

Adherence to Self-Care Interventions for Depression or Anxiety: A Systematic Review

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Objectives: The study objective was to synthesise and describe adherence to intervention in published studies of supported self-care for depression or anxiety, and to identify participant characteristics associated with higher adherence.

Methods: We searched the databases EMBASE, MEDLINE, CINAHL, and PSYCINFO for the period from January 1986 until September 2010. Eligible studies reported on adherence to supported self-care interventions for depression or anxiety symptoms.

Results: We identified 40 studies of supported self-care interventions for depression and anxiety, of which 22 (55%) reported any measure of adherence to the intervention. Among these 22 studies, 18 (82%) reported the per cent of participants completing the entire self-care tool (20%–93%; Mean = 66%, *SD* 17), 13 studies reported the amount of self-care tools completed by the average participant (50.6%–96.4%; Mean = 80%, *SD* 11.6). Four studies (18%) reported the frequency of contacts with the self-care guide. Three (14%) studies reported participant characteristics associated with adherence.

Conclusion: Overall, reported adherence levels to supported self-care interventions for depression and anxiety indicate a significant amount of patient involvement in these interventions. Routine reporting of adherence will improve our understanding of adherence to supported self-care interventions, and will allow researchers to link adherence with intervention outcome.

Keywords

Adherence, anxiety, depression, self-management, systematic review

INTRODUCTION

Systematic reviews and meta-analyses suggest that self-care interventions can be effective in managing symptoms of depression and anxiety (Den Boer et al., 2004; Bower et al., 2001; Gellatly et al., 2007; Anderson et al., 2005). These interventions have been adopted as part of recommended models of management for these common mental health disorders (National Collaborating Centre for Mental Health, 2009, 2011). In addition to clinical effectiveness, the low cost of these interventions makes them an attractive alternative to conventional face-to-face therapy. Supported self-care interventions for depression and anxiety consist mainly of written or audio-visual components, often based on principles of cognitive behavioural therapy, supplemented with information on the treated illness (Den Boer et al., 2004; Bower et al., 2001; Gellatly et al., 2007; Anderson et al., 2005). Support components typically include short contacts (face-to-face, telephone or email) with personnel trained in the delivery of support for self-care interventions, referred to here as self-care guides (Gellatly et al., 2007, Newman et al., 2003). While there is substantial research examining the effectiveness of self-care interventions, little is known about adherence to these largely self-administered treatments.

Adherence is defined as the degree to which a 'person's behaviour – taking medication, following a diet, and/or executing lifestyle changes, corresponds with agreed recommendations from a health care provider' (Sabate, 2003: 3). Measures of adherence to self-care interventions for depression and anxiety typically include measures of use (e.g. completion of modules, frequency of use) of the self-care tools, and the frequency or length of contact with the self-care guides. Adherence to various medical and psychological interventions is often associated with participant characteristics; for example, illness severity, socioeconomic characteristics and social support (DiMatteo, 2004; DiMatteo et al., 2007). However, little is known about whether participant characteristics are associated with adherence to supported self-care interventions.

Research indicates that better adherence is associated with improved health outcomes across a range of treatments (DiMatteo et al., 2002; Kazantzis et al., 2000), while adherence has seldom been studied in the context of supported self-care interventions, the effects of adherence are expected to be similar in relation to treatment outcome: when patients use the self-care tool, they learn the techniques therein, and may therefore have better resulting health outcomes than those who do not read or use the self-care tool. It is therefore important to summarise the current adherence research in order to give researchers and health care providers benchmarks by which they might compare their own adherence data.

The present review aimed to identify original studies of supported self-care interventions for depression or anxiety, and to determine: the proportion that reported adherence to the intervention; the types of adherence measures used, participant characteristics associated with adherence, and the levels of adherence reported..

METHODS

The criteria for this review were fairly broad given *a priori* knowledge of the dearth of adherence reporting in supported self-care interventions for depression and anxiety. However, some pragmatic restrictions were made in order to reduce the breadth of the search process itself. As the study objectives are descriptive, randomised controlled trials as well as single-arm clinical trials, such as feasibility studies, were eligible for study inclusion.

Search strategy

Following consultation with a health sciences librarian, the search strategy devised was as follows: databases searched were MEDLINE, EMBASE, CINAHL and PSYCINFO, where the first three databases were searched using the Ovid platform. MeSH and text terms (as found in the title or abstract) were used to specify for:

1. illnesses: depressive disorders, depression, anxiety disorder, anxiety, chronic disease, chronic physical illness, diabetes, chronic obstructive pulmonary disease (COPD), asthma, stroke, heart disease and hypertension; and
2. interventions: self-care, self-management, self-help, minimal contact, brief therapy, self-efficacy, cognitive behavioural therapy, tele-health and tele-medicine.

Adherence in studies of supported self-care is rarely (if ever) a primary outcome; in order to avoid an overly-specific search strategy, adherence terms were intentionally not specified. Restricting the search to include studies reporting adherence in the abstract or title would have eliminated most search results.

Studies were searched from January 1986 until September 2010, as 1986 has been previously used as a lower date limit in a Cochrane review of self-management interventions, beyond which the authors deemed it unlikely to find such types of interventions (Foster et al., 2007). Where available, filters were used to further specify the search strategy (e.g. therapeutic interventions; populations restricted to adults).

Inclusion criteria

Eligible study interventions met the following criteria: the intervention used some form of a self-care tool (a book, a manual or workbook, a computer or internet program) that was provided to participants. Participants were supported in the use of the tool by a self-care guide. The aim of the self-care intervention was to reduce symptoms of depression or anxiety. Studies reported any measure of adherence to the self-care tool (e.g. amount or frequency of use). Ratings of usefulness alone, however, were not considered adherence.

The professional background of the self-care guide was not restricted as therapists, paraprofessionals, and lay leaders have been effective in supporting cognitive-behavioural and self-care interventions (Foster et al., 2007; Montgomery et al., 2010).

The maximum weekly average contact time with the guide was 20 minutes, as used in a meta-analysis of depression self-care studies (Gellatly et al., 2007). To allow for longer interventions, no limit was set on the number of contacts between support and participant.

The mode of contact could be in-person, through email, voice-messaging, or over the telephone (Tate and Zabinski, 1993).

Study samples were restricted to non-institutionalised adults. Studies recruiting participants both in a clinical setting and on a volunteer basis were included. Excluded were studies of children under the age of 18 exclusively, pregnant women, persons with psychotic mental disorders, and bipolar syndrome, as these studies often did not fit into the intervention design criteria, and unnecessarily inflated the number of studies found through the search strategy.

Study screening

Titles and abstracts were screened by the first author, and potentially eligible studies were identified and retained. Retained references were read in full text, using an inclusion and exclusion criteria form detailed above. All included studies were reviewed by the second author. In the event that it was not clear whether to include a given study, the study was discussed with the second author, until agreement was reached.

Data extraction

A standardised data extraction form was devised for the purposes of this review following pilot testing on 10 articles. Data were extracted twice on different occasions by the first author. Authors were contacted if necessary information was missing or needed clarification ($N = 6$). Data were extracted only from those intervention arms that provided a supported self-care intervention. If a study had two relevant intervention arms, data were extracted from both.

Participant recruitment and characteristics

Recruitment was classified as 'clinical', 'volunteer', or 'mixed'. Clinical recruitment was defined as the referral of patients to the study from either a primary care physician or mental health centre waiting list. Volunteer recruitment was defined as the recruitment of participants through advertisements in health-related websites, community centres, and newspapers. Mixed recruitment used both clinical and volunteer strategies. Where available, the following participant characteristics were abstracted: sex; age; per cent of participants married or cohabiting; and educational attainment.

Self-care tool design

The design of the self-care tools was classified as print-based, internet-based, or sequential internet/computer-based (modules of the self-care tool were made available to the participant sequentially, and in a specific order). By contrast, non-sequential designs allowed for modules to be completed at the discretion of the participant.

Self-care guide background and role

Guide background was recorded where stated. The role of the guide was classified as either non-clinical or clinical according to the following criteria. A non-clinical role was defined as limited to providing risk assessment, encouragement and moral support, and answering basic questions about the self-care tools, but not engaging in active therapy. A clinical role was defined providing feedback based on professional knowledge and, when required, brief therapy, in addition to non-clinical tasks.

The mode of patient contact refers to the medium of communication between guide and patient (telephone, in person or email).

The frequency of contact was the number of contacts between guide and patient reported by the study. Studies wherein guides corresponded with patients were classified as 'continuous', as there was no set number of contacts that were planned. Frequency of contact was either reported as the number of contacts that occurred during the intervention (using 'measures of adherence' below) or the number of intended contacts, as specified in the manuscript.

Measures of adherence to self-care intervention were classified into quantity of adherence, which describe how much of the tool participants completed, and quality of adherence, which describe how the participants used the self-care tool (Gould and Clum, 1993; Kazantzis et al., 2000, 2004).

Quantity of adherence measures

1. Per cent of completion: per cent of participants in a given intervention arm who have completed all modules of the self-care tool.
2. Mean or median completion: percentage of the self-care tool that was completed by the average participant in the intervention arm in question. Where not reported explicitly, this measure was calculated based on information provided on the percentage of participants completing each module.

Quality of adherence measures

1. Exercises per week: the number of exercises found in the self-care tool used per week by the average participant in the intervention.
2. Plans to continue use: percentage of participants who self-report plans to continue using the self-care tool after the adherence was measured.
3. Log ins per week: the average number of times participants logged in to an online self-care tool.

The time and source of adherence was recorded; self-reported adherence was classified as either post-treatment or continuous, the latter indicating assessment at more than one time point. Automated adherence was recorded through internet monitoring; direct observation was recorded in study clinics.

RESULTS

The study selection flow for this review chart is presented in Figure 1. The main reason for the exclusion of 82 studies was that the level of support was judged beyond the scope of self-care (31 studies): examples included stepped-care interventions, group therapy, or individual psychotherapy where support, rather than self-care, was the focus of the intervention. Fifteen interventions involved delivery of self-care learning resources, but had no support component. Among the 35 studies of supported self-care interventions, more than 50% (18) did not report adherence. None of the included studies reported adherence in the abstract, nor was it included as a keyword.

The two most commonly reported adherence measures were per cent of completion (per cent of participants who completed the entirety of the self-care tool offered) and mean completion (the average per cent of the intervention completed by participants). The distributions of per cent and mean completion levels in each study are shown in Figure 2. Per cent of completion rates ranged from 20% to 93% with a median of 70% in 20 intervention arms and a mean of 66% (*SD* 17). Mean completion ranged from 50.6% to 95.4% in 15 intervention arms with a median of 83% and a mean of 80% (*SD* 11.6). The number of self-care exercises completed per week (for example, mood-monitoring) was reported three times; log ins per week and per cent of participants planning to continue self-care tool use were both reported twice (Table 1). Frequency of contact between the self-care guide and the participant was reported as the mean number of contacts per week or month, in four of 22 studies, shown in Table 1 (Mead et al., 2005; Osgood-Hynes et al., 1998; Perini et al., 2009; Titov et al., 2010). The remaining studies reported the planned, rather than actual, frequency of contact. Adherence measures did not make assumptions about the adherence of study drop-outs, who were counted as missing.

Study characteristics are displayed in Table 2. The majority of studies (16 of 22) recruited through media outlets using volunteer participants. In all but two studies the average participant age was below 50. In 75% of studies the majority of participants were female. Three studies reported associations between participant characteristics and adherence. One study reported that patients with or without major depression were equally likely to have read or viewed the materials (Robinson et al., 1997). A second found no differences between self-care tool completers and non-completers on age, duration of problem, severity of anxiety, severity of depression, or sex (Learmonth et al., 2008). A third reported that married participants were more likely than non-married to complete the entire tool (66% compared to 40%, $P = 0.008$), but found no differences in employment status, sick leave days, age, alcohol consumption and education (van Straten et al., 2008).

Table 1 describes the interventions used in the 22 studies (24 intervention arms). Sixteen intervention arms (14 studies) were electronic sequentially completed self-care tools. These were divided into two categories: internet-based sequential self-care tools which were accessed from home by participants (12 intervention arms), and computer-based sequential self-care tools which were only accessible at a mental health clinic (four intervention arms). These types of interventions presented successive modules based on completion of previous modules (Andersson et al., 2005, 2006; Carlbring et al., 2006, 2007; Furmark et al., 2009; Kaldø et al., 2008; Perini et al., 2009; Titov et al., 2010; van Straten et al., 2008) or on a weekly basis (Grime, 2004; Learmonth et al., 2008; Lorig et al., 2008; Shapiro et al., 2004; Whitfield et al., 2006). One study provided internet-accessed self-care tools, where all materials were simultaneously available (Berman et al., 2009). Print-based self-care tools were provided in seven studies (Bilich et al., 2008; Floyd et al., 2004; Jamison and Scogin, 1995; Johnston et al., 2010; Mead et al., 2005), two of which also provided video material (Osgood-Hynes et al., 1998; Robinson et al., 1997).

Communication with participants occurred: through email and telephone for internet-based

self-care tools; in person for computer-based interventions where the guide was present at the health clinic where the self-care tool was accessed; and over the telephone for the support of those using print-based self-care tools.

Quality of adherence was reported by seven studies: three studies reported number of self-care exercises completed per week; here, the implementation of self-care techniques was measured (Bilich et al., 2008; Jamison and Scogin, 1995; Mead et al., 2005). Four studies reported comprehension of self-care material (Floyd et al., 2004; Jamison and Scogin, 1995; Johnston et al., 2010; Whitfield et al., 2006). Quality of adherence was tacitly measured in six studies using automated adherence to track their patients' progress, whereby the guide verified that the participant had both completed and understood the material covered in the module in question (Andersson et al., 2005, 2006; Carlbring et al., 2006, 2007; Furmark et al., 2009; Kaldo et al., 2008). The remaining studies did not incorporate quality into their adherence measures. Three internet-based studies reported that successive modules were released to the participant upon completion of a previous module, but criteria for completing a module were not explained (Perini et al., 2009; Titov et al., 2010; van Straten et al., 2008). Similarly, the study by Lorig et al. (2008) measured how many modules the participant began using, as well as logins per week, but did not report how much of each module was actually completed; instead, it reported how many modules were participated in. Finally, one study combined automated and self-report adherence measures, obtaining a log in per week measure as well as a plan-to-continue statement (Berman et al., 2009). All studies reporting direct observation adherence, save Whitfield et al. (2006), also have the same ambiguity as to whether completion or participation was measured; these studies also all offered the same computerised intervention (Grime, 2004; Learmonth et al., 2008; Shapiro et al., 2004).

DISCUSSION

The present review aimed to identify original studies of supported self-care interventions for depression or anxiety to determine: the proportion that reported adherence to the intervention; the types of adherence measures used, participant characteristics associated with adherence, and the levels of adherence reported. To date, adherence to self-care tools has not been emphasised in many studies of supported self-care. Roughly half of those studies identified with the search strategy did not report adherence. When reported, it was never included in the abstract, and the studies were not assigned adherence keywords for database indexing.

The observed levels of adherence, when available, indicate that, among half or more of the intervention arms studied, 70% of participants completed the entirety of the self-care tools offered, and that participants completed an average of 83% of the self-care tools. The median rate of adherence identified in the present review is higher than that reported in an earlier review of computerised CBT interventions for depression or anxiety, in which a median per cent completion of 56% was derived from 36 individual studies; mean completion was not reported (Waller and Gilbody, 2004). The review included studies up to

July of 2005 (Waller and Gilbody, 2004), and it is plausible that the increased prominence of the internet in the five years since that report could help explain the higher reported adherence found in the present study. Median per cent completion adherence in the current review also appears to be higher than in a review of internet-only supported or unsupported self-care studies for depression and anxiety (Christensen, 2009). Taken together, reported adherence levels appear to be fairly high, indicating a significant amount of patient involvement in the interventions. Researchers can use the adherence information compiled here – along with the intervention descriptions – to aid in the planning phase of a supported self-care intervention, or to compare with their adherence results. Only four studies reported adherence to the self-care support component; similarly, only three studies reported univariate associations between participant characteristics and higher adherence. Therefore, no conclusions may yet be drawn based on the data currently available.

Organisations providing supported self-care interventions should be encouraged by the results presented in this study, which indicate that participants are opting to use significant portions of their self-care tools, and may therefore be learning the self-care techniques instructed therein, leading to positive health outcomes. Some methodological improvements, however, are needed to improve our understanding of adherence in this field. Only four of 22 studies reported adherence to the support component of the intervention; as such, we do not know how much people are opting to use the support component of the intervention. Questions remain, however, including: is the use of the self-care tool correlated with use of the support component; and is the use of the support component related to treatment outcome?

Adherence was most frequently measured as per cent completion of the self-care tool, which is a binary measure of tool completion that gives no information about how much of the self-care tool was completed by participants who did not complete the tool in its entirety. Moreover, quantity of adherence was reported more frequently than quality of adherence. Quality of adherence measurement allows researchers and clinicians to gauge how the participants are using the tools, including the frequency of use, and their understanding and employment of the techniques therein.

Accuracy is also a shortcoming when adherence is self-reported, as occurs in any non-electronic intervention. A review of adherence reporting to homework assignments in psychotherapy for psychiatric patients recommended recording adherence at multiple time-points during the intervention, and from more than one source (Kazantzis et al., 2004), which could improve the accuracy of reported adherence, and allow early identification of non-adherers (Bilich et al., 2008; Kazantzis et al., 2004). In the present review, all but one study (Berman et al., 2009) obtained adherence information from a single source: self-report, automated records, or self-care guide assessments. Among studies using non-automated or direct observation adherence assessment, all but two recorded adherence at post-treatment interviews.

Findings from the present review are subject to some limitations. Although the selection of studies was reviewed by two of us (first and second authors), data were

extracted only by the first author, which could have resulted in some error; however, care was taken to re-verify the extracted data at least twice per selected study. Generalisability of the findings is limited, as the majority of studies recruited volunteers through media outlets, and had a majority of female participants. Direct comparisons of adherence between interventions should be made with caution due to the diversity of self-care tool content. To improve upon the current research, a number of methodological components may be improved. Reporting adherence to interventions of supported self-care for mental illness should be standard practice, and should use descriptive summary measures of tool completion (mean or median completion). Adherence to the self-care guide should also be reported to gauge participants' use of the support component. Thorough descriptions of intervention components should be provided in order to contextualise the interventions within the larger body of research. While adherence reporting has thus far largely focused on the amount (quantity) of the self-care tool completed, there are a number of other dimensions that might also be measured (e.g. frequency of use, total time spent per week, comprehension of self-care concepts, and use of self-care exercises). These elements of the quality of adherence would provide a more complete understanding of whether and how adherence may be related to better outcomes, and can be assessed either by the guide or during study interviews (Kazantzis et al., 2004). By implementing improvements, future researchers and clinical practitioners of supported self-care will be provided with benchmarks for comparing adherence.

The accuracy of adherence reporting can also be improved. Given the increasing prominence of internet-based computing (including mobile technology), computerised self-care tools allow for detailed adherence data to be collected continually, and with little added expense. Internet software allows for real-time and accurate 'automated' measurement of adherence. Where automated measures of adherence are not available, adherence should be assessed – perhaps with the aid of the self-care guide – at more than one time-point to avoid recall bias at post-treatment.

Finally, self-care studies should explore the relationship between adherence to the intervention and the primary outcome of the intervention. A positive correlation has been repeatedly shown in individual studies and in meta-analyses of adherence to homework assignments in psychotherapy (largely for depression or anxiety), adherence to non-psychiatric medical treatments, and in a limited number of supported self-care studies (Kazantzis et al., 2000; DiMatteo et al., 2002; Donkin, 2011). Further research in this field will aid our understanding of the treatment-effect relationship for supported self-care interventions.

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Figure 1. Study flow diagram

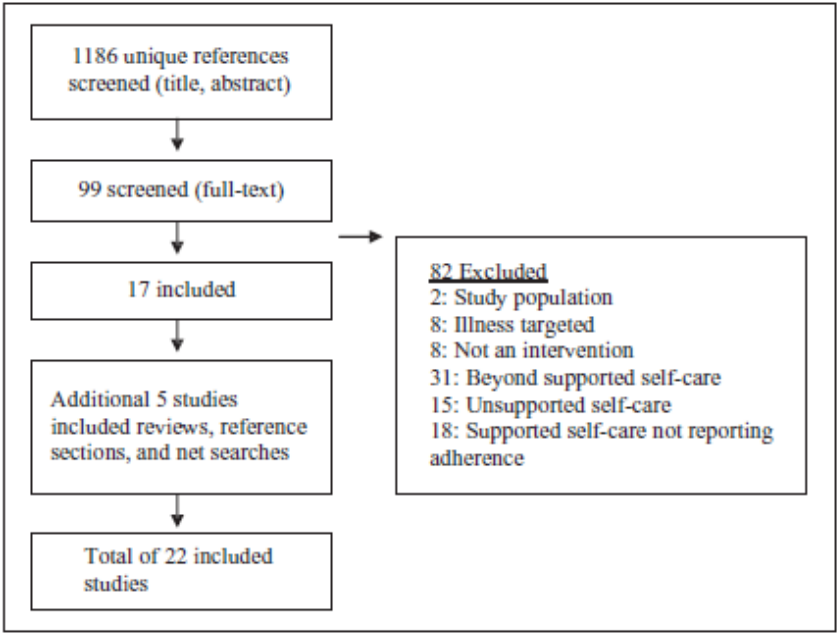
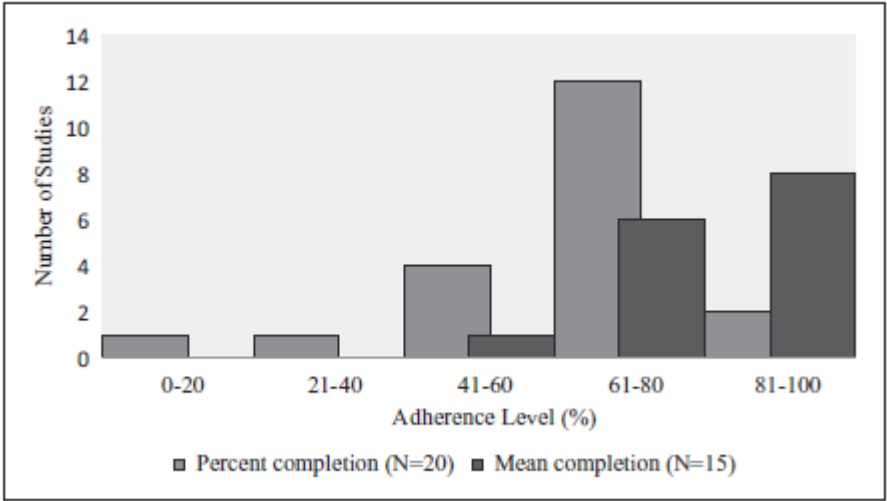


Figure 2. Per cent and mean completion of self-care tools



Author, year, study design	Self-care tools content	Coach background (role)	Mode of patient contact	Duration (weeks) Frequency of contact	Measure of Adherence
Andersson et al., 2005[25]; RCT	Internet-based sequential CBT	Post-graduate therapist (clinical)	E-mail	10 Weekly contact	Automated: PC: 65% MC: 74%
Andersson et al., 2006[26]; RCT	Internet-based sequential CBT	Clinical psychologists and Master's level student psychologists (clinical)	E-mail	9 Continuous contact	Automated: PC: 58.1% MC: 86.7%
Berman et al., 2009[35] RCT	Internet-based mind-body & complementary alternative medicine	Research assistant (non- clinical)	E-mail	6 Continuous contact	Automated: 3.75 log-in/week Self-report: post-treatment PCU: 78%
Bilich et al., 2008[36]; RCT; Minimal contact arm	Print-based CBT 1 Workbook	Research assistant (non-clinical)	Telephone	8 Weekly contact	Self-report: continuous PC: 85% EPW: 2
Bilich et al., 2008[36]; RCT; Assisted self-help arm	Print-based CBT 1 Workbook	Psychologist or intern psychologist (clinical)	Telephone	8 Weekly contact	AS ABOVE – adherence pooled for both intervention arms
Carlbring et al., 2006[27]; RCT	Internet-based sequential CBT	Master's level student psychologists (clinical)	E-mail; telephone	10 Weekly contact	Automated: PC: 80% MC: 89%
Carlbring et al., 2007[28]; RCT	Internet-based sequential CBT	Master's level student psychologists (clinical)	E-mail; telephone	9 Weekly contact	Automated: PC: 93% MC: 95.4%
Floyd et al, 2004[37]; RCT	Print-based CBT Book	Psychologist (clinical)	Telephone	4 Weekly contact	Self-report: continuous MC: 63.8%
Furmark et al., 2009[29]; RCT; CBT arm	Internet-based sequential CBT	Master's level student psychologists (clinical)	E-mail	9 Continuous contact	Automated: PC: 34.50% MC: 77.3%
Furmark et al., 2009[29]; RCT; Relaxation arm	Internet-based sequential relaxation	Master's level student psychologists (clinical)	E-mail	9 Continuous contact	Automated: PC: 53.60% MC: 75.1%
Grime et al., 2004[31];	Computer-based sequential CBT	Administrator (non-	In-person	8 Contact upon use	Direct observation: PC: 66.6%

Author, year, study design	Self-care tools content	Coach background (role)	Mode of patient contact	Duration (weeks) Frequency of contact	Measure of Adherence
RCT	(BtB)	clinical)		of tool at clinic	MC: 79.7%
Jamison et al., 1995[38]; RCT	Print-based CBT Book	Research assistant (non-clinical)	Telephone	4 Weekly contact	Self-report: post-treatment MC: 83.75% EPW: 0.86
Johnston et al., 2010[39]; RCT	Paper-based CBT 1 workbook; 6 modules	Master's level social sciences student (non-clinical)	Telephone	6 Weekly contact	Self-report: post-treatment PC: 72.6% (mean module PC)
Kaldo et al., 2008[30]; RCT	Internet-based sequential CBT	Master's level student psychologists (clinical)	E-mail	6 Continuous contact	Automated: PC: 62% MC: 75%
Learmonth et al., 2008[23]; Clinical audit	Computer-based sequential CBT (BtB)	Administrator (non-clinical)	In-person	7 Contact upon use of tool at clinic	Direct observation: PC: 71% MC: 83.75%
Lorig et al., 2008[32]; Single-arm	Internet-based sequential CBT and self-management	Peers from expert-patient program (non-clinical)	E-mail	6 Continuous contact	Automated PC: 79% MC: 86.7%
Mead et al., 2005[18];RCT	Print-based CBT 1 workbook	Therapist assistant (clinical)	In-person	12 Contact at study clinic Mean 1.05 contact per month	Self report: post-treatment 88 % Completed \geq half of tool EPW: 52% \geq 1 PCU: 90%
Osgood-Hynes et al, 1998[19]; RCT	Print-based and video CBT 3 workbooks	Interactive voice response & voice-mail with clinicians (clinical)	Telephone automated	12 Mean 1.1 contact per week	Self-report: post-treatment PC: 20% MC: 50.6% (for all 3 workbooks)
Perini et al., 2009[20]; RCT	Internet-based sequential CBT	Psychiatrist (clinical)	E-mail	8 Continuous contact: mean 1 contact per week	Automated: PC: 74%
Robinson et al., 1997[22]; RCT	Print-based and video CBT 2 workbooks	FP and Psychiatrist at HMO (clinical)	In-person	28 2 visits to FP; 2 visits to psychiatrist	Self-report: post-treatment PC: 75% for all tools

Author, year, study design	Self-care tools content	Coach background (role)	Mode of patient contact	Duration (weeks) Frequency of contact	Measure of Adherence
Shapiro et al., 2004[33]; Clinical Audit	Computer-based sequential CBT (BtB)	Administrator (non-clinical)	In-person	8 Contact upon use of tool at clinic	Direct observation: PC: 54.80%
Titov et al., 2010[21]; Technician-assisted arm; RCT	Internet-based sequential CBT	Administrator (non-clinical)	E-mail or Telephone	8 Continuous contact: Mean 4.6 contact per week	Automated: PC: 80% MC: 92.7%
Titov et al., 2010[21]; Clinician-assisted arm; RCT	Internet-based sequential CBT	Psychiatrist (clinical)	E-mail or Telephone	8 Continuous contact: Mean 4.3 contact per week	Automated: PC: 70% MC: 88.7%
Van Straten et al., 2008[24]; RCT	Internet-based sequential CBT	Master's level student psychologists (clinical)	E-mail	4 Continuous contact	Automated: PC: 55%
Whitfield et al., 2006[34]; Single-arm	Computer-based sequential CBT	Psychiatric nurse (non-clinical)	In-person	6 Contact upon use of tool at clinic	Direct Observation: PC: 70%
CBT: cognitive/behavioral therapy; sequential self-care tools: modules are released to participants in pre-defined order; PC: percent completion of the entire self-care tool; MC: mean completion of the self-care tool; EPW: self-care tool exercises completed per week; PCU: plans to continue using the tool; clinical: clinical support provided; non-clinical: non-clinical support provided; BtB: Beating the Blues intervention					

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