-64).

## 2.4. Satisfaction with treatment

**Global evaluation and satisfaction.** SLUTTP (Havik et al., 1995) comprises global ratings of change, satisfaction with the treatment, evaluation of the importance of different aspects of the program, and how demanding the program was.

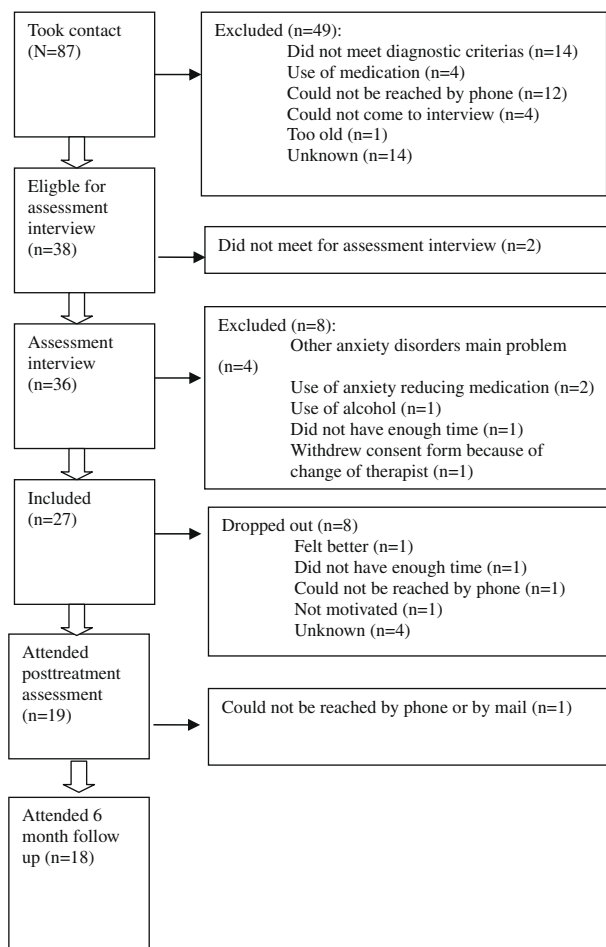


Fig. 1. Flow-chart of participants.

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