Self-Help and Minimal-Contact Therapies for Anxiety Disorders: Is Human Contact Necessary for Therapeutic Efficacy?

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Self-help materials, brief therapies, and treatments involving minimal therapist contact have all been proposed as effective and low-cost interventions for anxiety disorders. However, research also suggests that the therapeutic alliance is a central predictor of therapy outcome. Interestingly, amounts of therapist contact within and across "self-help" interventions vary greatly. It is therefore unclear how much therapist contact is necessary for a positive anxiety disorder treatment outcome. The present article reviews the literature on anxiety disorder treatments using self-help, self-administered, and decreased therapist-contact interventions. Treatment studies are grouped together by anxiety diagnosis as well as amount of therapist contact. It is concluded that self-administered treatments are most effective for motivated clients seeking treatment for simple phobias. Predominantly self-help therapies are efficacious for panic disorder and mixed anxiety samples. On the other hand, minimal-contact therapies have demonstrated efficacy for the greatest variety of anxiety diagnoses. © 2003 Wiley Periodicals, Inc. J Clin Psychol 59: 251–274, 2003.

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Due to high prevalence rates of anxiety disorders and swelling demands on professional service providers, there presently exists an acute need for the provision and dissemination of therapeutic services in less time-intensive formats than traditional psychotherapy (Marks, 1991; Newman, 2000). In addition, the reality of managed health care has elevated the

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priority of cost containment for treatment (Newman, 2000). These needs have stimulated attempts to create effective treatments for anxiety disorders without the involvement of exorbitant costs (e.g., Newman, Consoli, & Taylor, 1997; Palmer, Bor, & Josse, 2000). Self-help materials, brief therapies, and treatments involving minimal therapist contact have all been proposed as potential solutions to the dilemma. Furthermore, a diverse spectrum of media has been proposed as a means to deliver such cost-efficient treatments. Whereas usage of treatment-related materials in written and audio-taped format has been commonplace for years, newer developments encompass video and computer-administered/computer-assisted forms of treatment (Glasgow & Rosen, 1978; Marks, 1999; Newman, Consoli, & Taylor, 1997).

Despite potential benefits of low-cost therapies, efforts to design treatments of an abbreviated or self-administered nature have not been met without criticism. For example, the rapid proliferation and commercialization of unproven self-help materials has prompted ethical concerns by Rosen (1987). Similarly, Newman (2000) makes the point that self-help approaches may not be appropriate for all clients, and that greater attention should be paid to individual predictors of treatment response. Most relevant to proponents of self-help and minimal therapist contact treatments is the issue of whether decreased centrality of the relationship between client and therapist diminishes or endangers therapy outcomes—and if so, for whom. Indeed, the primacy of curative aspects of the "therapeutic alliance" has received increasing support across lines of treatment modality and disorder (Horvath & Symonds, 1991). Thus, a salient question is whether therapies with little emphasis on "client–therapist bond" are as efficacious as those that center on human contact.

Even though substantial research supports the value of the alliance between the client and the therapist, much research has been conducted that would challenge the overly simplistic reduction of therapy to a "curative relationship." In fact, researchers of common factors have noted that a significant portion of the effectiveness of treatments for anxiety disorders (viz., exposure-based treatments) is likely due to techniques (Lambert, 1992). Thus, it is possible that self-help interventions designed to deliver anxiety treatment techniques without the presence of a therapist may prove to be as effective as therapist-administered treatments.

This suggestion has received support from meta-analyses showing self-help treatments to be particularly effective for fear reduction or anxiety (Gould & Clum, 1993; Marrs, 1995). Such treatments have a medium to large effect size ($d = .74$) and are comparable to therapist-administered interventions (Gould & Clum, 1993; Marrs, 1995). Additionally, effect sizes are stable between posttreatment and follow-up, implying the maintenance of therapeutic gains (Gould & Clum, 1993; Marrs, 1995). In addition, when clients are given self-help media such as audio tapes in addition to bibliotherapy, effect sizes are roughly doubled (Gould & Clum, 1993). Thus, findings indicate that self-help treatments for anxiety may be valuable as stand-alone interventions.

Although these findings appear to support the efficacy of self-help techniques in the absence of a therapist, amounts of therapist contact and experimenter-imposed structure within and across "self-help" interventions vary greatly. In fact, it is quite rare to find a treatment study for a diagnosable anxiety disorder without therapist contact. At a minimum, experimental trials typically incorporate a preassessment, a therapist-delivered rationale, and an introduction to the self-help tool. Further, many studies include regular therapist check-ins, whereas others require clients to come regularly to a clinic to engage in self-treatment. Therefore, it may not be possible to determine if therapist contact is necessary. A better question may be whether minimal imposed structure or therapist contact is sufficient for a positive treatment outcome. One meta-analysis of bibliotherapy

studies (Marrs, 1995) found a significant positive relationship between amount of therapist contact and outcome for anxiety. This study, however, did not discriminate between different anxiety disorders and did not include self-help media other than bibliotherapy (e.g., audio therapy, video therapy, self-directed homework, and computer-assisted treatment).

In fact, it is possible that for some disorders such as agoraphobia, wherein there is a documented tendency to form intense attachments and to exhibit heightened fears of abandonment (Chambless, Foa, Groves, & Goldstein, 1982), extended therapist contact may facilitate countertherapeutic dependency on the therapist, making relapse more likely. This may mean that for specific anxiety disorders, decreased therapist contact may not only be permissible but may prove better suited to client needs. Similarly, for some media such as computers, researchers have noted that increased privacy as well as the interactive nature of particular programs may permit more full engrossment in therapeutic tasks for some clients (Newman, 1999). This contention is not utterly unexpected since a major common factor implicated in successful treatment outcome is clients' ability to work purposefully at therapeutic tasks, as opposed to therapist-related variables (Henry & Strupp, 1994).

The present article serves as a general review of anxiety disorder treatments using self-help, self-administered, and decreased therapist-contact interventions. For the purpose of this article, studies are organized by anxiety diagnoses, which include specific phobias, panic disorder, obsessive-compulsive disorder (OCD), generalized anxiety disorder (GAD), and social phobia. In addition, such studies are presented within the organizing framework of differing amounts of therapist contact. However, because amount of therapist contact varied greatly from study to study, the present review employed four categorical descriptors modified from those used by Glasgow and Rosen (1978). These descriptors are: (a) self-administered therapy (SA; therapist contact for assessment, at most), (b) predominantly self-help (PSH; therapist contact beyond assessment is for periodic check-ins, teaching clients how to use the self-help tool, and/or for providing the initial therapeutic rationale), (c) minimal-contact therapy (MC; active involvement of a therapist, though to a lesser degree than traditional therapy for this disorder, includes any treatment in which the therapist helps with initial hierarchy construction), and (d) predominantly therapist-administered treatments (PTA; clients have regular contact with a therapist for a typical number of sessions, but the study attempts to determine whether the use of a self-help tool augments the impact of the standard therapy). Whenever possible, treatments falling into each of these categories will be discussed for each disorder.

Specific Phobias

The most successful treatment for specific phobias is exposure (Chambless, 1990), a technique that is particularly amenable to self-administration. In fact, the assertion has even been made that exposure therapy can be so adequately self-administered that its therapist-delivered counterpart is rendered largely redundant (Marks, 1991). It also is the case that of all the anxiety disorders, specific phobia is the one most commonly addressed in self-help studies.

SA Treatments for Specific Phobias

SA interventions provide the most direct test of the effect of self-help tools on specific phobias. SA trials have treated phobias of snakes (Barrera & Rosen, 1977; Clark, 1973;

Cotler, 1970; Girodo & Henry, 1976; Hogan & Kirchner, 1968; Rosen, Glasgow, & Barrera, 1976) and spiders (Gilroy, Kirkby, Daniels, Menzies, & Montgomery, 2000; Hellstrom & Öst, 1995; Öst, Salkovskis, & Hellstrom, 1991; Öst, Stridh, & Wolf, 1998; Smith, Kirkby, Montgomery, & Daniels, 1997) and have ranged from self-administration solely at home (e.g., Rosen et al., 1976) to self-administration wholly in lab settings without therapist aid (e.g., Clark, 1973; Cotler, 1970; Gilroy et al., 2000; Hogan & Kirchner, 1968; Smith et al., 1997). Further, these studies all employed exposure-based interventions, though some combined exposure with relaxation (Baker, Cohen, & Saunders, 1973; Barrera & Rosen, 1977; Clark, 1973; Cotler, 1970; Lang, Malamed, & Hart, 1970; Phillips, Johnson, & Geyer, 1972; Rosen et al., 1976; Rosen, Glasgow, & Barrera, 1977), muscle tension techniques (Hellstrom, Fellenius, & Öst, 1996), or cognitive therapy (de Jongh, Muris, ter, Horst, & van Zuuren, 1995). These trials also had several methodological strengths. For example, most of them included objective forms of assessment (e.g., behavioral avoidance tests [BAT] and physiological measures). Additionally, only two studies reported dramatic dropout rates (e.g., 50–70%) for the SA conditions (Clark, 1973; Öst et al., 1998).

Results of this research found that SA treatments yielded significant benefits, with only a few exceptions (i.e., Girodo & Henry, 1976; Hellstrom & Öst, 1995; Öst et al., 1991). SA desensitization also was superior to placebo and no treatment (Rosen et al., 1976, 1977), and SA exposure was better than a reading control group (Girodo & Henry, 1976). Additional results suggested that SA treatments were as effective as those with greater therapist involvement. For example, a manualized form of desensitization was equally effective whether directed by therapist or self (Rosen et al., 1976). Similarly, SA desensitization (via audio tape and booklet) reduced phobic anxiety to the same extent as a PSH and an MC format (Clark, 1973). Further, computerized vicarious exposure (i.e., guiding an on-screen figure to encounter feared stimuli) was as effective as MC therapist-led exposure to pictures of the feared object (Gilroy et al., 2000), and educational reading about snakes was as effective as MC therapist-delivered snake education (Hogan & Kirchner, 1968). Moreover, in one study SA desensitization fared better at the two-month follow-up than the standard-length, therapist-administered version, and MC desensitization (Rosen et al., 1976). Treatment gains also were maintained at a two-year follow-up (Rosen et al., 1977).

Although findings seem to argue for the equivalence of SA and MC therapist-administered therapies, further examination of prior studies indicates the potential importance of externally imposed structure in the therapeutic process. For example, of the four studies that found SA equivalent to therapist-directed therapy, three of them conducted the SA interventions in a lab (Clark, 1973; Gilroy et al., 2000; Hogan & Kirchner, 1968), requiring clients to make appointments with people to whom they were accountable and to self-administer treatments in an imposed setting. This is important given that the only study that compared clinic to home self-administration found substantial differences in the percentage of clients who were clinically changed, based solely on the location of the self-exposure (i.e., 63% of clinic self-exposure clients vs. 10% of home self-exposure clients) (Hellstrom & Öst, 1995).

Additional findings also suggest that individual contact with a therapist may be important for some people. For example, 71% of MC therapist-directed versus 6% of home self-directed clients exhibited clinical change (Öst et al., 1991). In another study, 100% of those in individual MC treatment versus 68% in group MC, and 27% in home-based SA were clinically changed (Öst et al., 1998). Further, Hellstrom and Öst (1995) found that a three-hr session of therapist-aided exposure led to change in 88% of clients who improved whereas 63% of clinic self-exposure clients were clinically changed. Another

study found that one session of SA exposure in the lab was less effective than a session of therapist-delivered exposure (Girodo & Henry, 1976). These results suggest that some clients may only respond to interventions that include more therapist contact than what is typically delivered in SA interventions.

Several findings provide further information about the optimal conditions for SA therapy when treating specific phobias. For example, SA vicarious exposure was equally effective whether the target was phobia-relevant or phobia-irrelevant (Smith et al., 1997). Further, bibliotherapy was more effective than video therapy (Öst et al., 1998), and SA vicarious exposure outperformed group audio-tape-administered relaxation (Gilroy et al., 2000). Studies also found that a more detailed self-help manual was better than a briefer and more general manual (Hellstrom & Öst, 1995). Moreover, predictors of positive treatment outcome have included a highly credible treatment manual and motivation for psychotherapy (Öst et al., 1998). Thus, people with specific phobias are more likely to respond to SA treatments when they find the treatment manual to be credible, they are highly motivated, there is some externally imposed structure or therapist contact, and exposure techniques are part of the protocol.

PSH Treatments for Specific Phobias

In contrast to the plethora of SA therapy studies for specific phobias, only three PSH treatments were tested. Such interventions treated spider (Öst, Ferebee, & Furmark, 1997), snake (Moss & Arend, 1977), and mixed phobias (Phillips et al., 1972). Strengths of these studies were that all of them compared PSH approaches with treatments involving lengthier therapist contact and that most of them had objective outcome measures (Moss & Arend, 1977; Öst, Ferebee, & Furmark, 1997).

Interestingly, the findings of these trials were equivocal. On one hand, a 20-min therapist rationale plus home-based self-desensitization was as effective as 65 min of therapist-delivered rationale and hierarchy construction, plus weekly phone check-ins, and both active treatments were significantly more effective than a control condition (Phillips et al., 1972). In addition, a 30-min role play plus bibliotherapy for friend- or stranger-guided self-desensitization conducted in a lab was as effective as therapist-directed desensitization (Moss & Arend, 1977). On the other hand, PSH videotape-administered vicarious exposure and live vicarious exposure were inferior to three hr of therapist-led group in vivo exposure (Öst, Ferebee, & Furmark, 1997). Nonetheless, findings of the latter study are likely to be a virtue of the superiority of in vivo over vicarious exposure rather than the failed efficacy of PSH interventions. Thus, there is preliminary support for in vivo exposure-based PSH in the treatment of specific phobias.

MC Treatments for Specific Phobias

Within MC treatments, targeted phobias included spiders (Arntz & Lavy, 1993; Öst, 1996), snakes (Lang et al., 1970; O'Brien & Kelley, 1980), injections (Öst, Hellstrom, & Kaver, 1992), blood/injury (Hellstrom et al., 1996), flying (Öst, Brandberg, & Alm, 1997), heights (Baker et al., 1973), and dental settings/visits (de Jongh et al., 1995). Such phobias were treated with exposure in every case, combining it at times with cognitive therapy (de Jongh et al., 1995; Öst, Brandberg, & Alm, 1997), muscle tension techniques (Hellstrom et al., 1996), modeling (Öst, Brandberg, & Alm, 1997), and relaxation (Baker et al., 1973; Lang et al., 1970; Morris & Thomas, 1973). Therapy sessions ranged in frequency from one (e.g., Baker et al., 1973) to four (Lang et al., 1970) and in duration

from one (de Jongh et al., 1995) to three (Öst, Brandberg, & Alm, 1997) hr per session. Mean total therapist contact time appeared to be roughly two and one half hr.

Regardless of amount and duration of sessions, all MC interventions significantly reduced participants' phobias, maintaining benefits at follow-up of one (O'Brien & Kelley, 1980), three (Lang et al., 1970), and 12 months (Arntz & Lavy, 1993; de Jongh et al., 1995; Hellstrom et al., 1996; Öst, 1996; Öst, Brandberg, & Alm, 1997; Öst et al., 1992). MC cognitive therapy also was superior to information for dental anxiety (de Jongh et al., 1995). Further buttressing the finding of effectiveness was the fact that most of the studies utilized objective outcome measures (e.g., BAT and physiological measures).

It also was the case that MC therapies compared favorably to treatments with greater therapist contact. For example, one three-hr session was equal to five sessions across three and one half to six hr (Öst, Brandberg, & Alm, 1997; Öst et al., 1992), and one 2-hr session was equivalent to five 45- to 60-min sessions (Hellstrom et al., 1996) at follow-up. Likewise, one session of therapist aid in hierarchy construction plus periodic 5-min phone check-ins led to as much change as 12 to 13 therapist-directed sessions, and only the MC group experienced continued gains from post- to follow-up assessment (Baker et al., 1973). Another study found four sessions of therapist contact plus self-help desensitization were more effective than completely therapist-administered desensitization (Lang et al., 1970). Thus, MC interventions appeared to lessen phobic anxiety without lengthy therapist contact.

In addition to replicated findings of efficacy, several results provide information about optimal MC conditions. For example, MC therapies were slightly more effective when conducted in groups of three to four compared to seven to eight persons (Öst, 1996). Moreover, MC exposure was equally efficacious whether or not clients were directed to describe the features and behavior of the phobic stimulus (Arntz & Lavy, 1993). Further, as little as 30 min of therapist guidance was superior to a condition in which participants were given no guidance during exposure (O'Brien & Kelley, 1980). Individual predictors of positive treatment response for MC therapies included a more advanced level of education (Breitholtz & Öst, 1997) and greater anxiety and avoidance at pretest (Baker et al., 1973).

Taken together, results suggest that when treating specific phobias, the inclusion of externally imposed structure or some therapist contact may more effectively treat the greatest number of people. Whether the limited contact of a PSH intervention is sufficient is not yet clear. However, MC interventions are helpful to a majority of clients treated.

Panic Disorder

In addition to treating specific phobias, self-help therapies may be particularly useful to persons with panic disorder. In fact, those with agoraphobia may not otherwise seek therapy due to a fear of leaving their houses or of traveling certain distances. Thus, self-help approaches have the potential to provide an important intermediary step to facilitate initial mobility. Moreover, as noted earlier, some research suggests that extended therapist contact for panic-disordered persons may increase the probability of creating a dependency on the therapist, making relapse more likely (Jannoun, Munby, Catalan, & Gelder, 1980; Mathews, Teasdale, Munby, Johnston, & Sahw, 1977). Therefore, these individuals may be better served by reduced therapist contact.

SA Therapy for Panic Disorder

Few studies have examined entirely SA approaches to the treatment of panic disorder. In an uncontrolled study, Harcourt, Kirkby, Daniels, and Montgomery (1998) demonstrated

that computer-administered vicarious exposure significantly reduced self-reported panic symptoms immediately after treatment in 18 participants.

Providing for a further test of the efficacy of SA treatments, two controlled trials have been conducted. Parry and Killick (1998) compared cognitive-behavioral bibliotherapy to video therapy as a stopgap measure while clients waited for a therapist. Results demonstrated that although the videotape and manual reduced panic cognitions, participants who used the videotape rated it as more encouraging than did participants who used the manual. Further, after face-to-face therapy had begun, a follow-up assessment found the video group superior to bibliotherapy. Thus, the authors concluded that the videotape might serve as a good prelude to therapist-administered cognitive-behavioral treatment. In another study, Febbraro, Clum, Roodman, and Wright (1999) compared cognitive-behavioral bibliotherapy, bibliotherapy plus self-monitoring, self-monitoring, and wait-list. This was the only panic study that did not have therapist contact even for assessment purposes. Although all groups showed improvement in panic symptoms, there were no significant differences at post-assessment between active treatment groups, monitoring alone, and wait-list. Dropouts also were particularly high in this study. Thus, some therapist contact, beyond what is delivered in SA treatments, may be preferable for panic disorder interventions.

PSH Approaches for Panic Disorder

PSH treatments have been tested in a number of trials. Oftentimes, this contact was in the form of brief (10–15 min) phone calls or face-to-face meetings wherein the therapist answered questions and checked on client compliance (Ghosh & Marks, 1987; Lidren et al., 1994; Wright, Clum, Roodman, & Febbraro, 2000) or set homework goals (McNamee, O'Sullivan, Lelliott, & Marks, 1989). Such studies have found that multicomponent cognitive-behavioral bibliotherapy (Gould, Clum, & Shapiro, 1993; Lidren et al., 1994) exposure-based bibliotherapy (Ghosh & Marks, 1987; McNamee et al., 1989), and computer-administered vicarious exposure (Kirkby, Daniels, Harcourt, & Romano, 1999) led to a significant reduction in self-reported panic symptoms at postassessment. In addition, gains were maintained at the two-month (Gould & Clum, 1995), six-month (Ghosh & Marks, 1987; Lidren et al., 1994), and eight-month (McNamee et al., 1989) follow-up. Further, maintenance-oriented bibliotherapy, administered after participants received SA, was effective at preventing relapse (Wright et al., 2000). One additional study also found that bibliotherapy exposure was superior to audio-tape-delivered relaxation (McNamee et al., 1989), highlighting the importance of an exposure component to PSH approaches for panic disorder.

When studies included comparison conditions, they consistently demonstrated that bibliotherapy was more effective than a wait-list control (Gould & Clum, 1996; Gould et al., 1993; Lidren et al., 1994) and that home-based bibliotherapy or lab-based, computer-administered treatments were as effective as their therapist-administered counterparts (Ghosh & Marks, 1987; Gould et al., 1993; Lidren et al., 1994; Wright et al., 2000). Further, no significant differences between PSH and therapist-administered versions were observed at follow-up in terms of clinically significant change (Lidren et al., 1994). Moreover, most studies that assessed homework compliance, treatment satisfaction, or dropouts found no differences between PSH and therapist-administered treatments (Ghosh & Marks, 1987; Gould & Clum, 1995; Gould et al., 1993; Lidren et al., 1994; Wright et al., 2000), further bolstering the suggestion of equivalence between PSH and therapist-administered therapies for panic disorder.

MC Interventions for Panic Disorder

In addition to testing the efficacy of PSH interventions, a number of panic treatment studies examined self-help approaches as an adjunct to minimal therapist contact (Cobb, Mathews, Childes-Clarke, & Blowers, 1984; Jannoun et al., 1980; Mathews et al., 1977; McDonald et al., 1979; Newman, Kenardy, Herman, & Taylor, 1996, 1997; Westling & Öst, 1999). MC packages that applied cognitive therapy (Westling & Öst, 1999), exposure (Cobb et al., 1984; Jannoun et al., 1980; Mathews et al., 1977), problem solving (Jannoun et al., 1980), or mulitcomponent CBT (Newman et al., 1996; Newman, Kenardy, et al., 1997) in conjunction with extensive homework (McDonald et al., 1979; Westling & Öst, 1999), bibliotherapy (Cobb et al., 1984; Jannoun et al., 1980; Mathews et al., 1977), or palmtop computer-administered therapy (Newman et al., 1996; Newman, Kenardy, et al., 1997) all led to a significant reduction in panic symptoms. Further, gains were either maintained or increased at the six-month follow-up (Cobb et al., 1984; Jannoun et al., 1980; Mathews et al., 1977; McDonald et al., 1979; Newman et al., 1996; Newman, Kenardy, et al., 1997). The percentage of persons who were panic-free at follow-up ranged from 67 to 90% (Newman, Kenardy, et al., 1997; Westling & Öst, 1999).

Studies attempting to determine optimal conditions for MC therapy have found that exposure-based treatment was superior to problem solving (Jannoun et al., 1980) and that involving a spouse as a co-therapist was not significantly different from treatment alone (Cobb et al., 1984; McDonald et al., 1979).

Interestingly, only one study directly compared MC and standard-length therapy. This trial found that four sessions of cognitive-behavioral computer-assisted therapy was equivalent to 12 sessions without the computer (Newman et al., 1996; Newman, Kenardy, et al., 1997). However, in a study with a sample of severely agoraphobic clients treated with a stepwise design, a self-exposure component of MC bibliotherapy was insufficient, and such clients only began to respond when therapist-directed exposure was implemented (Holden, O'Brien, Barlow, Stetson, & Infantino, 1983). Taken together, these results support the efficacy of MC therapy for panic disorder, with the caveat that additional therapist contact may be necessary for severely agoraphobic clients. Thus, whereas the efficacy of SA therapies for panic disorder has not yet been established, PSH and MC may be sufficient for a majority of panic clients.

OCD

A small number of research trials have examined self-help interventions for OCD. Various self-help tools have been used in these studies including a desktop computer program (Clark, Kirkby, Daniels, & Marks, 1998), a laptop and desktop computer (Baer, Minichiello, & Jenike, 1987; Baer, Minichiello, Jenike, & Holland, 1988), a self-help manual (Fritzler, Hecker, & Losee, 1997), a computer-driven phone system with voice activated messages in conjunction with a self-help manual (Bachofen et al., 1999; Marks et al., 1998), and self-exposure homework (Emmelkamp, Van Linden Van den Heuvell, Ruephan, & Sanderman, 1989; Kasvikis & Marks, 1988; Marks et al., 1988). In all of these studies, exposure and response prevention (ERP) techniques were employed.

SA Therapy for OCD

Only one study examined the impact of a completely SA therapy for OCD. Clark et al. (1998) used an interactive computer program designed for vicarious dirt ERP of hand washing. Thirteen OCD participants (seven washers and six checkers) underwent three

interactive computer sessions in which they were to imagine being a figure on the computer screen and were to take the figure through various ERP sequences. Results showed a significant decrease in self-report symptoms from pre- to posttreatment, and participants demonstrated an increased ability to resist the urge to vicariously ritualize within the therapy sessions. A subsequent analysis of this data also found a significant correlation between number of hand-dirtying repetitions and percent improvement in OCD symptoms (Kirkby et al., 2000). As might be predicted, washers who used this program improved more than did checkers. Nonetheless, the degree of symptom improvement for all OCD participants was quite low and by some standards would be considered a treatment failure (e.g., Stanley & Turner, 1995). Thus, the authors suggested that the program might be more useful as an adjunct to face-to-face therapy, possibly within an MC design.

PSH for OCD

The two studies that tested PSH treatments for OCD (Bachofen et al., 1999; Marks et al., 1998) used a system called BT STEPS, a program that combined a self-guiding manual and access to an interactive voice response (IVR) system via any touch-tone telephone. BT STEPS included both a self-assessment component and a self-treatment component. Participants were asked to use the system daily, but if they failed to use it for a week, the study coordinator phoned them to answer questions and to provide encouragement. Such prompting led to a per patient average of three and one half calls in one study (Marks et al., 1998) and ten phone calls (M = 99 min) in the other (Bachofen et al., 1999). In addition, whenever clients completed an IVR call, computer-generated feedback sheets were produced that contained helpful summary information, praise, and reminders about the next homework assignment. These sheets were mailed back to the clients.

The impact of BT STEPS was tested across two uncontrolled studies. In the first trial, 43% of 40 individuals with OCD progressed to the self-treatment module (Marks et al., 1998). In addition, there was a significant correlation between number of steps completed and improvement in self-reported symptoms at postassessment. Moreover, a significant reduction in distress was associated with the completion of at least one ERP session. In the second study (Bachofen et al., 1999), 21 clients used BT STEPS during the time they were on a waiting list for face-to-face therapy. In this trial, the study coordinator either handwrote brief praise for progress on participant feedback sheets or made brief phone calls for this purpose. Results showed that 48% of participants progressed through at least two ERP exercises and that the 10 treatment completers showed significantly more improvement than the 11 noncompleters. Thus, BT STEPS was helpful to about half the participants tested, and low compliance was a strong predictor of negative treatment outcome. Other predictors of negative outcome included more severe OCD symptoms, low baseline motivation, and greater disability from symptoms (Bachofen et al., 1999; Marks et al., 1998).

MC Therapy for OCD

Four studies tested the impact of MC trials on OCD (Emmelkamp et al., 1989; Fritzler et al., 1997; Lowell, Fullalove, Garvey, & Brooker, 2000; Marks et al., 1998). Therapist contact in these investigations ranged from three and one half (Lovell et al., 2000) to five hr (Fritzler et al., 1997). Results showed that MC led to significant improvement at post-assessment in assessor-rated (Emmelkamp et al., 1989; Marks et al., 1988) and self-rated (Emmelkamp et al., 1989; Fritzler et al., 1997; Lovell et al., 2000; Marks et al.,

1988) OCD symptoms, and results were maintained at a one-month follow-up (Lovell et al., 2000). In addition, MC led to more positive change than delayed treatment (Fritzler et al., 1997). Further, MC with self-directed ERP was as effective as MC with therapist-directed ERP (Emmelkamp et al., 1989).

Although these studies did show improvement in response to MC treatment, one of them found that the combination of clomipramine and self-exposure led to quicker improvement than self-exposure plus placebo (Marks et al., 1988). Moreover, the one study that reported clinically significant improvement for the MC condition (Fritzler et al., 1997) found that only one third of the sample met this criterion. In addition, Emmelkamp and associates (1989) found that between posttest and follow-up, participants had a significant relapse on measures of depression and OCD symptoms, and that 79% of participants sought additional treatment after the follow-up assessment. These findings suggest that for most individuals, the tested MC interventions may not have been sufficient to adequately treat OCD.

PTA Therapy for OCD

In addition to the examination of MC therapies, two case studies have described PTA therapies for OCD. In each of these cases, a therapist-administered (Baer et al., 1987; Baer et al., 1988) therapy had failed to diminish some aspect of the OCD symptomatology, which prompted the use of the self-help tool in conjunction with therapy.

These case studies made use of computer programs designed to help reduce ritualized checking behavior in persons with OCD (Baer et al., 1987; Baer et al., 1988). A laptop was used to familiarize clients with the computer program called OC-CHECK, and once they were comfortable with it, they switched to a calculator-sized palmtop computer. If clients were experiencing a checking urge, the program instructed them to resist the urge for three min, which was counted off by the computer. Clients also were reminded that no negative consequences would result from not checking. If they specified that checking had already occurred, the program reminded them to consult the computer before checking, and feedback was given regarding the number of checks performed each day. In both case studies, the program dramatically reduced checking behaviors to close to zero levels. However, removal of the computers resulted in increased ritualizing, which was only reduced by reinstating the computer.

Taken together, these results provide very preliminary evidence that SA, PSH, MC, and PTA interventions all led to a reduction in OCD symptoms. Nonetheless, the evidence to date suggested that vicarious ERP was insufficient as a stand-alone SA treatment. On the other hand, an interactive PSH program that was accessed from home showed promise, particularly for about half of the clients who were compliant and more motivated. This was in contrast to the reviewed MC interventions, which were helpful for only one third of those tested. It is possible that the interactive nature of BT STEPS motivated stronger compliance from OCD clients than what was found in the MC studies. Additional case studies also suggested that some self-help tools augmented the effect of standard therapist contact. However, because of the preliminary nature of much of self-help OCD research, as well as the limited number of studies, much more research should be conducted before any firm conclusions can be drawn.

GAD

Relatively few studies examined self-help treatments for GAD. Such treatments were delivered in PSH (Bowman, Scogin, Floyd, Patton, & Gist, 1997) and MC formats

(Jannoun, Oppenheimer, & Gelder, 1982; Newman, Consoli, & Taylor, 1999; White, Keenan, & Brooks, 1992).

In the PSH study, participants had four five-min phone check-ins with bibliotherapy (Bowman et al., 1997). Treatment was comprised of problem-solving training, and findings supported its efficacy at posttest, with maintenance of results at a three-month follow-up. The intervention also was superior to wait-list participants.

In the MC studies, participants received therapist contact for six individual 30- to 45-min sessions (Jannoun et al., 1982), or in six two-hr group sessions (Newman et al., 1999; White et al., 1992). Studies supplemented brief therapist-led treatments with bibliotherapy (White et al., 1992), instructional booklets and audio-taped relaxation (Jannoun et al., 1982), or palmtop computers and manuals (Newman et al., 1999), and all treatments utilized some form of cognitive-behavioral therapy. Findings suggested that the MC approaches were efficacious at posttest, maintaining effects at three months (Jannoun et al., 1982) and six months (Newman et al., 1999; White et al., 1992). Two of the studies also demonstrated the superiority of MC treatment to wait-list (Jannoun et al., 1982; White et al., 1992), although MC was not significantly different from a placebo condition in one study (White et al., 1992). Other criteria representing meaningful treatment effects were a decrease in number of drop-in general practitioner consultations and anxiolytic prescriptions (White et al., 1992), 60% decrease in drug intake (Jannoun et al., 1982), and ceasing to meet criteria for GAD diagnosis (Newman et al., 1999). The finding of treatment success was augmented by the fact that several of the studies utilized ratings of independent assessors (Jannoun et al., 1982; Newman et al., 1999; White et al., 1992) and that attrition and treatment credibility data showed roughly equal rates across treatments (White et al., 1992).

Taken together, these findings show preliminary promise for PSH and MC treatments of GAD. However, more research should be conducted before definitive conclusions can be reached.

Social Phobia

Similar to GAD, few studies were conducted with social phobia (Gruber, Moran, Roth, & Taylor, 2001; Salaberría & Echeburúa, 1998). These studies applied cognitive therapy and exposure techniques within MC treatments (eight group therapy sessions of two and one half hr each that were reduced from the typical 12 sessions; Heimberg, 1991). Whereas one of these studies tested palmtop computer-assisted therapy (Gruber et al., 2001), the other one made use of bibliotherapy (Salaberría & Echeburúa, 1998).

Results were supportive of the MC therapies tested. Findings suggested that a self-help manual did not augment the effect of MC group therapy alone (Salaberría & Echeburúa, 1998), and that eight sessions of MC palmtop computer-assisted therapy were equivalent to 12-session therapy at the six-month follow-up (Gruber et al., 2001).

Mixed Anxiety Disorder Samples

In addition to a focus on only one anxiety disorder, a number of studies have used samples of people with heterogeneous anxiety disorder diagnoses. Samples have typically included some combination of GAD, panic disorder, specific phobia, and social phobia. Such studies have tested several means of delivering self-help including a client manual (Ghosh, Marks, & Carr, 1988; Kassinove, Miller, & Kalin, 1980; Sorby, Reavley, & Huber, 1991), an audio tape (Kassinove et al., 1980), a client manual and an audio tape (White, 1995; White et al., 1992), an audio tape in conjunction with referrals to community

self-help groups (Tyrer, Seivewright, Ferguson, Murphy, & Johnson, 1993; Tyrer et al., 1988), a desktop computer (Carr, Ghosh, & Marks, 1988; Ghosh et al., 1988), a client manual and a desktop computer (Dolezal-Wood, Belar, & Snibbe, 1998), and assignment of SA homework (Al-Kubaisy et al., 1992).

SA Therapy for Mixed Anxiety Disorders

One mixed diagnosis study was conducted by Kassinove and colleagues (1980), who compared the effect of audio therapy, bibliotherapy, and a no-treatment control condition using 34 people who were on a waiting list for therapy at a community mental health center. All treated participants conducted SA therapy at the clinic twice a week for eight weeks, and results showed that at postassessment both audio therapy and bibliotherapy led to significant reductions in irrational beliefs compared to the no-treatment group. However, only the bibliotherapy group also had reductions in neuroticism and trait anxiety, suggesting that SA bibliotherapy was slightly better than SA audio therapy for this mixed anxiety group.

PSH Approaches for Mixed Anxiety Disorders

A more common design for a mixed anxiety self-help study than the one that employed SA therapy was the PSH approach. Such approaches were used in a variety of different ways. Whereas one study used a PSH package as a stopgap measure during the time clients were waiting for a therapist to become available (White, 1995, 1998), other studies have used it as the primary therapy for participants (Carr et al., 1988; Ghosh et al., 1988; Tyrer et al., 1988). Research also differed regarding how much and when therapist contact took place. Such contact time ranged from a brief session to provide the rationale (White, 1995) to check-in visits (Carr et al., 1988). The average documented total contact time appeared to be between one and two hr.

Despite some variability in contact time, findings of these studies have been fairly consistent. Results have suggested that PSH packages used to train individuals in relaxation (Tyrer et al., 1993), exposure (Carr et al., 1988; Ghosh et al., 1988), and more complex cognitive-behavioral treatments (White, 1995, 1998) led to significant reductions in self-reported (Carr et al., 1988; Ghosh et al., 1988; Tyrer et al., 1993; White 1995, 1998) and clinician-rated (Carr et al., 1988) anxiety symptoms as well as on objective doctor visits (White, 1995). Moreover, self-help exposure or desensitization was as effective as therapist-directed counterparts (Carr et al., 1988; Ghosh et al., 1988). In addition, self-help relaxation in conjunction with access to community self-help groups was as effective as medication or therapist delivered CBT (Tyrer et al., 1993; Tyrer et al., 1988), and a CBT self-help package was more effective than no treatment and advice only (White, 1995, 1998). Further, White (1998) found that even after all participants had been seen by therapists for whatever time period was deemed necessary, those who had been given the PSH package while they were waiting for a therapist continued to do better three years after therapy ended than those who had simply been given advice or no treatment during the waiting period.

One study did not find any significant difference between medication placebo, active medications, therapist-delivered CBT, and PSH at postassessment (Tyrer et al., 1988). However, more people in the placebo condition sought additional treatment during the study than in any other treatment condition. In addition, a two-year follow-up (Tyrer et al., 1988) found that severely depressed individuals did best in the self-help condition.

It also is significant that of the studies that noted dropout rate by condition (Carr et al., 1988; Ghosh et al., 1988; Tyrer et al., 1988), none indicated more dropouts in the PSH condition than in comparison conditions. Similarly, of the studies that measured treatment credibility and/or satisfaction, none found differences between conditions (Ghosh et al., 1988; White, 1995). Therefore, PSH treatments appear to be helpful alternatives to standard interventions in samples with heterogeneous anxiety disorders.

Predictors of negative treatment outcome included older age, recurrent episodes of the anxiety disorder, and comorbid personality disorders at entry. Interestingly, the initial anxiety diagnosis was of no predictive value (Seivewright, Tyrer, & Johnson, 1998; Tyrer et al., 1993).

MC Interventions for Mixed Anxiety Disorders

Two studies have tested MC interventions in mixed anxiety samples. One examined whether an anxiety-management training booklet improved upon a ten-min rationale plus three sessions with a general practitioner (Sorby et al., 1991). Another one examined whether adding nine hr of therapist-guided exposure would augment the effect of six sessions of negotiation and monitoring plus self-exposure homework (Al-Kubaisy et al., 1992).

Results of the two studies showed that bibliotherapy augmented the effect of visiting a general practitioner alone, leading to more rapid improvement in self-reported anxiety symptoms (Sorby et al., 1991). In addition, MC was as effective as MC plus therapist-guided exposure (Al-Kubaisy et al., 1992). Further, the MC interventions had as many (Al-Kubaisy et al., 1992) or fewer (Sorby et al., 1991) dropouts than comparison conditions, thus providing evidence that the addition of self-help components may augment the effect of MC therapies, and that an MC treatment may be equivalent to standard therapy.

PTA Interventions

Three studies also looked at the effect of PTA interventions on mixed anxiety samples. One of these trials examined whether a computer program that provided an individualized intervention in a group therapy setting would increase the cost–benefit of the group. The computer program systematically helped individuals identify their problems as well as generate solutions to their problems. During the first half of the group session, participants worked individually in front of a computer. The second part of the session involved processing of the information with the group and the therapist. The computer program also printed out a customized workbook. This intervention was compared to group cognitive-behavioral therapy that included bibliotherapy and homework (Dolezal-Wood et al., 1998). Results found the compared interventions to be equally effective at a six-month follow-up, suggesting that the individualized component of the group treatment saved valuable therapist time without sacrificing efficacy. However, the comparison groups entailed very different intervention strategies, and it is unclear whether the group problem-solving intervention without the computer would have been less effective than the same intervention with the computer.

In addition to examining the additive effect of a computer component, two studies examined whether providing participants with self-help packages would enhance whatever current treatment they were receiving. In one study, clients suffering from a chronic anxiety condition were randomized to one of two conditions: treatment as usual or treatment as usual plus a self-help CBT manual and audio tape (Donnan, Hutchinson, Paxton, Grant, & Firth, 1990). In the other study, participants suffering from anxiety, depression,

or mixed anxiety and depression were randomized to usual treatment with and without bibliotherapy (Holdsworth, Paxton, Seidel, Thomson, & Shrubb, 1996). Results of these two studies differed. Whereas Donnan and colleagues (1990) found that the self-help package significantly augmented the current treatment, Holdsworth et al. (1996) found no significant additive effect of the self-help package.

These studies suggest that SA and PSH treatments show promise as a stopgap measures while mixed anxiety participants are waiting for therapy, and that PSH may serve to help maintain progress after therapy has been completed. In addition, PSH, MC, and PTA treatments have demonstrated promising results in the treatment of mixed anxiety samples.

Summary and Conclusions

Before drawing conclusions from the reviewed research, several methodological weaknesses should be pointed out. First, most of the studies contained small cell sizes, and the failure to find significant differences between active therapy conditions may merely be due to concomitant lack of statistical power. A majority of the studies also failed to insure or assess compliance with self-help tools. Without information on compliance, it is unclear whether findings can be attributed to the self-help tools, per se. In addition, a number of the studies were uncontrolled or did not include follow-up assessments, reducing their validity and generalizability. Moreover, for each of the anxiety disorders, some categories were represented by only one or two studies (see Table 1). Individual predictors of treatment response also were seldom assessed, limiting the ability to determine whether there were subgroups of participants who were likely to respond better than others.

In addition to the aforementioned weaknesses, there was a great deal of heterogeneity regarding the self-help tools being used as well as the manner in which they were used. On one hand, the general consistency of the findings, despite the method heterogeneity, supports their validity and suggests that self-help and MC interventions are beneficial for some people. On the other hand, the fact that each research group tended to use their own bibliotherapy manual, computer program, videotape, or audio tape, as well as the huge variability regarding how these tools were used both in terms of exact amount of time therapists spent with clients and what the therapist did during that time, makes it difficult to determine what variables actually led to the end results. For instance, some of the results that did not support the efficacy of SA or PSH therapy could be due to such things as how well written/produced and easily understandable the therapy manual/videotape/computer program was, the specificity of the information provided, the intervention techniques that were included, and so on. Results also may be due to variables such as whether participants felt that they had some sort of relationship with a therapist who was overseeing their treatment, characteristics of the therapist, and what the therapist did. In fact, none of the studies assessed therapeutic alliance—a variable found to be predictive of outcome. The failure to assess alliance restricts our understanding of whether it plays a role in therapies in which there is very brief contact and for which success is typically attributed to the techniques and/or self-help tools. Method heterogeneity also limits our ability to draw precise conclusions about the least expensive but most helpful therapy conditions. In fact, very few studies documented the cost of their interventions.

Despite some methodological weaknesses, it is possible to draw some preliminary inferences pertaining to the value of varying levels of therapist contact across each of the anxiety disorder diagnoses. SA interventions, for example, were most effective for specific phobias, leading to more improvement than placebo and no treatment but not

significantly different from interventions with greater therapist contact. One study also suggested that SA was more helpful than no treatment for a mixed anxiety sample. However, for panic disorder and OCD, results were less encouraging, indicating SA for panic disorder was not significantly different from a self-monitoring or wait-list condition, and SA for OCD led to minimal change. Thus for anxiety disorders other than specific phobias, SA treatments may be optimal as a preliminary step while clients wait for a therapist to become available or as a maintenance strategy.

Nonetheless, even for specific phobias, SA interventions were not always effective. Clients were more likely to respond if they found the self-help tool to be credible and were highly motivated for treatment. In addition, requiring participants to conduct SA in a lab worked better for most clients than SA at home. This may mean that for many participants, accountability to some human being may be important in the therapeutic process, even though such accountability is unlikely to involve a therapeutic relationship. Studies also suggest that beyond basic accountability or imposed structure, human contact, per se, may have an additive effect for some clients. This idea is supported by findings showing that MC interventions led to greater clinically significant change in specific phobias than lab-based SA interventions. To date, no studies have tested SA interventions for purely GAD, PTSD, or socially phobic samples.

When studies tested the effect of PSH therapies, they found that for specific phobia and panic disorder in vivo exposure-based PSH was equivalent to treatments that incorporated greater therapist contact and superior to no treatment. A limited number of studies also found that PSH showed promise for individuals with OCD and was superior to a wait-list people when treating GAD. In addition, PSH worked well for mixed anxiety samples. In fact, it was as effective as therapist-administered therapies and more effective than no treatment or advice only. Further, PSH was helpful when aimed at maintenance of therapy gains for panic-disordered individuals and mixed anxiety disorders. Clients were most likely to respond to PSH if they were motivated, their symptoms were not extremely severe, they were not too disabled from their symptoms, they were younger, had no personality disorders, and had not had recurrent bouts of the anxiety. No PSH studies were conducted with a purely socially phobic or PTSD diagnosed sample.

MC interventions also work well for a number of anxiety diagnoses. For example, MC was sufficient for most clients diagnosed with a specific phobia, and more extensive therapist contact had no additive effect. In addition, MC interventions worked quite well when treating panic-disordered clients, but were found to be insufficient when treating severely agoraphobic participants. When tested with OCD diagnosed participants, MC was superior to delayed treatment and appeared to be sufficient for a third of those treated. For GAD, the value of MC treatments is undetermined, as MC was superior to wait-list clients in two studies but not significantly different from placebo in another. However, MC did work well for socially phobic participants, demonstrating equivalence to a standard-length treatment. Similarly, in a mixed anxiety sample, MC was equivalent to a therapy with greater therapist contact. No MC studies were tested with a PTSD diagnosed sample. Persons likely to benefit most from MC therapy were those with a more advanced level of education and a high level of anxiety and avoidance at pretest.

Interestingly, although there were a number of case studies, only two controlled trials examined whether self-help tools augmented standard therapist-contact treatments. Using mixed anxiety samples, one study found that a manual plus an audio tape augmented the effect of a standard therapy whereas the other study found that a self-help package did not augment the current therapy. Thus, whether self-help tools add anything above and beyond standard therapies awaits further research.

Table 1
Summary of Information Pertaining to Reviewed Studies

Author	Disorder	Comparison Conditions	How Self-Help Used	Total Amount of Therapist Contact	Outcome
Kassinove et al. (1980)	Mixed anxiety	SAT BA vs. SAT AA vs. NTx	In clinic	No human contact	BA > AA
Ghosh et al. (1988)	Mixed anxiety	PSH CA + RA + CI vs. PSH BA vs. TD	CA at lab, BA at home	BT = 4.6 hr, CA = 4.7 hr, BA = 1.5 hr	CA = BA = TD
Tyrer et al. (1988)	Mixed anxiety	PSH AA + CI + SG vs. MC TD vs. Med vs. Placebo med	At home	MC = 5–10 hr PSH = 1.25 hr	PSH = TD = med. Active Txs > placebo
Tyrer et al. (1993)	Mixed anxiety	Follow-up to Tyrer et al. (1988)			PSH best
White (1995)	Mixed anxiety	PSH BA + AA vs. Advice only vs. NTx	At home	AO = 30 min, PSH = 1 session	PSH > AO > NTx
White (1998)	Mixed anxiety	3-yr follow-up to White (1995)			PSH > AO > NTx
Carr et al. (1988)	Mixed anxiety	PSH CA + CI vs. TD	In office	TD = 11.5 hr, CA = 40 min	PSH = TD
Sorby et al. (1991)	Mixed anxiety	MC BA + CI vs. TD	At home	10 min + 3 GP visits	MC = TD
Al-Kubaisy et al. (1992)	Mixed anxiety	MC exposure vs. TD exposure vs. MC relax.	At home	MC = 6 hr, TD = 15 hr	MC exposure = TD exposure > MC relax.
Dolezal-Wood et al. (1988)	Mixed anxiety	PTA BA + GT vs. PTA CA + GT	In office	15 hr	PTA BA = PTA CA
Donnan et al. (1990)	Chronic anxiety	PTA AA + BA vs. TD	At home	Uncontrolled	TD + SH > TD
Holdsworth et al. (1996)	Mixed anxiety	PTAT BA vs. TD	As adjunct	Uncontrolled	No sig. results
Febbraro et al. (1999)	Panic	SM vs. SAT BA + SM vs. NTx	At home	No human contact	SM = SAT BA
Parry & Killick (1998)	Panic	SAT BA vs. SAT VA vs. NTx	At home	None	VA > BA > NTx
Harcourt et al. (1998)	Agor	SAT CA	In office	unspecified	Improved
Gould et al. (1993)	Panic	PSH BA + CI vs. TD vs. WL	At home	PSH = 20 min, TD = 8 hr	PSH = TD > WL
Gould & Clum (1995)	Panic	PSH BA + VA + AA + CI vs. WL	At home	PSH = 20 min	PSH > WL
Lidren et al. (1994)	Panic	PSH BA + CI vs. TD GT vs. WL	At home	PSH = 3 calls, TD = 12 hr	SH = GTD > WL
McDonald et al. (1979)	Agor	PSH w/spouse vs. PSH	At home	2 hr	PSH = PSH w/spouse
McNamee et al. (1989)	Agor	PSH-BA Exposure + CI vs. PSH AA relax + CI	At home	2 hr total	BA > AA
Wright et al. (2000)	Panic	PSH BA + CI vs. WL	At home	1 hr	BA > WI
Ghosh & Marks (1987)	PD agor	PSH CA vs. PSH BA vs. TD	In office	TD = 3.1 hr, PSH CA = 1.2 hr, PSH BA = 0 hr	BA = CA = TD
Newman et al. (1997)	Panic	MC CA vs. TD	At home	MC CA = 6 hr, TD = 12 hr	TD = MCCA
Holden et al. (1983)	Agor	First MC BA + CI then TD	At home	BA = up to 2.67 hr TD = 4, 6, 8, or 10 hr	TD best
Westling & Öst (1999)	Panic	MC + hw	At home	4 hr	Improved
Jannoun et al. (1980)	Agor	MC + BA exposure vs. MC + BA Prob solv	At home	*M* = 3.5 hr	Exposure > Prob solv.
Cobb et al. (1984)	Agor	MC BA + spouse vs. MC BA	At home	5 hr	MC BA = MC BA + spouse
Mathews et al. (1977)	Agor	MC BA	At home	*M* = 9.4 hr	Sig. improved
Clark et al. (1998)	OCD	SAT CA	In office	None	Sig. improved

Bachofen et al. (1999)	OCD	PSH BA + CA + CI	At home	Calls as needed	Sig. improved
Emmelkamp et al. (1989)	OCD	MC Massed vs. TD Massed vs. MC Spaced vs. TD Spaced	At home	TD = 23 hr MC = 4 hr	No difference between conditions
Marks et al. (1998)	OCD	PSH BA + CA + CI	At home	Calls as needed	Sig. improved
Fritzler et al. (1997)	OCD	MC BA vs. WL	At home	MC = 5 hr	Improved
Marks et al. (1988)	OCD	MC BA exposure + CI + Meds vs. MC BA antiexposure + CI + Meds vs. TD + Meds vs. TD + placebo		MCBA = 5.33 hr + 4 calls, TD = 17.67 hr + 3 calls	Those w/exposure improved the most
Kasvikis & Marks (1988)	OCD	Follow-up to Marks et al. (1988)			All improved
Baer et al. (1987; Baer et al., 1988)	OCD	PTA + CA	After therapy failed	Unspecified	Improved but relapsed without computer
Bowman et al. (1997)	GAD	PSH BA + CI vs. WL	At home	Initial intro + 25 min	PSH > WL
Jannoun et al. (1982)	GAD	MC BA + AA	At home	6 hr	Sig. improvement
Newman et al. (1997)	GAD	MC GT CA	At home	12 hr	Improved
White et al. (1992)	GAD	MC BA CGT vs. MC BA BGT vs. MC BA CBGT vs. MC BA Placebo GT vs. WL	At home	12 hr	Active Txs = placebo
Gruber et al. (1996)	Social phobia	MC CA CBGT vs. TD CBGT vs. WL	At home	MC = 24 hr, TD = 30 hr	MC = TD
Salaberría & Echeburúa (1998)	Social phobia	PTA BGT vs. PTA BGT + BA vs. PTA CBGT vs. PTA CBGT + BA vs. WL		24 hr	Active Txs > wait list
Hogan & Kirchner (1968)	Snake phobia	SAT BA vs. TD implosion vs. TD electric verbal therapy	In lab	1 session	Implosion > SH & EVT, but not sig.
Clark (1973)	Snake phobia	SAT BA + AA vs. PSH BA + AA vs. TD BA + AA	In lab	SAT = 0, PSH = 1–2 hr, TD = 11 hr max.	TD = PSH = SAT
Rosen et al. (1976)	Snake phobia	SAT BA vs. MC vs. TD vs. placebo vs. NTx	At home	SAT = 0, MC = CI, TD = 16 hr max.	TD = MC = SAT > placebo & NTx
Rosen et al. (1977)		Follow-up to Rosen et al. (1976)			TD = MC = SH > placebo & NTx
Barrera & Rosen (1977)	Snake phobia	SAT BA vs. SAT BA + self-reward vs. SAT placebo + self-reward	At home	none	No difference between groups
Öst et al. (1991)	Spider phobia	SAT BA vs. MC	At home	SAT = 0, MC = 3 hr	MC > SAT
Hellstrom & Öst (1995)	Spider phobia	SAT brief BA at home vs. SAT brief BA at clinic vs. SAT detailed BA at home vs. SAT detailed BA at clinic vs. MC TD	At home	SAT = 0, MC = 3 hr	MC best, detailed BA in clinic most effective self-help Tx
Cotler (1970)	Simple phobia	SAT AA male vs. SAT AA female vs. control AA male vs. control AA female	In lab	SAT = 1 question answering period	SAT > control
Smith et al. (1997)	Spider phobia	SAT CA w/fear relevant exposure & feedback vs. SAT CA relevant exposure w/o feedback vs. SAT CA irrelevant exposure w/feedback	In lab	none	No difference between conditions
Öst et al. (1998)	Spider phobia	SAT BA vs. SAT VA vs. group MC vs. individual MC	At home	SAT = 0, MC = 3 hr	MC ind. > MC group > SAT BA > SAT VA
Girodo & Henry (1976)	Snake phobia	SAT BA vs. TD continuous exposure vs. TD interrupted exposure	In lab	TD = 30 min, SAT unclear	TD continuous exposure best

(*continued*)

Table 1. *Continued*

Author	Disorder	Comparison Conditions	How Self-Help Used	Total Amount of Therapist Contact	Outcome
Gilroy et al. (2000)	Spider phobia	SAT CA exposure vs. SAT AA relaxation vs. TD exposure	In lab	SAT = 5 min	TD = SAT exp > SAT relax.
Moss & Arend (1977)	Snake phobia	PSH BA + friend, PSH BA + stranger vs. MC vs. attention control	In lab	PSH = 30 min, MC = 2 hr	SAT + friend = SAT + stranger = TD > control
Philips et al. (1972)	Simple phobia	PSH BA vs. initial help MC vs. NTx	At home	PSH = 20 min, MC = 65 min	MC > PSH > control
Öst et al. (1997)	Spider phobia	MC direct Tx vs. MC direct observation vs. PSH VA observation	In lab	PSH = 30–60 min, MC = 3 hr	DT > DO > VA
Study 2 of Philips et al. (1972)	Simple phobia	PSH BA + TD hierarchy construction vs. PSH + TD relaxation	At home	1 hr	Txs equal
Baker et al. (1973)	Acrophobia	PSH AA vs. TD vs. WL	In lab	TD = 13 hr, PSH = 1.5 hr	PSH > TD > WL
de Jongh et al. (1995)	Dental phobia	PSH CT + AA vs. PSH information + AA	At home	1 hr	CT > I at post, = at follow-up
Arntz & Lavy (1993)	Spider phobia	MC elaboration vs. MC nonelaboration	In lab	2.5 hr	No difference
Lang et al. (1970)	Snake phobia	MC AA vs. TD vs. NTx	In lab	MC = 4 hr, TD = 15 hr	MC AA > TD
Öst (1996)	Spider phobia	MC small GT vs. MC large GT	At home	3 hr	Small GT = large GT
O'Brien & Kelly (1980)	Snake phobia	PTA vs. TD vs. MC vs. MC brief	In lab	PTA = 59 min, TD = 70 min, MC = 30 min	TD = PTA > MC > MCb
Hellstrom et al. (1996)	Injection phobia	1 session MC + exposure vs. 5 sessions MC + exposure vs. 1 session MC without exposure		5 sessions = 5 1 session = 2 hr	At post 5 sessions MC best, Txs equal at follow-up
Öst et al. (1992)	Injection phobia	1 session MC vs. 5 sessions MC		1 session MC = 3 hr 5 sessions MC = 5 hr	No differences between Txs
Öst et al. (1997)	Flying phobia	1 session MC vs. 5 sessions MC		1 session MC = 3 hr, 5 sessions MC = 6 hr	No differences between Txs

Note. BA = bibliotherapy administered; CA = computer administered; GT = group therapy; AA = audio tape administered; VA = videotape administered; SG = support group; SAT = self-administered therapy; PSH = predominantly self-help; MC = minimal contact therapy; PTA = predominantly therapist administered; TD = totally therapist-directed treatment; WL = wait list; NTx = no treatment; med = medications; CI = regular therapist check-in (by phone or in office); HA = hierarchy; RA = rationale for therapy; SM = self-monitoring; RP = relapse prevention; CGT = cognitive group therapy; BGT = behavior group therapy; CBGT = cognitive behavioral group therapy.

Future Directions

Future studies would benefit from developing and testing self-help tools and MC therapies more programmatically. At an initial level, a particular computer program, bibliotherapy manual, videotape, or audio tape should be tested for credibility, understandability, and helpfulness. Information about how to improve these tools should be gathered, and relevant revisions should be made. For example, when devising a palmtop computer program, our research group gave it to a number of people who were currently receiving therapy for panic disorder and made multiple changes based on client feedback. Following this, we pilot tested the program in a controlled study (e.g., Newman, Kenardy, et al., 1997). Our findings suggested that the program might be more efficacious if we added an in vivo exposure module. Thus, in a subsequent study, the program was upgraded and then retested (e.g., Kenardy, Dow, Newman, & Taylor, 1998). Similarly, Hellstrom and Öst (1995) tested whether a longer, more detailed bibliotherapy manual was better than a briefer, more general manual, and Öst et al. (1998) tested whether the same intervention was more efficacious when it was delivered by a manual or a video. In addition to studies that aim to optimize a particular self-help tool, the same self-help tool should be programmatically tested in the context of varying degrees of therapist contact as well as multiple variations regarding what the therapist does and how the self-help tool is used. For example, Öst and colleagues have programmatically varied such things as whether the self-help tool was used at home or in a lab (Hellstrom & Öst, 1995), whether an MC intervention was delivered to a group or an individual (Öst et al., 1998), or a small versus a large group (Öst, 1996). Each step in such a programmatic approach also should document the cost of the approach in exact dollars compared to the cost of a standard approach (Newman et al., 1999; Newman, Kenardy, et al., 1997). A more programmatic approach to the determination of efficacy in conjunction with cost determination would lead to a more precise understanding of the optimal conditions for low-cost therapies.

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