

Breaking the Rhythm of Depression: Cognitive Behavior Therapy and Relapse Prevention for Depression

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Abstract

A crucial part of the treatment of depression is the prevention of relapse and recurrence. Psychological interventions, especially cognitive behavior therapy (CBT) are helpful in preventing relapse and recurrence in depression. The effectivity of four types of relapse prevention cognitive behavior therapy strategies will be addressed, i.e. acute prophylactic cognitive behavior therapy, continuation cognitive behavior therapy, sequential cognitive behavior therapy and cognitive behavior therapy in partial remission.

Specific ingredients of three sequential cognitive behavior therapy programs (well-being cognitive therapy, preventive cognitive therapy, and mindfulness-based cognitive therapy) will be discussed as applied after remission in patients that experienced previous depressive episodes. Sequential preventive cognitive behavior therapy after acute treatment may be an attractive alternative treatment for many patients who currently use antidepressants for years and years to prevent relapse and recurrence. This is an extremely challenging issue to research thoroughly. Future studies must rule out what intervention for whom is the best protection against relapse and recurrence in depression.

Keywords: major depressive disorder, relapse, recurrence, cognitive behavior therapy, prevention, psychological interventions

Major depressive disorder (MDD) was projected to rank second on a list of 15 major diseases in terms of burden by the year 2030 (Mathers & Loncar, 2006). This major contribution of MDD to disability and medical costs is largely due to its highly recurrent nature (Murray & Lopez, 1997). Therefore, a crucial part of the

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treatment of depression is the prevention of relapse and recurrence¹. Both terms indicate a clinically significant deterioration in depressive symptoms meeting the criteria of a depressive episode according to DSM IV-TR (American Psychiatric Association, 2000) that followed a previous significant improvement (remission) of at least two months.

This paper focuses on the enduring and preventive effects of cognitive behavior therapy (CBT) for relapse prevention of depression. Several types of relapse prevention programs can be differentiated. First, preventing relapse by the enduring and prophylactic effects of cognitive behavior therapy applied during the acute-treatment phase. Second, preventing relapse by continuation-cognitive therapy in partly-recovered or completely-recovered patients, during the maintenance and long-term follow-up phase after a treatment with cognitive behavior therapy in the acute depressive phase. Third, relapse prevention by starting sequential cognitive behavior therapy after remission in patients that did not get cognitive behavior therapy in the acute phase. The latter intervention is typically provided to the patient after reaching remission status from the acute treatment. Fourth, relapse prevention in patient that are not fully remitted, i.e. partially remitted patients. In this paper the evidence for cognitive behavior therapy as relapse prevention strategy will be discussed, followed by an overview of the main ingredients of primary sequential cognitive behavior therapy programs to prevent relapse will be discussed.

Prophylactic Effects of Acute Cognitive Behavior Therapy

Cognitive behavior therapy interventions, applied in the acute phase of a depressive episode, have enduring effects that reduce risk of relapse following remission (e.g., for a meta-analysis see: Vittengl, Clark, Dunn, & Jarrett, 2007, for reviews see: Dobson et al., 2008; Hollon, Stewart, & Strunk, 2005; Kuyken, Dalgleish, & Holden, 2007; Paykel, 2007). In a meta-analysis of 28 studies, including 1,880 adults, Vittengl and colleagues (2007) reviewed the studies on cognitive behavior therapy aimed at preventing relapse in major depressive disorder. They included thirteen studies to examine the prophylactic effect of acute cognitive behavior therapy. Their results indicated that after discontinuation of acute-phase treatment, many responders to cognitive behavior therapy have lower relapse rates than those treated with antidepressants, but comparable to other depression specific psychotherapies. Overall, these patients have still relatively high relapse rates (29% within 1 year, and 54% within 2 years).

Relapse proportions varied significantly between these studies reviewed by Vittengl et al. (2007). Factors that contribute to this include the following: the length of follow-up (higher relapse rates in studies with a longer follow-up);

¹ Relapse and recurrence are used interchangeably

applied statistical procedure (survival analyses show higher relapse rates than analyses that merely compare proportions between conditions); reported assessment of therapist competence and adherence (studies that report these aspects have lower relapse rates); and whether researchers used a relapse definition and assessment instrument specifically for this issue (mixed effects). Surprisingly, the high-relapse (versus other) subtype seemed not to moderate relapse differences (i.e. the effect) between these studies. The number of previous episodes of depression, however, was consistently found to be a strong predictor of relapse in several studies (e.g., Kessing, Hansen, Andersen, & Angst, 2004; Mueller et al., 1999). The lack of moderation by relapse subtype could be explained by the dichotomous classification of subtype (high-relapse history versus other), rather than by the number of previous episodes. In addition, relatively few studies in this meta-analysis included patients with a higher number of previous episodes.

Overall, many studies indicate that acute-cognitive behavior therapy has enduring effects, indicating that this psychological intervention might indeed produce lasting change. These relapse-prevention effects for cognitive behavior therapy seem to hold also in naturalistic, "real world" settings, not just in the research, "university medical center" settings that are often used in randomized controlled trials (Minami et al., 2008).

Continuation Cognitive Therapy

A second type of relapse prevention is continuation-cognitive therapy in recovered patients after a treatment with cognitive behavior therapy in the acute depressive phase. The recent meta-analysis by Vittengl and colleagues (2007) indicated that continuation-cognitive therapy reduced relapse from 21% reduction (assessment at the end of continuation-cognitive therapy) up to 29% reduction (assessment at the follow-up). Continuation-cognitive therapy also reduced relapse compared with other active continuation treatments, at the end of the continuation treatment (12% reduction) and at the follow-up (14% reduction).

Sequential Cognitive Behavior Therapy

The third type of relapse prevention is the sequential use of cognitive behavior therapy, after remission on diverse types of acute treatments (sometimes referred to as "relapse-prevention cognitive behavior therapy"). Studies on the effectiveness of relapse-prevention cognitive behavior therapy vary in the acute-to-maintenance sequences that are used. Some studies focus on the effect of continuation-cognitive therapy after remission on acute-cognitive behavior therapy. In contrast, some other studies switch from acute-treatment antidepressant and remission to relapse-prevention cognitive behavior therapy during the maintenance phase. In addition, some other studies have developed and evaluated relapse-prevention cognitive behavior therapy during the maintenance and follow-up phase, regardless of the

type of treatment used in the acute phase. This last sequential strategy, applying cognitive behavior therapy after remission regardless of the type of prior treatment, may enhance generalizability of research results to daily clinical practice in primary care practices, since the acute treatment of depression varies widely (Ebmeier, Donaghey, & Steele, 2006).

Although all studies used relapse prevention cognitive behavior therapy as main intervention strategy, certain studies added extra ingredients (e.g., mindfulness, well-being, or rumination-focused cognitive behaviour therapy). For the sake of clarity, we will refer to all of these interventions as variations of cognitive behavior therapy.

One of the relapse prevention cognitive behavior programs that added extra ingredients is the mindfulness-based cognitive therapy (MBCT). Teasdale et al. (2000) reported that a sequential treatment with a version of cognitive behavior therapy was effective for relapse prevention. The treatment sequence was antidepressants during acute treatment and then a version of cognitive therapy – MBCT – following the successful acute treatment with antidepressants (N = 145). This study was replicated later, with an additional 75 patients (Ma & Teasdale, 2004). Kuyken et al. (2008) recently compared in a randomized control trial (RCT) MBCT while tapering antidepressants against continuation of antidepressants in remitted recurrently depressed patients (N = 123). Relapse rates over 15 months for the MBCT group were not higher than for the antidepressants group (47% for cognitive therapy - CT, and 60% for the continuation of antidepressants group). In another, randomized controlled trial enrolling 172 remitted, but recurrently-depressed patients, the efficacy and cost-effectiveness of "preventive cognitive therapy" (PCT) was evaluated as an add-on to treatment-as-usual (TAU). PCT was also compared with TAU alone (Bockting et al., 2005). In line with the MBCT studies, PCT was effective (and "cost-effective" Bockting et al., under review) in preventing depressive relapses over a 2 year follow-up period, for patients with multiple previous episodes. TAU was less effective, and it included several types of aftercare: antidepressants during post-acute-treatment (including non-controlled tapering of anti depressants), primary care, secondary care, and no care at all during the follow-up phase. Recently the enduring effect of PCT was demonstrated over 5.5 years (Bockting, Spinhoven, Koeter, & Schene, 2009).

In both the PCT study and the MBCT studies, the protective effect seemed absent for patients with only two previous episodes. Strikingly, in these three studies also comparable main findings were reported, i.e. augmenting treatment as usual, with cognitive behavior therapy (either PCT or MBCT) resulted in a significant protective effect, which intensified with the number of previous depressive episodes experienced by the patient (a well-known predictor of relapse/recurrence). The differences in relapse proportions between the conditions, however, at the point of three previous episodes, were small in all studies. In the PCT study, the estimated number of previous depressive episodes needed to benefit

from the cognitive behavior therapy intervention seemed somewhat higher (i.e., five-or-more previous episodes rather than three previous episodes, Bockting et al., 2005; four or more over 5.5 years follow up, Bockting et al., 2009). The apparent indication of the number of episodes experienced for CT to be beneficial should be interpreted with caution because of the modest sample size. CT seemed to have no significant protective effect for patients with two previous episodes, in line with some other relapse prevention studies. Several explanations have been offered for this differential effect. The subtype hypothesis (Bockting et al., 2005; Teasdale et al., 2000) states that some category of depressions may be closely associated with reaction to life events, possibly reflecting the group of patients with fewer previous episodes in our study. The other type of depression may be brought about by rumination, reflecting the group of patients with a high number of episodes. Another hypothesis presumes that relapse/recurrence in patients with more previous episodes is thought to be attributable to autonomous relapse/recurrence processes involving reactivation of depressogenic thinking patterns by dysphoria. With repeated experiences of episodes of major depression, less environmental stress is required to provoke relapse/recurrence (Post, 1992). The prophylactic effect of CT (including mindfulness interventions) may arise from disruption of those processes at times of potential relapse/recurrence by reducing the extent to which patterns of depressive thinking reactivated by sad moods could feed factors responsible for relapse/recurrence (Segal, Williams, & Teasdale, 2002; Teasdale et al., 2000). It may be that the group of patients characterized by a lower age of onset, as previously reported (Bockting et al., 2005; Ma & Teasdale, 2004) and more previous episodes suffer from a more biological subtype of depression, with a weaker link between stress and relapse/recurrence.

Alternatively, the differential effect of relapse prevention CT could be simply explained by a time effect (in general a longer time to relapse in patients with two previous episodes) since other relapse prevention studies have a maximum of two-year follow-up. Some support for this time effect has been reported over the 5.5 follow-up study on PCT (Bockting et al., 2009) since the apparent indication of the number of episodes experienced for PCT to be beneficial seemed decreased compared to the two-year follow-up.

A recent study indicated that behavioural activation might also be effective in preventing relapse (Dobson et al., 2008). Only one previous study (Petersen et al., 2004) did not find a positive effect of cognitive behavior therapy (19 sessions in a half a year) on relapse prevention in depressed patients ($N = 132$). These patients achieved remission with the antidepressant fluoxetine (Prozac) and then were randomised to receive cognitive behavior therapy and antidepressant medication versus antidepressant medication alone. Relapse rates were low in all groups. It is not clear why this one study, in contrast to many others, did not show a relapse-prevention effect for cognitive behavior therapy.

In summary, studies indicate that sequential cognitive behavior therapy interventions overall have enduring effects that reduce the risk of relapse following the completion of acute-treatment. Recently, more evidence was obtained for the long-term effects of sequential-cognitive behavior therapy, over long follow-up intervals of 5.5 years (Bockting et al., 2009) and 3.5 to 5.5 years (Fava, Rafanelli, Grandi, Conti, & Belluardo, 1998b; Fava et al., 2004). In these studies, cognitive behavior therapy was used as a sequential treatment strategy, after acute treatment with antidepressants. In conclusion, sequential treatment where cognitive behavior therapy is started after remission, regardless of the acute treatment that is used, is an effective strategy to prevent relapse in high-risk patients for recurrence. Currently there is especially evidence for protective effects of cognitive behavior therapy for patients with at least two or three-or-more previous depressive episodes. Long term studies including at least 10 years of follow up are needed to rule out whether patients with fewer episodes can benefit from preventive psychological strategies.

Cognitive Behavior Therapy in Partially Remitted Patients

Sequential treatment where cognitive behavior therapy is offered to partially remitted patients is another type of relapse prevention that has been understudied. This group of patient is at a very-high risk of relapse because of their partial recovery from the depressive episode. A few studies indicate that cognitive behavior therapy also appears to be an effective relapse-prevention strategy (e.g., Kingston, Dooley, Bates, Lawlor, & Malone 2007; Paykel et al., 1999, 2005; Watkins et al., 2007). Apart from evidence for traditional cognitive behavior therapy in partially remitted patients (Paykel et al., 1999, 2005), modification of cognitive behavior therapy have promising preliminary results in this partially remitted patient group. A pilot study by Watkins et al. (2007) evaluated "rumination-focused cognitive behavior therapy" (RFCBT), that emphasizes assessing, reducing, and coping with negative depressive ruminations. In their study, 12 weekly sessions of RFCBT was the relapse-prevention intervention for 14 partially remitted patients. The investigators reported that 71% of the patients showed a 50% reduction in depressive symptoms, and 50% of the patients achieved complete remission from their depressive episode (Watkins et al., 2007). The RFCBT treatment specifically focused on helping patients to switch from less helpful to more helpful styles of thinking, using functional analysis, experiential-imagery exercises, and behavioral experiments regarding their negative ruminations. Although there results are promising replications in a larger sample are necessary with a long term follow up period before we can draw firm conclusions.

Another example is a pilot study of Kingston et al. (2007) on the effects of MBCT for 19 recurrently-depressed patients (at least three previous episodes) with residual symptoms after acute treatment. Short-term follow-up results indicated that MBCT had a positive effect on the residual depressive symptoms, at the end the

MBCT intervention and at a 1-month follow-up. Again, replications in larger samples with a proper follow up are necessary before this can be applied in clinical practice for this specific patient group.

Ingredients of Effective Sequential Relapse-prevention Cognitive Therapy in Remitted Patients

The acute treatment of depression varies widely (Ebmeier, Donaghey, & Steele, 2006). Therefore the three primary, relapse-prevention versions of sequential cognitive behavior therapy for remitted patients will be highlighted since applying cognitive behavior therapy after remission regardless of type of prior treatment is very useful for daily clinical practice. Specific characteristics of each intervention will be discussed. These versions of cognitive behavior therapy are typically focused on remitted patients with a history of multiple depressive episodes. The three versions of cognitive behavior therapy are: well-being CBT (WBCT), preventive CT (PCT), and mindfulness-based CT (MBCT).

Well-Being CBT

Fava and colleagues (1998a, 1998b, 2004) have studied a sequential psychological treatment that is applied after a successful treatment with antidepressant medication in the acute phase of depression, i.e. well-being CBT. Well-being CBT significantly reduced depressive relapse in patients with at least three previous episodes (Fava et al., 1998a, 1998b, 2004). Well-being cognitive therapy includes specific psychological interventions with some cognitive behavior therapy elements, like life-style modification and well-being therapy (cf. Fava, 1999a, 1999b). In their treatment protocol, well-being CBT extends over 8 individual sessions (once a week, 30-50 minutes each). As is common in cognitive behavior therapy, a structured diary is used as part of the patient's homework. This approach emphasizes the interaction between patients and therapists, along with other issues in the "therapeutic alliance." Well-being CBT is structured, directive, problem-focused, and based on an educational model of therapeutic intervention. Well-being CBT is based, in part, on Ryff's cognitive model of "psychological well-being" (Ryff, 1989). This conceptual framework focuses on six potential well-being impairments: (a) *Environmental mastery*: this impairment refers to the patient's feeling of lack of control and attributing negative outcomes to their own self, while attributing positive achievements to external factors; (b) *Personal growth*: this impairment reflects the patient's inability to learn from previous, successfully handled experiences, and then use this skill for future experiences (also called "transfer of experiences;" see: Fava, 1999a, 1999b); (c) *Purpose of life*: this impairment reflects the patient's lack of direction and purpose in life, which is often accompanied by a sense of self-devaluation; (d) *Autonomy*: this impairment can reflect the patient's perceived lack of self-worth, and it may lead to unassertive

behavior or avoidance; (e) *Self-acceptance*: this impairment refers to the patient's perfectionist attitudes, which may lead to unrealistically-high standards and expectations. Well-being is harmed or at least neutralized by a chronic dissatisfaction with self; and (f) *Positive relations with others*: this last impairment builds on the others so that the patient may create unrealistic expectations for intimate relationships and friends, or simply avoid intimate and other close relationships. Although there are, some similarities between these formulated well-being CBT impairments and "standard cognitive behavior therapy". Well-being CBT has been described as having its own style and way of emphasizing these themes (Beck, Rush, Shaw, & Emery 1979; Clark & Beck, 1999; Fava, 1999a; Fava, 1999b; Fava et al., 1998a, 1998b, 2004).

The first sessions of well-being CBT usually focus on encouraging and teaching patients to keep a diary, which emphasizes the circumstances of experiences with well-being. The diary may include a concrete rating system as is common in cognitive behavior therapy (e.g., a 0-100 rating scale for specific thoughts and behaviors). Thereafter, the patients are encouraged to identify thoughts, emotions, and behaviors that lead to a decrease in their sense of well-being. Then these thoughts and associated emotions and behaviors can be discussed, evaluated, and possibly modified. In addition, patients are encouraged to increase activities that promote positive well-being (including graded-task assignments and homework common in standard cognitive behavior therapy). In the final sessions of well-being CBT, errors in thinking and alternative and more functional thinking styles are discussed further; then the therapist and patient work on solidifying these positive changes. Moreover, the diary, self-monitoring, homework, and therapy discussions all facilitate assessment and change, again within the six conceptual areas of well-being impairment. It should be acknowledged that "standard cognitive behavior therapy techniques" are also used, such as cognitive restructuring (modification of automatic and irrational thoughts), scheduling of positive activities (mastery, pleasure, and graded-task assignments), assertiveness training, and problem-solving strategies. In summary, well-being CBT is an interesting modification of standard CBT procedures for depression, that has been successfully used in some randomized controlled trials, and which was developed specifically with relapse-prevention in mind.

Preventive Cognitive Therapy (PCT)

PCT is a modified form of standard cognitive behavior therapy that was also specifically developed to prevent relapse in recurrent depression and was adapted for remitted high risk patients (Bockting et al., 2005). It is usually conducted in a group-therapy format, with eight weekly, two-hour sessions. The group typically has 7 to 12 members and a specifically trained therapist. The relapse-prevention program of PCT targets, in particular, underlying cognitive vulnerability factors that are "depressogenic assumptions/beliefs" and that thought of as vulnerability

factors for relapse (Beck, 1987). Compared to standard cognitive behavior therapy for acutely-depressed patients (e.g., Beck et al., 1979), however, PCT for relapse-prevention is less focused on modifying a wide range of negative and dysfunctional thoughts in the here and now. Instead, it is mainly focused right from the beginning on the identification of dysfunctional attitudes/assumptions/beliefs, aided by a self-report questionnaire that includes concrete examples. After identification of these attitudes and beliefs it is directed towards challenging these specific attitudes and beliefs, especially using a wide array of cognitive techniques, such as Socratic questioning and the identification of certain positive attitudes ('dream beliefs' as demonstrated by Padesky). The content and style of these PCT techniques is brought into close alignment with the dysfunctional thinking styles that are predominantly latent in this remission phase, but easily activated. As is common in cognitive behavior therapy patients are constantly encouraged to practice in between the sessions with the new material.

Remitted, but recurrently-depressed patients, often have an inability to retrieve specific memories from the past and this is associated with impaired problem-solving skills (e.g., Pollock & Williams, 2001), long-term course of depressive disorders (e.g., Peeters, Wessel, Merkelbach, & Boon-Vermeeren, 2002), and difficulties staying recovered from depression (e.g., Brittlebank, Scott, Williams, & Ferrier, 1993). Therefore, patients are asked to keep a diary of positive experiences in order to enhance the storage and retrieval of specific memories of positive experiences, rather than focusing on many general and vague memories, some of which may be negative.

In addition, in the last group sessions an individual prevention plan is designed and discussed that captures warning signals for relapse, known psychological vulnerability factors and expected stressful events and, last, helpful strategies will be formulated.

In summary, PCT is a modification of standard cognitive behavior therapy techniques for depression, developed specifically for relapse prevention, and conducted in a group-therapy format after the completion of diverse type of acute treatments.

Mindfulness-Based Cognitive Therapy (MBCT)

Kabat-Zinn and his colleagues were among the first to introduce the concept of "mindfulness" into healthcare settings, in the 1980s (Kabat-Zinn, 1982; Kabat-Zinn, Lipworth, & Burney, 1985). They used this approach for the treatment of chronically-ill patients, patients with severe pain, and patients with anxiety disorders (e.g., Kabat-Zinn, 1982; Kabat-Zinn, Lipworth, & Burney 1985; Kabat-Zinn et al., 1992). Segal, Williams, and Teasdale (2002) and colleagues have adapted "mindfulness training" as a strategy to *prevent* relapse in depression. They call this strategy mindfulness-based CT (MBCT). They, and others, have evaluated

this strategy in a series of randomized controlled trials (e.g., Kuyken et al., 2008; Ma & Teasdale, 2004; Teasdale et al., 2000, 2001). In MBCT, standard cognitive behavior therapy interventions are combined with "mindfulness meditation." Mindfulness is essentially a non-judgmental, but keen awareness, of the present moment and current environment. Meditation techniques are practiced in order to prevent negative rumination. The aims of MBCT include helping patients who have suffered from depression learn skills that prevent depressive relapse. These skills include becoming more aware of bodily sensations, feelings, and thoughts from moment-to-moment. Thus, the patients learn to react, and relate, to their emotions and thoughts in a more-positive way, with an acceptance and acknowledgement of the unwanted feelings and thoughts. This mindfulness-based perspective also helps patients to view this as something that just happens to them, rather than something that implies negative things about their own self. Furthermore, this mindfulness-based perspective helps patients to select and implement more skillful responses to the unpleasant thoughts, and move on.

MBCT includes 8-10 weekly sessions, each lasting 2 hours. The sessions tries to teach patients to shift from a 'doing' mode to a 'being' mode, by applying mindfulness meditation practice, body scan techniques, and mindful-movement training. Learning to pay attention is the focus of the first few sessions. Patients learn to become aware of how the mind is wandering and to bring it back to the body or another single focus. Handling mood shifts now or dealing with them later is dealt with in the next few sessions. Patients learn to move their attention to their breathing and later to expand their attention to their body as a whole, which is thought of as an essential step in effectively dealing with difficulties. In line with PCT, in the last session of MBCT, patients are also encouraged to become more aware of their personal warning signs of impending depression, and to develop specific plans for when this might occur. Patients are also asked to practice daily meditation at home.

Conclusion

Overall, maintenance treatment with antidepressant medication is the most-common strategy to prevent relapse in patients with recurrent major depressive disorder (e.g., American Psychiatric Association, 2008; Geddes et al., 2003; National Institute for Clinical Excellence, 2009). A recent meta-analysis, however, illustrates that the success rates for long-term antidepressants should be cautiously interpreted. In this study by Turner and colleagues, they reported an over-estimation of the effect size for antidepressants of 32%, which was apparently due to "publication bias", i.e. only the more positive outcomes were published (Turner, Matthews, Linardatos, Tell, & Rosenthal 2008). In addition, previous studies, indicated that many depressed patients in Europe (up to 70%) who are being treated in primary care settings are not willing to take antidepressant medications

after remission; or, these patients take too-low dosages for treatment efficacy during the follow-up phase (e.g., Bockting et al., 2008; Meijer et al., 2004). Therefore, maintenance cognitive behavior therapy (e.g., relapse-prevention cognitive behavior therapy) after acute treatment may be an attractive alternative treatment for many patients, and there is some support for this (e.g., Blackburn & Moore, 1997; Kuyken et al., 2008). This is an extremely challenging issue to research thoroughly, however, and more large studies are needed. Currently, Kuyken is replicating his first study in the UK and in the Netherlands a national study is undertaken that compares PCT while tapering antidepressants against the combination of PCT with antidepressants versus continuation of antidepressants alone (Bockting et al., submitted a).

The research completed so far suggests that cognitive behavior therapy programs aimed at preventing relapse do reduce depressive relapse. New studies on sequential cognitive behavior therapy should investigate, among other things, the underlying mechanisms of these preventive treatments. For example, further process studies are needed to evaluate the claims that the additions to standard cognitive behavior therapy programs, such as meditation training (MBCT) and well-being training (WBCT), are essential for an effective relapse prevention program. In addition, research should focus on who benefits the most from various cognitive behavior therapy relapse-prevention strategies.

Minimal Interventions?

Given the high prevalence of major depressive disorder, new intervention with minimal therapist support, deserve more attention, such as cognitive behavior therapy-type programs specifically aimed at preventing relapse that are delivered over the Internet. At the moment, a national study is undertaken in the Netherlands on the effect of an intervention offered over the internet with minimal therapist support based on the face to face PCT program (Bockting et al., submitted b).

Overall, a depressive relapse is for most an awful experience, especially if it is happening repeatedly. Cognitive behavior therapy offers an effective treatment option for relapse prevention, with considerable support from meta-analysis and randomized controlled trials. Especially the brief sequential cognitive behavior therapy, as applied after remission, regardless of prior treatment, seems a cost effective, easily implemented intervention to prevent relapse in high-risk groups. Since many remitted patient have no treatment in secondary care, implementation in primary care (in general practitioner's practices) is recommended.

Sequential cognitive behavior therapy might be alternative to long-term antidepressant treatment and for some patients a complementary intervention with antidepressant treatment is the best option. Future studies must rule out what intervention for whom is the best protection against relapse.

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