

Chapter 1

General introduction

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Common mental disorders

Epidemiological studies indicate that anxiety and depressive disorders are the most prevalent mental disorders (Kaltenthaler et al., 2006; Kessler et al., 1994), with European life time prevalence rates of approximately 14% (ESEMED, 2004). The prognosis for untreated depressive and anxiety disorders is unfavourable; anxiety and depressive disorders are consistently found to be persistent (Kessler, 2007) and associated with high relapse rates (Bruce et al., 2005; Mueller et al., 1999). Depression is among the top four causes of burden of disease world wide (Lopez and Murray, 1998) and is expected to be the disorder with the greatest disease burden in high income countries by the year 2030 (Mathers and Loncar, 2006). Anxiety disorders are also associated with severe and substantial psychosocial disability (Weiller et al., 1998). Furthermore, depression and anxiety are consistently associated with high costs (DuPont et al., 1996; Smit et al., 2006), substantial impairment to work (e.g., work absenteeism, performance, unemployment, under-employment) as well as disruption to interpersonal and family relationships (e.g., social isolation, interpersonal tensions, marital problems) (Kaltenthaler et al., 2006; Kessler, 2007). Given the high prevalence and relapse rate as well as disease burden and economic costs, treatment for common mental disorders is very important. However, only 20% to 30% of depressed and anxious people find their way into the health care system (Kessler et al., 1999; Young et al., 2001). Several reasons can be found for this under-utilization of treatment. For example, patients may fail to recognize their symptoms or they may underestimate its severity; other reasons include absence of health care in the vicinity or fear of social stigma (Docherty, 1997; Kaltenthaler et al., 2006; Robinson and Roter, 1999). Furthermore, sufferers often remain undetected in health care settings (Sartorius, 1996). GPs may fail to diagnose up to 50% of the depression or anxiety disorders, particularly where the patient complains of somatic rather than psychological symptoms (Kaltenthaler et al., 2006). Therefore, a good screening procedure is important.

Low-intensity screening for common mental disorders

Mental health screening questionnaires are instruments which are aimed at measuring symptoms of, for example, depressive or anxiety disorders. They can give an indication of the prevalence of a mental health disorder in a population. They can also assess the probability of a mental disorder in a patient or evaluate symptom severity. Importantly, screening can be conducted via self-report or based on ratings made by a health professional. Questionnaires can be administered via paper and pencil, telephone, or online.

Widely used screening questionnaires for depression are for example the Center for Epidemiologic Studies Depression Scale ([CES-D] Radloff, 1977; 20 items), Beck Depression Inventory ([BDI] Beck, 1961; 21 items), and Kessler 10 ([K10] Kessler and Mroczek, 1994; 10 items) and for anxiety disorders, the Beck Anxiety Inventory ([BAI] Beck, 1988; 21 items) and the Fear Questionnaire (Marks and Matthews, 1977; 21 items) Previous studies indicated that these questionnaires are reliable and valid in detecting depressive or anxiety disorders respectively (e.g., Beck, et al., 1988; Kessler and Mroczek, 1994). A screening

questionnaire is reliable when the measure is internally consistent or gives consistent results over time. There are several forms of validity. Construct validity (the measure actually measures what it claims to measure) can be assessed by convergent validity. This is measured by the degree of the correlation with others screening questionnaires which aim to measure the same theoretical construct (e.g., depression). Construct validity can also be assessed by divergent validity. This is measured by the degree to which the theoretical construct that the screening questionnaire aims to measure, does not correlate with screening questionnaires which aims to measure other theoretical constructs. Predictive validity describes the degree of agreement between the screening questionnaire and another (more direct and objective) measure of the same construct that is measured at some time in the future. When assessing a diagnosis (which can only be absent or present), this can be done by calculating sensitivity, specificity, Area Under the Curve (AUC), Positive Predictive Value (PPV) and Negative Predictive Value (NPV). Sensitivity is the probability that a person who has a disorder is screen positive. Specificity is the probability that a person not suffering from a disorder is screen negative. The AUC (the sum of sensitivity versus $[1 -]$ specificity) measures a scale's accuracy; it equals the probability that a randomly chosen case will score higher than a randomly chosen non-case (Fischer et al., 2003). PPV is the proportion of patients with positive test results who are correctly diagnosed. NPV is the proportion of patients with negative test results who are correctly diagnosed. PPV and NPV depend on the prevalence of the disorder in a sample and thus might vary.

When a screening questionnaire is translated into another language, used in another population with different characteristics (e.g., age, gender, [co morbid] health disorder), used in different settings (e.g. primary care, general population, medical outpatients, urgent care veterans' clinic) or administered in various ways (e.g., face to face, paper-pencil, via the internet), reliability and validity could be different, and should therefore be tested.

Standard self-administered screening questionnaires are already available online and can be as reliable and valid as paper and pencil versions (Buchanan, 2002). Fast-track screening is important, because unduly prolonged screening for computerized psychotherapy (CP) in routine care wastes resources (e.g., hard-pressed health workers) incurs discouraging delays for potential users (Marks and Cavanagh, 2009) and might not necessarily enhance detection of mental disorders (Gilbody et al., 2008). It is, however, unclear whether short screening questionnaires with only one or two items, are as reliable and valid as longer versions. Some studies and one meta-analysis showed that screening for depression or anxiety could be reduced to one or two questions (e.g., Henkel et al., 2004; Kroenke et al., 2009; McKenzie and Marks, 1994; Mitchell and Coyne, 2007; Whooley et al., 1997; Zimmerman et al., 2006). However, other studies (e.g., Van Marwijk et al., 1995; Osborn et al., 2003) found that single item questionnaires do not perform better than chance.

Screening serves a range of purposes. First, online questionnaires on mental health websites can be used by individuals to check whether they have symptoms of a specific disorder. Usually, they receive automated feedback with advice based on their score. Since many sufferers do not easily recognize their particular mental health problem, this new way of screening may lead to earlier detection, awareness, and recognition of symptoms. Secondly, online screening

may be used by health care providers as part of the assessment process prior to treatment, or in order to monitor treatment outcomes. For example, patients can fill in online questionnaires prior to their therapy sessions, which will give the provider additional information regarding the patients' current symptom level. Online questionnaires can also be generated automatically at preferred intervals during the therapy to check patients' progress. Finally, with the thriving development of internet-based therapies for mental health disorders, online questionnaires can be used to make specific recommendations regarding which low intensity therapy programme is the most appropriate for the patient's problems.

Health screening using internet based tools has several advantages. First, the internet provides easy access to large numbers of users (Austin et al., 2006; Buchanan and Smith, 1999). Secondly, since patients do not have to travel to a clinic and the clinic does not have to provide a room for patients to fill in the questionnaires, online screening saves time and costs (Austin et al., 2006; Buchanan, 2002), for both patient and health practitioner. Thirdly, people often disclose more sensitive information in computer-generated than in face-to-face interviews (Buchanan, 2002; Joinson, 1999). Hence, using the internet may lead to more sensitive screening (Carlbring et al., 2001), but more research is needed to confirm this. Fourth, it might possibly improve detection of common mental disorders (US Preventive Services Task Force, 2002). Finally, as previously mentioned, because mental health screening questionnaires can be time-consuming and expensive, they are not frequently used by busy health care providers or patients. This may be one of the reasons why the majority of patients with mental health disorders remain undetected in primary care. Online mental health screening, however, is both time-saving and economically efficient. Because people can fill in their online questionnaires at home and receive immediate feedback, internet screening has the potential to reach populations who have difficulty travelling or leaving home because of physical or mental disability, for example, those who cannot leave home due to physical immobility or mental disorders (e.g. severe agoraphobia), or people who feel stigmatized. This mode of delivery may therefore improve the detection of patients suffering from mental health disorders.

Online screening tests may be reliable and valid, but this cannot be taken for granted, since people answer questionnaires differently online than face-to-face (Joinson, 1999). There are several reasons for this. First, because online screening can be done at home, health care practitioners do not have control over the test situation. Noise, distractions, mood, fatigue, or intoxication, for example, might cause people to fill in online questionnaires differently than in situations where there is more control, such as in a professional health care setting (Buchanan and Smith, 1999). However a similar lack of control might equally apply to internet, and paper and pencil ratings done in other 'real life' situations. Secondly, different hardware and software combinations can cause online tests to look different or even to malfunction which can affect the reliability and validity of assessments (Austin et al., 2006; Buchanan and Smith, 1999). For example, a questionnaire can have an attractive layout with pictures on one computer using the latest version of an internet browser, but may look quite different or be totally unavailable on another computer using older software. Finally, the internet's advantage of greater anonymity might increase honesty and self-disclosure among participants, which too can cause differences in reliability and validity.

The Canadian Task Force on Preventive Health care (MacMillan et al., 2005), the US Preventive Services Task Force (U.S. Preventive Services Task Force, 1996) and The U.K. National Institute for Health and Clinical Excellence (NICE, 2004) all recommend routine use of screening and case-finding instruments to improve the quality of care for psychiatric disorders and depression in particular. Furthermore, NICE also recommends the use of one- and two-item screening instruments for depression (NICE, 2004). Although some studies showed that the use of screening questionnaires can increase the recognition and delivery of mental health care (e.g., Christensen et al., 2005; Lim et al., 2000; Moore et al., 1978), it was concluded by Gilbody et al. (2008) in their meta-analysis examining the effectiveness of screening in improving the recognition of depression, that screening questionnaires for depression alone would have little or no impact on the detection of depression by clinicians. Feedback of high scoring patients was, however, effective in increasing the rate of recognition of depression. The authors suggested that the use of more complex 2-stage screening and feedback methods improved recognition. Kroenke (2001) argues that screening alone is not enough, and should be followed by treatment, careful follow-up and monitoring of treatment effectiveness.

Low-intensity interventions for common mental disorders

The Dutch guidelines recommend pharmacotherapy for the treatment of severe depressive disorders, panic disorder with severe or moderate agoraphobia or an anxiety disorder with co-morbid severe depressive disorder (Multidisciplinary Guidelines on Depression, 2005; Multidisciplinary Guidelines on Anxiety Disorders, 2003). In the case of mild to moderate depressive or anxiety disorders, psychotherapy is the first option. The most widely researched form of psychotherapy is Cognitive Behavioural Therapy (CBT), although other psychological treatments, such as Interpersonal Psychotherapy (IPT), psychodynamic therapy and problem solving treatment have been shown to be more or less equally effective in reducing mental health symptoms (Cuijpers et al., 2008b). The reported effect sizes have to be considered with caution, however, as the effects of psychotherapy for adult depression seem to be considerably overestimated because of publication bias (Cuijpers et al., 2010). The overall effect size of 89 comparisons between CBT and a control condition was 0.69, which was reduced to 0.49 after adjustment for publication (Cuijpers et al., 2010). Overestimation of effects might apply to anxiety disorders as well.

Despite effective treatment, many of the diagnosed people remain untreated (Hirschfield et al., 1997). Long waiting lists for mental health services caused by low workforce numbers (National Institute of Health, 1991) limited accessibility (Palmqvist et al., 2007), high costs and perceived social stigma which reduces help seeking (Carlbring et al., 2007b) may discourage individuals who have symptoms, or who meet the criteria for a psychiatric disorder from seeking professional help. Given the high prevalence and burden associated with these disorders and the existence of treatment barriers, there is a clear need for brief, inexpensive and effective interventions. Low-intensity interventions, such as psychoeducation or (internet-based) self-help interventions are immediately accessible and of low cost and thus may offer a first step in a stepped care model

or an alternative to face-to-face therapy in people with mild to moderate depressive and/or anxiety disorders.

Passive psychoeducational interventions for depression, anxiety and psychological distress

As early as the mid 1800s, psychoeducation was used as part of patients' therapy and treatment (Silverberg, 2003). Psychoeducation is a key component of effective psychological treatments in reducing depressive or anxiety symptoms. It has been used in health care and community settings and seems effective in prevention and quality improvement programmes in primary care (Cuijpers, 1998; Dowrick et al., 2000; Munoz et al., 1995; Wells et al., 2000).

Psychoeducational interventions are interventions in which education is offered to individuals with psychological disorders or physical illnesses. These interventions can vary from the delivery of 'passive' materials such as single leaflets, emails or information websites (e.g., Christensen et al., 2004) to active multisession group-intervention with exercises and therapist guidance, such as cognitive bibliotherapy (e.g., Scogin et al., 1987). Passive psychoeducational interventions can be easily implemented in routine care, since they are cost-effective, more easily administered and potentially more accessible than conventional pharmacological and psychological interventions. They might also improve the recognition of mental health disorders. Examples of passive interventions are those that offer psychoeducational information about disorders (e.g., by leaflet or via the internet) or personalized feedback to individuals based on test results or screening tests. The internet could be an important resource for delivering psychoeducation to the general population. Mental health information can easily be accessed 24/7 online, with a staggering amount of mental health-related information available, as indicated by the 103,000,000 web results in 0.30 seconds when a search with the keywords "mental health" was used on Google (June, 2010). The internet is frequently used by people to gather mental health information, and 26% of adult internet users have searched for information about a mental illness (Fox et al., 2000). Although mental health websites can contain accurate information, they can also lack a complete, evidence-based overview of the disorder (Griffiths and Christensen, 2000). However, consumers apparently do tend to choose sites that are reputable and accurate (Fogel et al., 2001),

Some evidence from RCTs in this field shows that passive psychoeducational interventions are effective in treating or preventing mental disorders, with between-group effect sizes varying from 0.22 to 0.31 in favour of the intervention compared to controls (Christensen et al., 2004; Riper et al., 2009). Although one cannot assume that passive psychoeducational interventions reduce severe cases of depression, anxiety or stress, they can alleviate clinical symptoms. These brief interventions may provide a first step in a stepped-care model for those experiencing lower levels of depressive, anxiety or stress related symptoms. When people experience mild to moderate levels of mental health symptoms, self-help treatments could be the next step.

Self-help for depression and anxiety disorders

One of the earliest articles on self-help dates from 1937, in which Menninger (1937) describes the effectiveness of bibliotherapy. Since then, the development of self-help interventions and the interest of the general public in these have increased considerably. A quick search on Google in June 2010 using the terms “self-help books for psychiatric disorders” yielded a million results. With the technological developments of the late 20th century, the mode of self-help delivery has encompassed not only books but also computers, DVDs, mobile phones etc. Nowadays, computer-aided psychotherapy (CP) is a regular care option, because of its efficacy and the encouragement of CP’s dissemination and implementation by some national funding bodies and governmental agencies (Marks and Cavanagh, 2009). In London, for example, the first primary care clinic was set up to deliver 4 CBT-based self-help programmes (including Beating the Blues for depression and Fear Fighter for anxiety disorders) (Gega et al., 2005; Marks and Cavanagh, 2009). In the last decade, several evidence-based internet-based self-help treatments have been made publicly available for the general population worldwide. For example, since MoodGYM, an automated CBT-based self-help treatment funded by the Australian government, went online in 2004, over 200,000 global users have registered on the website (<http://moodgym.anu.edu.au/welcome>, accessed on June 2010). In the Netherlands, ‘Colour your Life’ (www.kleurjeleven.nl) for depression have been accessed by an average of 3,113 unique visitors per month between Sept 2007 and August 2010 (personal communication), and ‘lessdrinking’ (www.minderdrinken.nl) for alcohol related problems have been accessed by an average of 2,750 unique visitors per month between May 2007 and February 2008 (Riper et al., 2009).

A clear definition of self-help is difficult to give, since, for example, the content and quality of the self-help material, as well as the delivery type and amount of therapist guidance can differ greatly. This thesis uses the definition of self-help by Cuijpers (Cuijpers, 1997; Cuijpers and Schuurmans, 2007). Self-help can be seen as a standardized psychological treatment, which the patient or client takes home and works through independently or with the help of a therapist. In the standardized psychological treatment, the patient can use step-by-step instructions on how to apply a generally accepted psychological treatment procedure to him- or herself. Self-help interventions can be delivered with or without support by a professional therapist or coach. When self-help is guided, the support should be minimized in terms of contact and be primarily supportive or facilitative in nature in supporting the patient in working through the standardized psychological treatment. Contact with the therapist can take place through face-to-face contact, by telephone, by email or any other communication method (Cuijpers, 1997; Cuijpers and Schuurmans, 2007). Support from a therapist can vary widely. In a review by Newman et al. (2005), four levels involving therapist input are defined:

1. Self-administered self-help (SA; no therapist contact, or for assessment only)
2. Predominantly Self-Help (PSH; therapist contact [by phone or face-to-face] for assessment, periodic check-ins, teaching clients how to use the self-help tool, providing the therapeutic rationale)
3. Minimal-Contact therapy (MC; active involvement [by phone or face-to-face] by a therapist, but to a lesser degree than traditional therapy for

this disorder, to have a more specific therapeutic effect instead of merely support)

4. Predominantly Therapist-Administered treatments (PTA; involving regular contact with a therapist; the use of a self-help tool augments the impact of the standard therapy)

The self-help material can be contained in a book or video- or audio-tape, but can also be administered less conventionally by computer systems or via the internet (Cuijpers and Schuurmans, 2007).

Among the advantages of self-help and internet-based self-help in particular, are the easy dissemination among the public, shortened wait lists in mental health care settings and improved access to care for those living in remote areas (Cuijpers and Riper, 2007; Marks et al., 2004). Computerized programmes can be customised for each patient and don't have some of the deficiencies of human therapists such as memory problems and fatigue (Kaltenthaler et al., 2006; Titov et al., 2007). Self-help can offer privacy and consistency of care and the promotion of self-activation and self-motivation (Kaltenthaler et al., 2006). Furthermore, patients have more choice in which treatment they can avail of (De Graaf, 2009), they are able to work at their own pace to master the material and it can be used at home at a convenient time that does not necessitate taking time off work (Andrews, 2010). (Internet-based) self-help interventions seem to be effective (e.g. Andersson and Cuijpers, 2009; Gould and Clum, 1993; Kaltenthaler et al., 2006) and they also seem to be cost-effective, although the evidence is still scarce (Kaltenthaler et al., 2006; Titov et al., 2007). However, self-help also has some limitations. For example, non-tested self-help books or internet-interventions can provide inappropriate health information and treatment, which decreases the quality of care; failed treatment might lead to negative self-recrimination and to a decrease or delay in further help-seeking behaviour (Robinson, 1998); there are less clear responsibilities between patients and therapists (Kaldo, 2008) and there is a loss of nonverbal communication by body language, voice fluctuation, etc (Ybarra and Eaton, 2005). Other limitations of internet-based self-help treatment in particular concern the websites' lack of security and the quality control of internet-based treatments. Thorough research is needed to test the treatment before it is made publicly available. Furthermore, although coverage of internet access is increasing rapidly worldwide (www.internetworldstats.com), with for example 91% of the Dutch population having access to the internet in 2008, the web is less widely used by less educated and low income families and by people older than 65 (www.cbs.nl).

Self-help was effective in reducing symptoms of depression (e.g., Andersson and Cuijpers, 2009; Proudfoot et al., 2003; Warmerdam et al., 2008), anxiety (e.g., panic disorder and agoraphobia, social phobia, specific phobia, obsessive compulsive disorders [Andersson et al., 2009a; Carlbring et al., 2001, Carlbring et al., 2007b; Clark et al., 1973; Ruwaard et al., 2009]), smoking cessation (Muñoz et al., 2009) tinnitus (Kaldo et al., 2008), problem drinking (Riper et al., 2009), insomnia (Ritterband et al., 2009; Van Straten et al., 2009), pain (Cuijpers et al., 2008a), and many other health related problems (Marrs, 1995). Substantial randomized controlled trials and meta-analysis found large positive effect sizes of guided self-help for anxiety and depressive disorders compared to control conditions. In a meta-analysis of 33 minimal therapist contact self-help

interventions for anxiety problems, Hirai and Clum (2006) found an effect size of $d=0.62$ at posttreatment and $d=0.51$ at follow-up compared to control groups. Gould and Clum (1993) report in their meta-analysis for self-help treatments an effect size (Cohen's d) of $d=0.74$ for depression and an effect size of $d=1.11$ for fear reduction compared to combined treatment (no treatment, wait-list or placebo control condition). In a meta-analysis by Spek and colleagues (2007) of 12 studies of solely internet-based treatment for depression, the mean effect size was 1.00 for guided internet based treatment compared to waitlist.

A review by Glasgow and Rosen (1978) concluded that attrition (one indicator of satisfaction with treatment) was a primary problem in self-help studies. Since then, however, several meta-analyses found no significant differences in drop-out between self-help and control conditions (Gould and Clum, 1993; Hirai and Clum, 2006). Perhaps self-help is more accepted nowadays.

Guided self-help versus face-to-face treatment

Several studies compared face-to-face treatments directly to self-help treatments for depression and anxiety and found no differences in effect size (e.g. Carlbring et al., 2005; Kiropoulos et al., 2008) and drop-out rates (e.g., Kiropoulos et al., 2008), other studies did (e.g., Carlbring et al., 2005). Furthermore, Carlbring and colleagues (2009) found that long-term effects (30 months) of internet-delivered CBT for social phobia are comparable to previous face-to-face treatment CBT trials. Moreover, several meta-analyses showed that self-help for anxiety and depression are as effective as therapist-led CBT (Cuijpers, 1997; Marrs; 1995; Scogin et al., 1990; Gould and Clum, 1993). In a review by Kaltenthaler and colleagues (2006) of 20 studies of computer- and internet-based self-help for depression and anxiety, these treatments seemed more effective than treatment as usual and as effective as traditional cognitive therapy. But most of the individual studies and some meta-analyses are underpowered, limiting the chance of detecting a 'true' difference between the two interventions. Also, there is some conflicting evidence. Hirai and Clum (2006) found an effect size of $d=0.11$ and a significant difference in drop out rate ($p<.01$) in pure self-help for anxiety compared to therapist directed interventions. However, this meta-analysis did not include a power calculation or test for publication bias.

Unguided internet based self-help treatment

Several studies examining unguided internet based CBT-based self-help found a significant reduction in depressive or anxiety symptoms (Furmark et al., 2009; Spek et al., 2007), compared to waitlist. However, when compared to treatment as usual, unguided self-help did not outperform the treatment as usual group in depressive symptoms (Clarke et al., 2002; De Graaf et al., 2009). Infrequent use of the internet site or a more seriously depressed sample might explain the results in the Clarke et al.(2002) study. When weekly telephone reminders were added in a subsequent study by Clarke and colleagues (2005), they did find positive effects of the intervention. Since there was no waiting-list control or placebo group in the De Graaf study (2009), neither the effects of natural remission nor placebo response

could be separated from response to specific treatments (Andrews, 2010). Another explanation might be that the care as usual in the Netherlands was of high quality.

In their meta-analysis for self-help treatments for health disorders, Gould and Clum (1993) did not find a significant difference between pure self-help and minimal contact self-help. In a meta-analysis of 12 studies of solely internet-based treatment for depression, Spek and colleagues (2007) found an effect size of 1.00 versus 0.26 for guided and unguided internetbased treatment compared to waitlist. Drop-out rates reported in studies examining the effectiveness of unguided self-help can vary greatly (e.g., 21.9% [Spek et al., 2007], 34% [Clarke et al., 2002] and 64% [De Graaf et al., 2009]). Some studies did not find differences in drop-out rate between guided and unguided selfhelp (Furmark et al., 2009; Gould and Clum, 1993), other studies did (Spek et al., 2007).

Unguided self-help is relatively easy to implement at a low cost as it does not require a complex and costly structure of professionals. Since having more clients does not imply more therapist time (Palmqvist et al., 2007), a treatment without any therapist guidance enables maximum access. However, there are legal and ethical issues regarding this type of treatment. A major limitation of unguided internet treatment is their inability to identify a patient and adjust treatment when s/he is in a psychological crisis. Seeking ways to exclude patients with high depression scores, suicidal ideation and/or anxiety measures, as well as closely monitoring participants (either by personalia details or unique username or ID) in the internet-based treatment could be recommended. On the other hand, exclusion from participation in the intervention could leave patients feeling rejected.

The role of support in Internet based self-help treatment

Therapist support in internet-delivered self-help treatment of depression and anxiety seems to reduce the dropout rate and increase effect size (Almlöv et al., 2010). In a review by Palmqvist and colleagues (2007), a Spearman correlation of 0.75 ($p < 0.005$) was found between therapist time per participant and between-group effect sizes for internet delivered treatments for psychiatric conditions. Among the reviews concerning self-help in general including internet or computer-based self-help, Kaltenthaler and colleagues (2006) found little effect on patient outcome compared to self-help (bibliotherapy) alone with regard to additional therapist input for depression. However, anxiety treatments do appear to be more effective when there is additional therapist contact. Newman and colleagues (2005) concluded in her review for different therapist support levels of self-help for anxiety that self-administered therapy was effective for motivated subjects with specific phobia, whereas subjects with panic disorder, GAD, and OCD benefited more from predominantly self-help (PSH) and minimal contact therapy (MC). Some studies, however, lacked sufficient statistical power and some studies were uncontrolled. These findings are, on the other hand, in contrast to a previous meta-analysis in which it was concluded that duration of therapist contact hours or method for contact had no significant relationships with effect sizes (Hirai and Clum, 2005). Marrs (1995) found similar results, although one explanation might be that the sample for depression and anxiety was insufficient to detect a statistical difference. Klein and colleagues (2009) concluded in their study among 57 participants in internet-delivered CBT for panic disorder that the effectiveness of human-supported intervention did not depend on the frequency of e-mail contact with

patients beyond one per week. Furthermore, no significant differences were found for therapeutic alliance, treatment credibility and treatment satisfaction between participants who received frequent contact compared to those receiving infrequent therapist contacts. Moreover, this study too could lack statistical power.

There is no doubt that (internet-based) self-help treatments are effective in reducing anxiety and depression. However, it is not clear how these interventions can best be offered to all sufferers who could benefit from them. A major issue is whether it is better to offer the intervention with the support of a coach or whether automated programmes could work. Where support is necessary, it is not clear which level of support is needed. Moreover, it has not been sufficiently studied whether there are differences in drop-out rate and costs between interventions with and without support, and in particular varying levels of support.

Aims and research questions

This thesis comprises five different studies with two central aims: 1) Low-intensity screening for common mental disorders and 2) Low-intensity interventions for common mental disorders. The first aim is to investigate the psychometric properties and diagnostic accuracy of (internet-based) screening questionnaires for common mental disorders. It is still unclear whether the psychometric properties of online questionnaires are reliable and valid, and whether short questionnaires (as short as one question) are as valid in detecting mood or anxiety symptoms as full-length questionnaires. The second aim is to investigate the effectiveness of low-intensity interventions for anxiety and depression, such as passive psychoeducational interventions and (internet-based) self-help treatments for depression and anxiety. The role of the therapist (unguided, guided and different levels of guidance) in internet-based self-help treatments for depression and anxiety in particular is studied, since issues concerning clinical effectiveness, cost-effectiveness and drop-out rate are still unresolved.

Outline

Chapter 2 examines the psychometric properties of the Dutch paper-pencil version of the K10 and extended K10, which was investigated using data from the Netherlands Study of Depression and Anxiety (NESDA). Chapters 3 to 5 report results from our study examining the psychometric properties of online questionnaires. Chapter 3 describes the validity of a short web screening questionnaire for common mental disorders (WSQ). Three online screening questionnaires for depression (CES-D, K10 and SID) are presented in chapter 4. Chapter 5 describes the validity of the GAD-7 and shorter versions (GAD-2 and GAD-SI) of this screening questionnaire for generalized anxiety disorder. In chapter 6, results from a meta-analysis of passive psychoeducation for depression, anxiety and stress are reported. Chapter 7 describes a meta-analysis of the equivalence between face-to-face therapy and guided self-help for depression and anxiety. Chapter 8 presents the protocol of the role-of-support study. Finally, chapter 9 discusses how the results relate to the main aims of this thesis, their clinical implications, and future directions for research.

