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CBT for difficult-to-treat depression: self-regulation model

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Abstract

Background: Cognitive behavioural therapy (CBT) is an effective treatment for depression but a significant minority of clients do not complete therapy, do not respond to it, or subsequently relapse. Non-responders, and those at risk of relapse, are more likely to have adverse childhood experiences, early-onset depression, co-morbidities, interpersonal problems and heightened risk. This is a heterogeneous group of clients who are currently difficult to treat.

Aim: The aim was to develop a CBT model of depression that will be effective for difficult-to-treat clients who have not responded to standard CBT.

Method: The method was to unify theory, evidence and clinical strategies within the field of CBT to develop an integrated CBT model. Single case methods were used to develop the treatment components.

Results: A self-regulation model of depression has been developed. It proposes that depression is maintained by repeated interactions of self-identity disruption, impaired motivation, disengagement, rumination, intrusive memories and passive life goals. Depression is more difficult to treat when these processes become interlocked. Treatment based on the model builds self-regulation skills and restructures self-identity, rather than target negative beliefs. A bespoke therapy plan is formed out of ten treatment components, based on an individual case formulation.

Conclusions: A self-regulation model of depression is proposed that integrates theory, evidence and practice within the field of CBT. It has been developed with difficult-to-treat cases as its primary purpose. A case example is described in a concurrent article (Barton *et al.*, 2022) and further empirical tests are on-going.

Keywords: cognitive behavioural therapy; complex cases; depression; self-regulation

Introduction

The goal of the self-regulation model is to provide effective therapy for depressed clients who have not responded to standard cognitive behavioural therapy (CBT) protocols, such as cognitive therapy (CT; Beck *et al.*, 1979) and behavioural activation (BA; Martell *et al.*, 2010). Non-responders to CBT, and those who have heightened risk of relapse, form a diverse and heterogeneous group. They are often non-responsive to other psychological therapies, anti-depressant medication and social interventions. They are sometimes described as clinically complex, treatment-resistant, or, more recently, difficult-to-treat has been proposed as a better way to describe their depression, at least with respect to current treatments (McAllister-Williams *et al.*, 2020; Rush *et al.*, 2022). Compared with treatment responders, they are more likely to have adverse childhood experiences, early-onset depression, co-morbidities,

interpersonal problems and heightened risk to self (Wojnarowski *et al.*, 2019). Recurrent episodes and chronic presentations are common, as are referrals to secondary and tertiary services.

Should clients who have not improved following an adequate dose of high-fidelity CBT be offered a different evidence-based treatment or a second course of CBT? This is a common dilemma across the stepped care system. Our response has been to adjust CBT to the needs of this client-group and we present the model we have developed in this article. The method we applied is collaborative and integrative, in two senses. Firstly, all interventions are guided by individualised case formulations in collaboration with clients, either in routine practice or single case research (Barton *et al.*, 2008). When at all possible, treatment dilemmas are shared with clients and their feedback is used to shape model development and treatment strategies. Secondly, within the field of CBT we draw on several theories of depression, relevant cognitive science and treatment strategies, including first, second and third wave therapies. The resulting model is an integrated CBT approach. More information about the model development is available in Barton and Armstrong (2019).

While the self-regulation model can be used with any depressed client, therapy for difficult-to-treat cases is its primary purpose. At present, it has a small, emergent evidence base and should not be used instead of CT or BA in the first instance; rather it can be considered when CT and/or BA have not had a sufficiently beneficial or lasting effect. Therapists use core CBT skills as they would with any CBT model: there are no special procedures that deviate from core competencies. It is a high dose treatment with up to 30 individual sessions, usually over a 12-month period. This is expensive compared with standard protocols but, when effective, it has the potential to save on future healthcare costs which are particularly high in this client-group (Johnston *et al.*, 2019). There are ten treatment components and these are combined in a bespoke way, based on the needs of the individual undergoing therapy. Some of the components fall within established CBT practice, for example, alliance building, risk reduction and relapse prevention; some have overlapping features with second- and third-wave models such as mindfulness-based cognitive therapy (MBCT; Teasdale *et al.*, 2000) and rumination-focused cognitive behavioural therapy (RFCBT; Watkins *et al.*, 2011); others are novel, for instance self-organisation, which seeks to influence networks of self-states rather than core beliefs.

The model is grounded in self-regulation theory. It shares the same assumptions about self-regulation as originally described by Carver and Scheier (1999):

(1) Personal identity is plural and based on multiple self-representations that provide self-definition across different situations.
(2) Specific 'selves' are goal-directed and motivated: they are seeking to approach or avoid different outcomes and respond to feedback in pursuit of their goals.

The model is not derived from all of Carver and Scheier's (1999) proposals; rather it shares the same fundamental assumptions about self-regulation. The model is a set of hypotheses about how self-regulation becomes dysregulated during depression and this is used to formulate individual cases and shape treatment.

This article introduces the model and treatment components and provides an example of a case formulation. It also explores similarities and differences compared with standard protocols, such as CT and BA. A concurrent article provides a case example of how the model is used in practice, and readers are encouraged to refer to that article to explore the therapeutic applications (Barton *et al.*, 2022). The current evidence base is summarised in Barton and Armstrong (2019).

Self-identity disruption

A fundamental claim of the model is that depression is associated with disrupted or under-developed self-identity. Normal self-identity is not unitary or simple: it is constituted by

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multiple self-representations that develop at different points in the lifespan (Schwartz and Petrova, 2018). Some self-representations are internalised in early childhood, for example, the felt-sense of being loveable, competent and safe. These representations provide a structure within which life skills can develop, for example, interpersonal, social, educational, occupational, etc. Other self-representations result from experiences in adolescence and adulthood when people become identified with particular goals, relationships, roles and group memberships (e.g. family, partner, social, relationships, work, occupation, interests, leisure, nationality, gender, spirituality, etc; Meca *et al.*, 2019). As an individual develops, their self-identity usually becomes more plural and coherent, but for some people this is delayed or obstructed, leaving them with an unconsolidated or confused sense of self that can limit and/or complicate their development.

Self-representations vary in how core or peripheral they are and this can vary over time. When self-representations are core and self-defining, negative affect is likely when they are disrupted or destabilised. Disruptions can be precipitated contextually, for example, negative life events or developmental changes ('outside in'), or intra-psychically, for example, through thoughts, images or memories ('inside-out').

Vulnerability to depression is formulated as one or both of the following:

(1) Limited internalisation of positive self-representations, particularly in childhood and adolescence.
(2) Narrow investment in specific positive self-representations, particularly in adulthood.

In this context, 'positive' means a self-representation that provides self-definition, value and purpose. In the cognitive model of Beck *et al.* (1979), vulnerability to depression derives from negative self-beliefs that result from adverse childhood experiences. In the self-regulation model, vulnerability to depression derives from the under-development of positive self-representations. This can be the result of early adverse experiences which can make it difficult for young people to develop positive self-identities (Elrefaay *et al.*, 2021). When positive self-representations are under-developed, it is more difficult to successfully negotiate developmental tasks, such as adolescence. This is the period of life when most first-onset depressions occur, and people with early-onset depression are more prone to relapse and recurrence later in the lifespan (Bockting *et al.*, 2015; Wojnarowski *et al.*, 2019).

Depending on how adult self-identity is structured and organised, vulnerability to depression can increase in mid and later life, even when childhood experiences were positive and secure. Vulnerable individuals rely on a restricted range of positive self-representations and they are prone to over-investing in these, for example, an idealised relationship, career or over-valued goal (Lam *et al.*, 1996). These can provide self-definition, value and purpose in the short-to-medium term (so long as they remain stable), but there is a hidden vulnerability to depression when self-identity has limited breadth and flexibility.

Depressed mood and impaired motivation

Depressed mood is a normal consequence of disrupted core self-representations. For most people, depressed moods are short-lived states that self-correct automatically or through the use of strategies. In major depression, there is a failure of self-correction: mood repair strategies (deliberate or automatic) are either not used, not sufficiently potent or are working against the intended outcome. In this situation, negative affect intensifies and positive affect weakens. The model describes a number of psychological processes that can interact repeatedly to create a downward spiral into depression, as depicted in Fig. 1.

When depressed mood persists, approach motivation is impaired: there is reduced positive anticipation, lower reward expectancies and weakened impulses towards desired states (Frey and McCabe, 2020; Kumar *et al.*, 2018; Sherdell *et al.*, 2012; Wu *et al.*, 2017). Impaired

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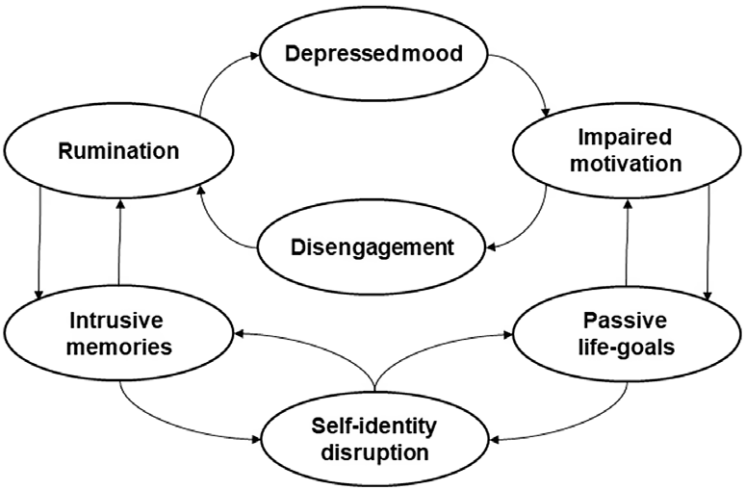

Figure 1 Self-Regulation Model of Depression.

approach is associated with reduced openness to new experiences and a defensive orientation when interacting with others (Treadway *et al.*, 2012; Trew, 2011). Drive motivation, such as goal pursuit and reward seeking, is attenuated, and the motivation to self-soothe and relate to others can also be weakened (Watson *et al.*, 1999). The net result is impoverished interest in goal-directed activity, which can be task-related, interpersonal or intra-personal. As approach impulses reduce in intensity, avoidant impulses tend to increase with heightened urges to avoid, escape or hide (Hershenberg *et al.*, 2017; Roskes *et al.*, 2014).

Disengagement

Behavioural disengagement is the usual consequence when motivational impairments are not counteracted. Disengagement refers to how behaviour is enacted, in ways that reduce connectedness, openness and receptivity, particularly when tasks are effortful or demanding (Bowie *et al.*, 2017). This can take different forms, for example: experiential and behavioural avoidance (Haskell *et al.*, 2020; Moulds *et al.*, 2007; Ottenbreit and Dobson, 2004; Quigley *et al.*, 2017); social withdrawal (Girard *et al.*, 2014; Katz *et al.*, 2011; Ottenbreit *et al.*, 2014); interpersonal submission and passivity (Bird *et al.*, 2018; Catarino *et al.*, 2014; Gilbert, 2001; Gilbert and Allan, 1998); mental defeat and reduced self-agency (Gilbert, 2001; Panagioti *et al.*, 2012; Sloman, 2000; Taylor *et al.*, 2011); and suicidality, the intentional and fatal disconnection from life itself (Hawton *et al.*, 2013; Ribeiro *et al.*, 2018).

Rumination

Disengagement tends to increase self-focused attention and this is one of the setting conditions for rumination (Cribb *et al.*, 2006; Koster *et al.*, 2011; Lyubormirsky and Nolen-Hoeksema, 1995; Marroquín *et al.*, 2010). The depressed mind has limited reflective capacity and it becomes fused and enmeshed with its negative contents (Watkins and Teasdale, 2001). This contrasts with reflective processing, which enables an individual to pay attention flexibly and de-centre from their mental events. The model proposes that depressed individuals are attempting to think clearly, understand events and make decisions, but the effects of self-focused attention and depressed mood compromise normal cognitive processing. Efforts at reflection and strategic thinking fall foul of the cognitive effects of depression,

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leading to brooding on repetitive themes and unproductive cycles of self-analysis (Nolen-Hoeksema, 1991). This is sometimes interspersed with phases of cognitive avoidance and emotional suppression, which at best provide temporary escape from the distress associated with rumination (Liverant *et al*., 2011).

The model proposes that rumination results from mismatches between goals and cognitive processes: the goal the person is trying to attain is mismatched to the process intended to achieve it (Watkins and Roberts, 2020). Concrete examples are observed in depressing questions, such as, 'why should I bother going on?'. The implicit goal in this question is to recover value and purpose, but this is defeated by the cognitive effects of the question which either lead to no answer or unhelpful answers.

Intrusive memories

The interaction between rumination and identity disruption results in positive memories becoming less accessible (Brewin, 2006) and negative memories becoming more accessible (Brewin *et al*., 1999; Gaddy and Ingram, 2014; Mihailova and Jobson, 2020). A significant proportion of these are intrusive, that is, unwanted recollections rather than the product of deliberate recall, and this is more pronounced in individuals with trauma histories (Mihailova and Jobson, 2018; Payne *et al*., 2019; Starr and Moulds, 2006). Intrusive memories are often subject to rumination: explanations of the past are sought but, as above, questions generated during depression tend to defeat their intended goals (e.g. 'Why do bad things always happen to me?'; Rosebrock *et al*., 2019; Wisco and Nolen-Hoeksema, 2009). In contrast to intrusions, deliberate recollections of past events are over-general and lack specificity. Over-general memory can be very frustrating for depressed individuals: in spite of cognitive effort, they struggle to access details to remember and learn from their past (Hallford *et al*., 2020). This is also associated with rumination and is pronounced in individuals who suffered childhood abuse (Griffith *et al*., 2016; Liu *et al*., 2017). This creates another vicious spiral where the excess of distressing intrusive memories fuels rumination, and the individual struggles to access the specific memories that would support reflective processing.

Passive life goals

The interaction between impaired motivation and identity disruption results in life goals becoming more passive. Rather than being tangible concrete possibilities, life goals become abstract wished-for states. Belief in being able to influence them is reduced and there is increased pessimism about achieving them (Dickson *et al*., 2011; Dickson *et al*., 2016). The net effect is increasing goal discrepancies: depressed individuals make minimal progress towards their life goals because they are not engaged with them, and this becomes an input for rumination and discrepancy-based thinking (e.g. 'How come I never get what I want?').

Because interactions with the environment are limited, there is minimal feedback on progress and it is difficult, when depressed, to assess whether goals are realistic. Consequently, depressed individuals are sometimes over-invested in goals, and possible selves, that are unlikely to be attainable (Lam *et al*., 1996). Life goals also tend to be on hold until other conditions are satisfied ('when I feel better'), which limits engagement with actions that could otherwise help to enhance mood (Coughlan *et al*., 2017; Hadley and MacLeod, 2010). Short-term goals shift to preventing depression from worsening rather than taking good risks to improve it. Even when life goals are active, and appear to be approach-based, there can be avoidant elements in the underlying motivation that subtly maintain vulnerability to depression (Sherratt and MacLeod, 2013).

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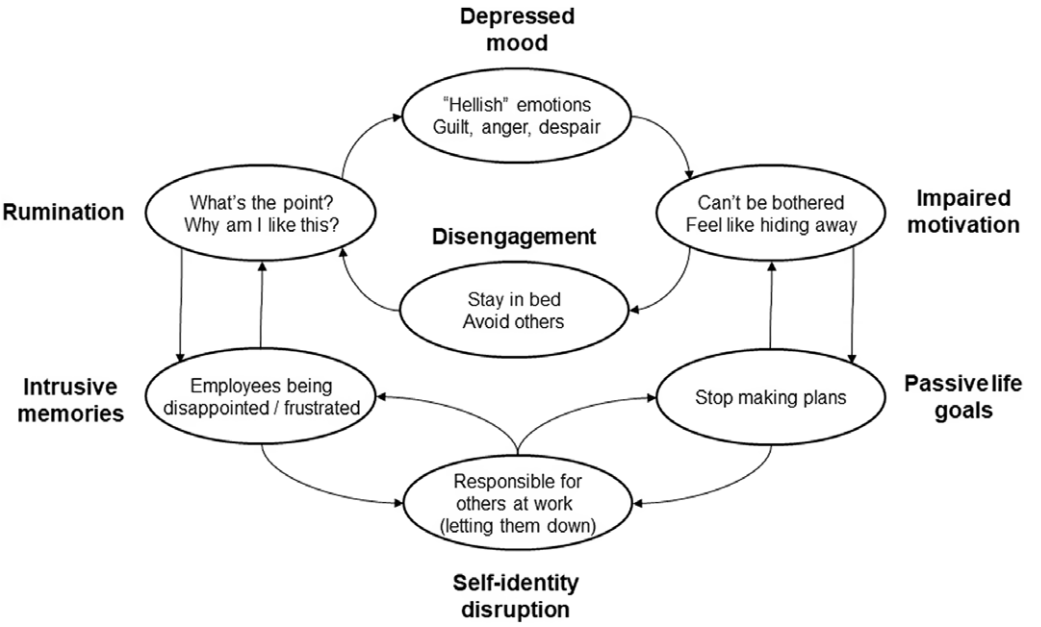

Figure 2. Evelyn's self-regulation formulation.

Summary

The model proposes that depression is perpetuated by repeated interactions of self-identity disruption, impaired motivation, disengagement, rumination, intrusive memories and passive life goals. The key issue is the repeated interaction of these processes which captures the system like a traffic gridlock, in which the potential for change in any specific process is limited by the presence of other processes (Teasdale and Barnard, 1993). This has an entrapping effect and as depression becomes more severe, helplessness and hopelessness often develop as a consequence (Maier and Seligman, 2016; Siddaway *et al.*, 2015).

Case example

Figure 2 presents a case formulation of a 52-year-old married woman suffering with severe recurrent depression (pseudonym, Evelyn). Evelyn suffered adverse childhood experiences and these limited the development of positive self-representations, particularly in the interpersonal domain of being likeable and loveable. However, as a young person she experienced some degree of self-worth feeling responsible for others and performing well at school.

The self-regulation model focuses on positive self-representations: whether or not they were internalised across the lifespan, and how they influence current self-identity. Evelyn's self-identity was narrowly invested in taking responsibility for others through her work as managing director of a company. This was a positive self-representation that provided self-definition, value and purpose. Evelyn was highly invested in the goal of doing her job well and valued this goal. This does not mean that she had consistently positive beliefs about doing a good job; in fact, these fluctuated a great deal. She experienced phases of work going reasonably well when she reported her mood to be 'OK', but small set-backs at work (real or perceived) had a disproportionate effect on her mood. There was nothing abnormal about being a managing director or the goal to help others at work; the problem was that Evelyn's self-identity was narrowly invested in the work domain and, as such, her global self-identity

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Table 1. Treatment components

Treatment component	Purpose
Alliance building	Build and maintain a collaborative working alliance; overcome alliance barriers; balance support and change
Treatment rationale	Reflect on mood fluctuations; differentiate depressed and less-depressed moods; use this to leverage change
Approach motivation	Pay attention to needs and desires; generate reasons for action; strengthen approach impulses
Active engagement	Encourage increased interaction with tasks and other people; experiment to influence preferred outcomes
Mental freedom	Develop a good self-mind relationship; increase reflective capacity, attentional skills and helpful questions
Self-organisation	Strengthen, diversify and re-structure positive self-representations; de-centre from negative self-beliefs
Goal organisation	Structure life goals so they are approach-based, concrete, imaginable and span a range of self-representations
Memory integration	Elaborate positive recollections to increase their memorability and accessibility; emotionally process intrusive memories
Risk reduction	Reduce suicide risk by considering intended and unintended consequences; find non-lethal ways to respond to needs
Staying well	Consolidate self-regulation skills learned during therapy; apply them independently under mildly challenging conditions

was prone to disruption when work-related setbacks occurred. Over-investment led to over-generalisation. She could switch rapidly into a self-loathing, unmotivated, withdrawn, ruminative state, pre-occupied with memories of letting others down and uninterested in planning for the future. Evelyn's therapy is described in detail in Barton *et al.* (2022).

Treatment components

The aim of treatment is to enhance self-regulation skills and encourage the re-organisation of self-identity. There are ten treatment components, as listed in Table 1.

An advantage of treatment protocols is standardising therapy to maximise consistency and therapist fidelity (McGlinchey and Dobson, 2003; Waltz *et al.*, 1993). A disadvantage is providing the same interventions in the same sequence and dose for all clients, irrespective of client need. The model proposes that, for difficult-to-treat cases, there is an advantage in allowing individualisation of the components, provided that therapists maintain good fidelity to them. Individualisation means varying their sequence, combination and dose, based on client-need. It does not mean drifting from the therapist actions prescribed within them (Weck *et al.*, 2011a; Weck *et al.*, 2011b). This strategy is a way of responding to the heterogeneity observed in this client group. For example, some depressed clients have extensive trauma histories and are highly ruminative: their treatment needs to target intrusive memories, rumination and identity disruption. Other clients are stuck in the transition between adolescence and adulthood: their treatment needs to target impaired motivation, passive life goals and identity formation. Encouraging a bespoke plan is a way of balancing different client needs within the same treatment model.

Alliance building

In common with all CBT therapies, the therapist and the client need to form a collaborative working alliance (Cameron *et al.*, 2018). In difficult-to-treat cases, the presence of multiple biomedical, psychological and social problems can be a barrier to this, creating confusion

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about what to target and sometimes leading to mistrust, excessive formulation or a lack of focality (Barton *et al.*, 2017). Self-dysregulation can contribute to these difficulties, with clients struggling to engage, agree goals and contribute to shared reflections. It is important that alliance barriers are identified and made explicit so that they can be overcome, creating an optimal balance of support and change. The treatment dose of up to 30 sessions is intended to give clients and therapists the time they need to form and maintain a strong working alliance.

Treatment rationale

The treatment rationale is based on mood fluctuations. Some clients believe that their mood is invariant, but this is never the case: a sufficiently sensitive mood diary always reveals some variability, however slight. Therapists inquire about specific client experiences, some when their mood was very depressed, and others less so. The aim is to increase the client's awareness of the contrast between different mood-states. To learn from these, detailed information needs to be elicited about self-regulatory processes: affect, motivation, behavioural engagement, cognitive processes, memories, goals, etc. This helps to build the case formulation which is usually formed gradually over a number of sessions (e.g. Fig. 2). The emphasis on mood contrasts helps clients to recognise that they already experience less-depressed moods to some extent, even if they are short-lived and difficult to remember. To effect change, sufficient emphasis has to be placed on less-depressed experiences, not just the maintenance formulation.

Approach motivation

The aim is to stimulate approach impulses and weaken avoidant impulses. Achieving this is centred on increasing attention on the client's needs and desires to make these explicit, forming intentions and making plans, and fostering active engagement. Questioning the client about what they felt like doing and were hoping would happen during less-depressed moods increases awareness of needs and desires. This is essential because everyday actions need to be approached in a deliberate intentional way at first, gradually becoming more automatic as normal self-regulation is restored. This applies to tasks (e.g. making a lunch), interactions with others (e.g. socialising with friends), and to interactions with oneself (e.g. self-soothing when distressed). Concretely, when considering situations prospectively, therapists ask: 'What do you need from this situation? What do you desire? What would you like to happen?'. This contrasts with standard CT, which usually asks: 'What do you expect or predict will happen?'. The explicitness of this process helps to generate reasons for action and, depending on the outcomes of active engagement, these gradually become motivational impulses. As motivation in daily life becomes stronger and more automatic, the client is encouraged to reflect on higher-order needs and deeper desires, to form an individualised hierarchy that guides their decisions and personal development.

Active engagement

The goal of active engagement is to increase clients' interaction, including daily tasks, relating to others and oneself. Engagement is targeted in areas where the client is currently disengaged, withdrawn or avoidant. There is curiosity about how clients interact, and there is a big emphasis on experimentation, with clients encouraged to try out new ways of relating and interacting, grounded in their needs and desires. When particular relationships or tasks are considered, the aim is to elicit concrete details about what the client would like to happen, aligned with their approach motives. All experiments are exploratory, to find out if the client can influence their preferred outcomes. Ways of actualising their preferences are explored in detail: how they will approach the situation, how they will interact, where they will place their

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attention, etc. At every point, it is essential to calibrate actions to what is manageable within the client's energy and window of tolerance. The aim is confirmatory learning: for clients to learn that they can influence their preferences sufficiently for it to be worth the effort and risk of doing so. They do not learn that life is fully controllable or predictable; rather, that seeking to influence preferred outcomes is a helpful way to self-regulate and approach different situations.

Mental freedom

The aim of mental freedom is to develop a good self-mind relationship with reflective capacity, attentional and questioning skills. The first step is to increase awareness of the difference between rumination and reflection. Positive beliefs about rumination need to be addressed, so it is recognised as an understandable but unhelpful process. In contrast, reflective processing – which can address the same subjectively important content – helps to generate new ideas, answer questions, reach conclusions and make decisions. Becoming aware of the difference between the two is itself a reflective activity (Arditte and Joormann, 2011). As reflective capacity increases, clients develop greater attentional skills, choosing where to place their attention in different situations. This is amenable to cognitive experiments in session, for example, varying the object and depth of attention to discover the effects on cognition and mood (e.g. internal *vs* external; mind *vs* body; Koster *et al.*, 2017). Clients learn the value of external focus when interacting with tasks and other people, and this can be incorporated into active engagement. During self-reflection, they learn the value of paying attention to somatic and affective experiences, so that the body receives sufficient attention, not just the mind (Dey *et al.*, 2018; Watkins and Moberly, 2009). As clients' cognitive skills increase, they learn to differentiate helpful and unhelpful questions through cognitive experiments: encouraging helpful questions is a way of counteracting the goal-process mismatches that are common in depressive rumination.

Self-organisation

The aim is to strengthen, diversify and re-structure positive self-representations. When this is effective, clients come to a fuller appreciation of their personal qualities and capacities (i.e. true self), and this acts as a buffer against the negative self-beliefs that often occur during depression (i.e. false self). Clients do not always recognise their personal qualities or internalise them as self-representations. Self-organisation makes clients' qualities explicit, sometimes by involving family and friends in selected sessions, and encourages their consolidation and internalisation. When negative self-beliefs obstruct this, a theory A/B method is used to help the client de-centre from them. Theory A is the false self: e.g. 'I'm useless and worthless because that's how I feel'; theory B is an alternative explanation why A sometimes feels true: e.g. 'I sometimes feel useless and worthless because I was neglected and unfairly treated as a child. I internalised those experiences as if they were to do with me, rather than how I was treated. When I get depressed, it brings back those feelings'. Unlike standard CT, the content of negative self-beliefs is not elaborated in detail: rather theory B is used to help the client de-centre from negative beliefs when they are present, so they are more able to engage with recognising and building positive self-representations.

Goal organisation

The aim is for clients to structure their life goals so they are attainable and linked to positive self-representations. It is best for these to span a number of domains rather than narrow investment in one area (e.g. family, partner, social, relationships, work, occupation, interests, leisure, etc.). Mapping goals out explicitly can help to overcome specific problems, for example, when there are too few or too many goals, when they are avoidant rather than approach-based, when

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they are in conflict with each other, or highly conditional. Life goals need to be concrete, specific and imaginable, not abstract possibilities outside of the client's influence. Some clients also need structured support with planning, to break goals into sub-goals and concrete steps. This can help to reduce goal conflict and conditionality, and further encourage approach motivation and active engagement.

Memory integration

There are different aims for positive and negative memories. For negative memories, much depends on the personal significance of the event. If it is a minor, time-limited event, it is usually best to limit the attention paid to it, mitigating the risk of rumination elaborating the memory in an unhelpful way. However, it is important to differentiate memory avoidance from the freedom to place attention where it is needed: for example, 'I don't have to dwell on this' is mentally freer than 'I must not think about it'. For significant negative events, it is important that there is an opportunity to emotionally process the experience, to reduce the likelihood of it becoming unprocessed and intrusive in the future. This should be approached with a clear timeline, experientially and reflectively, grounded in concrete experiences and not in an abstract or analytic way (Hitchcock *et al.*, 2017). The same approach is taken with intrusive memories that pre-date therapy, for example, childhood traumas (Gisquet-Verrier and Riccio, 2018; Houle and Philippe, 2020). Whenever possible, the interpretive context for memory integration should be positive self-representations, especially for negative experiences (Gisquet-Verrier and Riccio, 2018). For example, a memory of feeling lonely during childhood should be integrated through theory B ('unfairly treated'), rather than theory A ('useless and worthless'). For memories of positive experiences, the aim is to reflect, elaborate and consolidate them so that they become more memorable and accessible, when possible making explicit links to self-representations.

Risk reduction

The aim is to reduce suicide risk when it is heightened. Clients' motivation is explored in detail by asking about the intended and unintended consequences of suicidal actions. When feeling suicidal, clients' attention often narrows around a specific need, for example, to be re-united with a loved one, to escape, to experience relief or put an end to a particular emotion. The intention to die develops as a way of satisfying that need, although this is often implicit, confused and obscured by negative affect and rumination. Therapy makes the need explicit and invites reflection on whether suicide is the only or best way of satisfying that need. The need is taken seriously by considering non-lethal alternatives. In most cases, unintended consequences have not been fully considered and, when they are explored in detail, the client begins to re-appraise whether suicide is a necessary or helpful path (e.g. pain, injury, illness, disability, distress, loss, guilt; Britton *et al.*, 2011; Hawton *et al.*, 2013). Suicide is usually motivated by some form of avoidance and clients are encouraged to switch to approach mode: to take their needs seriously and find other means of connection, escape, relief, etc. This process is augmented by broadening attention onto other life goals and reasons for living (Linehan *et al.*, 1983). The final part of the process is making a safety plan: sharing information with others and preparing how to respond when risk increases. Clients need to access this learning when they feel suicidal, so that suicide is appraised as a bad strategy and non-lethal actions are chosen instead.

Staying well

This component is intended to counteract depressive relapse and it is usually the focus of booster sessions delivered towards the end of treatment (Jarrett *et al.*, 2001). The client is encouraged to review and synthesise their learning across therapy, making explicit and consolidating their

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self-regulation skills. They are also encouraged to accept future challenges, setbacks and dysphoric moods as a normal part of life, rather than trying to avoid situations that could trigger disappointment or conflict (Jarrett and Thase, 2010). In preparation for treatment ending, it is helpful for clients to be exposed to mild stressors or setbacks, so they can learn how their mood is affected and practise self-regulation skills in an independent way. The aim is for knowledge and skills to be accessed when they are most needed, when clients start to become depressed. Ideally, clients learn that they can stay well without the continued presence of the therapist, and this limits the risk of relapse and future recurrences.

Relationship to other CBT therapies

The self-regulation model provides an integrated approach to treatment within the field of CBT. Alliance building, risk reduction and relapse prevention are similar to standard approaches, although they are delivered in a way that coheres with the self-regulation formulation. Alliance-building is emphasised more than in standard CT or BA, because of the high likelihood of alliance barriers in difficult-to-treat cases. Attending to mood fluctuations is also part of other therapies, for example, CT identifies changes in cognition when there are mood shifts. In self-regulation CBT (SR-CBT) it plays an even more central role, for two reasons: firstly, sometimes there are only micro-differences in mood across time, particularly in chronic cases, so greater attention needs to be paid to noticing fluctuations; secondly, less-depressed moods are essential for encouraging hope. Attention needs to be placed on less-depressed moods so that clients learn to associate them with motivation, engagement, reflection, positive memories and active life goals, even when less-depressed moods are fleeting at first.

Like CT, mental freedom involves cognitive re-structuring and the emphasis is on establishing a better self-mind relationship through helpful processes such as attention, reflection and questioning. Unlike CT, negative thoughts and beliefs are not targeted directly, rather, an improved self-mind relationship makes it less likely that negatively biased thoughts will be generated. There are similarities with both mindfulness-based cognitive therapy (MBCT; Teasdale *et al.*, 2000) and rumination-focused cognitive behavioural therapy (RFCBT; Watkins *et al.*, 2011); however, in SR-CBT there is a distinctive emphasis on encouraging clients to mentally engage with issues that are subjectively important to them, learning how to reflect, question and make decisions about them effectively. Rumination is discouraged, thinking is not. There is also an emphasis on generating reasons to act with a lot of attention placed on clients' needs. There are points of contact with both motivational interviewing and some aspects of CFT, as attending to needs is a self-compassionate process and is much-needed in clients with self-critical rumination.

Like BA (and activity scheduling in CT), active engagement seeks to encourage behaviour change, but emphasises elucidating and satisfying the individual's needs and desires. Contextual factors are considered, but in service of needs and desires rather than in and of themselves. Like CT, change is targeted through behavioural experiments, but expectations and predictions (often negative) are not elicited. Instead, therapeutic time is devoted to eliciting preferred outcomes and exploring ways of influencing them. A desired outcome is a goal, not just a sequence of actions, and when preferred outcomes are influenced, the learning process is confirmatory rather than disconfirmatory. In this model, being able to influence or attain a goal is as important as having an enjoyable experience.

Active engagement and goal organisation have overlaps with values-based BA (Kanter *et al.*, 2012), acceptance and commitment therapy (ACT; Zettle, 2007) and augmented depression therapy (ADepT; Dunn *et al.*, 2019) in terms of committing to valued action and seeking to enhance positive affect, not just reduce negative affect. However, the emphasis in SR-CBT is on needs and desires rather than values. The difference is not just semantic: when people are

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depressed, values can be filtered through what they believe they *should* value, rather than what they actually *want*. For some clients, the question of what they want is new and their desires are an unchartered territory.

The need for memory integration is an acknowledgement of the prominence of intrusive memories in depression, and the high prevalence of both childhood and adult trauma in difficult-to-treat cases (Gisquet-Verrier and Riccio, 2018). In some cases, reliving is needed because of the intrusive and depressing effects of re-experiencing. This is not a novel therapy process but, to our knowledge, it is the first time it has been made explicit in a CBT treatment model for depression. Given the bespoke nature of treatment plans, memory integration can play a prominent role for some clients and a minor role for others.

Finally, self-organisation has overlaps with schema-focused work in CT, but the emphasis is different (Renner *et al.*, 2018). The model does not target negative schemata but, when necessary, it will formulate how they developed to help a client de-centre from them. SR-CBT is less concerned with negatives and more concerned with positive self-representations: whether they are under-developed, disrupted or restricted in range, seeking ways to diversify and restructure self-identity so that vulnerability to depression is reduced.

Data availability statement. This article introduces a theoretical model: data availability is not applicable as no new data were created or analysed.

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References

Arditte, K. A., & Joormann, J. (2011). Emotion regulation in depression: reflection predicts recovery from a major depressive episode. *Cognitive Therapy and Research*, *35*, 536–543. https://doi.org/10.1007/s10608-011-9389-4.

Barton, S., & Armstrong, P. (2019). *CBT for Depression: An Integrated Approach*. Sage.

Barton, S., Armstrong, P., Holland, S., & Tyson-Adams, H. (2022). CBT for difficult-to-treat depression: single complex case (in press, *the Cognitive Behavioural Therapist*).

Barton, S., Armstrong, P., Wicks, L., Freeman, E., & Meyer, T. D. (2017). Treating complex depression with cognitive behavioural therapy. *the Cognitive Behavioural Therapist*, *10*. http://dx.doi:10.1017/S1754470X17000149

Barton, S. B., Armstrong, P., Freeston, M. H., & Twaddle, V. (2008). Early intervention for adults at high risk of recurrent/chronic depression: cognitive model and clinical case series. *Behavioural and Cognitive Psychotherapy*, *36*, 263–282.

Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive Therapy of Depression: A Treatment Manual*. New York, USA: Guilford Press.

Bird, T., Tarsia, M. & Schwannauer, M. (2018). Interpersonal styles in major and chronic depression: a systematic review and meta-analysis. *Journal of Affective Disorders*, *239*, 93–101.

Bockting, C., Hollon, S. D., Jarrett, R. B., Kuyken, W., & Dobson, K. (2015). A lifetime approach to major depressive disorder: the contributions of psychological interventions in preventing relapse and recurrence, *Clinical Psychology Review*, *41*, 16–26. http://dx.doi.org/10.1016/j.cpr.2015.02.003

Bowie, C. R., Milanovic, M., Tran, T., & Cassidy, S. (2017). Disengagement from tasks as a function of cognitive load and depressive symptom severity, *Cognitive Neuropsychiatry*, *22*, 83–94. doi: 10.1080/13546805.2016.1267617

Brewin, C. R. (2006). Understanding cognitive behaviour therapy: a retrieval competition account. *Behaviour Research and Therapy*, *44*, 765–784.

Brewin, C. R., Reynolds, M., & Tata, P. (1999). Autobiographical memory processes and the course of depression. *Journal of Abnormal Psychology*, *108*, 511–517. https://doi.org/10.1037/0021-843X.108.3.511

Britton, P.C., Patrick, H., Wenzel, A., & Williams, G. C. (2011). Integrating motivational interviewing and self-determination theory with cognitive behavioral therapy to prevent suicide. *Cognitive and Behavioral Practice*, *18*, 16–27.

Cameron, S. K., Rodgers, J., & Dagnan, D. (2018). The relationship between the therapeutic alliance and clinical outcomes in cognitive behaviour therapy for adults with depression: a meta-analytic review. *Clinical Psychology & Psychotherapy*, *25*, 446–456.

Carver, C. S., & Scheier, M. F. (1999). *On the Self-Regulation of Behaviour*. Cambridge, UK: Cambridge University Press.

Catarino, F., Gilbert, P., McEwan, K., & Baião, R. (2014). Compassion motivations: distinguishing submissive compassion from genuine compassion and its association with shame, submissive behavior, depression, anxiety and stress. *Journal of Social and Clinical Psychology*, *33*, 399–412.

Coughlan, K., Tata, P., & MacLeod, A. K. (2017). Personal goals, well-being and deliberate self-harm. *Cognitive Therapy & Research*, *41*, 434–443. https://doi.org/10.1007/s10608-016-9769-x

Cribb, G., Moulds, M. L., & Carter, S. (2006). Rumination and experiential avoidance in depression. *Behaviour Change*, *23*, 165–176. https://doi.org/10.1375/bech.23.3.165.

Dey, S., Newell, B. R., & Moulds, M. L. (2018). The relative effects of abstract versus concrete thinking on decision-making in depression. *Behaviour Research and Therapy*, *110*, 11–21.

Dickson, J. M., Moberly, N. J., & Kinderman, P. (2011). Depressed people are not less motivated by personal goals but are more pessimistic about attaining them. *Journal of Abnormal Psychology*, *120*, 975–980. https://doi.org/10.1037/a0023665

Dickson, J. M., Moberly, N. J., O'Dea, C., & Field, M. (2016). Goal fluency, pessimism and disengagement in depression. *PLoS One*, *11*, e0166259. https://doi.org/10.1371/journal.pone.0166259

Dunn, B. D., Widnall, E., Reed, N., Owens, C., Campbell, J., & Kuyken, K. (2019). Bringing light into darkness: a multiple baseline mixed methods case series evaluation of Augmented Depression Therapy (ADepT). *Behaviour Research and Therapy*, *120*, 103418. https://doi.org/10.1016/j.brat.2019.103418

Elrefaay, S. M., Wang, S., & Park, M. (2021). Non-pharmacological interventions for depression among survivors of adverse childhood experiences: a meta-analysis. *Journal of Behavioral and Cognitive Therapy*, *31*, 349–362. https://doi.org/10.1016/j.jbct.2021.05.001.

Frey, A.-L., & McCabe, C. (2020). Impaired social learning predicts reduced real-life motivation in individuals with depression: a computational fMRI study. *Journal of Affective Disorders*, *263*, 698–706.

Gaddy, M. A., & Ingram, R. E. (2014). A meta-analytic review of mood-congruent implicit memory in depressed mood. *Clinical Psychology Review*, *34*, 402–416.

Gilbert, P. (2001). Depression and stress: a biopsychosocial exploration of evolved functions and mechanisms. *Stress*, *4*, 121–135. doi: 10.3109/10253890109115726

Gilbert, P., & Allan, S. (1998). The role of defeat and entrapment (arrested flight) in depression: an exploration of an evolutionary view. *Psychological Medicine*, *28*, 585–598

Girard, J. M., Cohn, J. F., Mahoor, M. H., Mavadati, S. M., Hammal, Z., & Rosenwald, D. P. (2014). Nonverbal social withdrawal in depression: evidence from manual and automatic analyses. *Image and Vision Computing*, *32*, 641–647.

Gisquet-Verrier, P., & Riccio, D. C. (2018). Memory integration: an alternative to the consolidation/reconsolidation hypothesis. *Progress in Neurobiology*, *171*, 15–31. https://doi.org/10.1016/j.pneurobio.2018.10.002

Griffith, J. W., Claes, S., Hompes, T., . . . **& Hermans, D.** (2016). Effects of childhood abuse on overgeneral autobiographical memory in current major depressive disorder. *Cognitive Therapy and Research*, *40*, 774–782. https://doi.org/10.1007/s10608-016-9784-y

Hadley, S. A., & MacLeod, A. K. (2010). Conditional goal-setting, personal goals and hopelessness about the future. *Cognition and Emotion*, *24*, 1191–1198. doi: 10.1080/02699930903122521

Hallford, D. J., Rusanov, D., Yeow, J., & Barry, T. J. (2020). Overgeneral and specific autobiographical memory predict the course of depression: an updated meta-analysis. *Psychological Medicine*, *51*, 909–926. https://doi.org/10.31234/osf.io/gjwsb

Haskell, A. M., Britton, P. C., & Servatius, R. J. (2020). Toward an assessment of escape/avoidance coping in depression. *Behavioural Brain Research*, *381*, 112363.

Hawton, K., Casañas i Comabella, C., Haw, C., & Saunders, K. (2013). Risk factors for suicide in individuals with depression: a systematic review. *Journal of Affective Disorders*, *147*, 17–28.

Hershenberg, R., Mavandadi, S., Wright, E., & Thase, M. E. (2017). Anhedonia in the daily lives of depressed Veterans: a pilot report on experiential avoidance as a moderator of emotional reactivity. *Journal of Affective Disorders*, *208*, 414–417.

Hitchcock, C., Werner-Seidler, A., Blackwell, S. E., & Dalgleish, T. (2017). Autobiographical episodic memory-based training for the treatment of mood, anxiety and stress-related disorders: a systematic review and meta-analysis. *Clinical Psychology Review*, *52*, 92–107.

Houle, I., & Philippe, F. L. (2020). Is the negative always that bad? Or how emotion regulation and integration of negative memories can positively affect well-being. *Journal of Personality*, *88*, 965–977. https://doi.org/10.1111/jopy.12544

Jarrett, R. B., Kraft, D., Doyle, J., … **& Silver, P. C.** (2001). Preventing recurrent depression using cognitive therapy with and without a continuation phase. A randomized clinical trial. *Archives of General Psychiatry*, *58*, 381–388.

Jarrett, R. B., & Thase, M. E. (2010). Comparative efficacy and durability of continuation phase cognitive therapy for preventing recurrent depression: design of a double-blinded, fluoxetine- and pill placebo-controlled, randomized trial with 2-year follow-up. *Contemporary Clinical Trials*, *31*, 355–377.

Johnston, K. M., Powell, L. C., Anderson, I. M., Szabo, S., & Cline, S. (2019). The burden of treatment-resistant depression: a systematic review of the economic and quality of life literature. *Journal of Affective Disorders*, *242*, 195–210. https://www.sciencedirect.com/science/article/pii/S0165032718311200

Kanter, J., Puspitasari, A., Santos, M., & Nagy, G. (2012). Behavioural activation: history, evidence and promise. *British Journal of Psychiatry*, *200*, 361–363. doi: 10.1192/bjp.bp.111.103390

Katz, S. J., Conway, C. C., Hammen, C. L., Brennan, P. A., & Najman, J. M. (2011). Childhood social withdrawal, interpersonal impairment, and young adult depression: a mediational model. *Journal of Abnormal Child Psychology*, *39*, 1227. https://doi.org/10.1007/s10802-011-9537-z

Koster, E. H. W., De Lissnyder, E., Derakshan, N., & De Raedt, R. (2011). Understanding depressive rumination from a cognitive science perspective: the impaired disengagement hypothesis. *Clinical Psychology Review*, *31*, 138–145.

Koster, E. H. W., Hoorelbeke, K., Onraedt, T., Owens, M., & Derakshan, N. (2017). Cognitive control interventions for depression: a systematic review of findings from training studies. *Clinical Psychology Review*, *53*, 79–92.

Kumar, P., Goer, F., Murray, L., … **& Pizzagali, D. A.** (2018). Impaired reward prediction error encoding and striatal-midbrain connectivity in depression. *Neuropsychopharmacology*, *43*, 1581–1588. https://doi.org/10.1038/s41386-018-0032-x

Lam, D. H., Green, B., Power, M. J., & Checkley, S. (1996). Dependency, matching adversities, length of survival and relapse in major depression. *Journal of Affective Disorders*, *37*, 81–90.

Linehan, M. M., Goodstein, J. L., Nielsen, S. L., & Chiles, J. A. (1983). Reasons for staying alive when you are thinking of killing yourself: the reasons for living inventory. *Journal of Consulting and Clinical Psychology*, *51*, 276–286.

Liu, Y., Yu, X., Yang, B., … **& Yin, G.** (2017). Rumination mediates the relationship between overgeneral autobiographical memory and depression in patients with major depressive disorder. *BMC Psychiatry*, *17*, 103. https://doi.org/10.1186/s12888-017-1264-8

Liverant, G. I., Kamholz, B. W., Sloan, D. M., & Brown, T. A. (2011). Rumination in clinical depression: a type of emotional suppression? *Cognitive Therapy and Research*, *35*, 253–265. https://doi.org/10.1007/s10608-010-9304-4.

Lyubormirsky, S., & Nolen-Hoeksema, S. (1995). Effects of self-focused rumination on negative thinking and interpersonal problem-solving. *Journal of Personality and Social Psychology*, *69*, 176–190.

Maier, S. F., & Seligman, M. E. P. (2016). Learned helplessness at fifty: insights from neuroscience. *Psychological Review*, *123*, 349–367. https://doi.org/10.1037/rev0000033

Marroquín, B. M., Fontes, M., Scilletta, A., & Miranda, R. (2010). Ruminative subtypes and coping responses: active and passive pathways to depressive symptoms, *Cognition and Emotion*, *24*, 1446–1455. doi: 10.1080/02699930903510212

Martell, C. R., Dimidjian, S., & Herman-Dunn, R. (2010). *Behavioral Activation for Depression: A Clinician's Guide*. New York, USA: Guilford Press.

McAllister-Williams, R. H., Arango, C., Blier, P., Demyttenaere, K., Falkai, P., Gorwood, P., Hopwood, M., Javed, A., Kasper, S., Malhi, G. S., Soares, J. C., Vieta, E., Young, A. H., Papadopoulos, A., & Rush, A. J. (2020). The identification, assessment and management of difficult-to-treat depression: an international consensus statement. *Journal of Affective Disorders*, *267*, 264–282. https://doi.org/10.1016/j.jad.2020.02.023.

McGlinchey, J. B., & Dobson, K. S. (2003). Treatment integrity concerns in cognitive therapy for depression. *Journal of Cognitive Psychotherapy*, *17*, 299–318. https://doi.org/10.1891/jcop.17.4.299.52543

Meca, A., Rodil, J. C., Paulson, J. F., … **& Zamboanga, B. L.** (2019). Examining the directionality between identity development and depressive symptoms among recently immigrated Hispanic adolescents. *Journal of Youth and Adolescence*, *48*, 2114–2124. https://doi.org/10.1007/s10964-019-01086-z

Mihailova, S., & Jobson, L. (2018). Association between intrusive negative autobiographical memories and depression: a meta-analytic investigation. *Clinical Psychology & Psychotherapy*, *25*, 509–524

Mihailova, S., & Jobson, L. (2020) Cross-cultural exploration of the characteristics, content and themes of intrusive autobiographical memories recalled during depression. *Memory*, *28*, 701–711. doi: 10.1080/09658211.2020.1767143

Moulds, M. L., Kandris, E., Starr, S., & Wong, A. C. M. (2007). The relationship between rumination, avoidance and depression in a non-clinical sample. *Behaviour Research and Therapy*, *45*, 251–261.

Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology*, *100*, 569–582.

Ottenbreit, N. D., & Dobson, K. S. (2004). Avoidance and depression: the construction of the Cognitive-Behavioral Avoidance Scale. *Behaviour Research and Therapy*, *42*, 293–313.

Ottenbreit, N. D., Dobson, K. S., & Quigley, L. (2014). An examination of avoidance in major depression in comparison to social anxiety disorder. *Behaviour Research and Therapy*, *56*, 82–90.

Panagioti, M., Gooding, P. A., & Tarrier, N. (2012). Hopelessness, defeat, and entrapment in posttraumatic stress disorder: their association with suicidal behavior and severity of depression. *Journal of Nervous and Mental Disease*, *200*, 676–683. doi: 10.1097/NMD.0b013e3182613f91

Payne, A., Kralj, A., Young, J., & Meiser-Stedman, R. (2019). The prevalence of intrusive memories in adult depression: a meta-analysis. *Journal of Affective Disorders*, *253*, 193–202.

Quigley, L., Wen, A., & Dobson, K. S. (2017). Avoidance and depression vulnerability: an examination of avoidance in remitted and currently depressed individuals. *Behaviour Research and Therapy*, *97*, 183–188.

Renner, F., DeRubeis, R., Arntz, A., Peeters, F., Lobbestael, J., & Huibers, M. J. H. (2018). Exploring mechanisms of change in schema therapy for chronic depression. *Journal of Behavior Therapy and Experimental Psychiatry*, *58*, 97–105. https://doi.org/10.1016/j.jbtep.2017.10.002

Ribeiro, J. D., Huang, X., Fox, K. R., & Franklin, J. C. (2018). Depression and hopelessness as risk factors for suicide ideation, attempts and death: meta-analysis of longitudinal studies. *British Journal of Psychiatry*, *212*, 279–286. doi: https://doi.org/10.1192/bjp.2018.27

Rosebrock, L. E., Arditte Hall, K. A., Rando, A., Pineles, S. L., & Liverant, G. I. (2019). Rumination and its relationship with thought suppression in unipolar depression and comorbid PTSD. *Cognitive Therapy and Research*, *43*, 226–235. https://doi.org/10.1007/s10608-018-9935-4

Roskes, M., Elliot, A. J., & De Dreu, C. K. W. (2014). Why is avoidance motivation problematic, and what can be done about it? *Current Directions in Psychological Science*, *23*, 133–138.

Rush, A. J., Sackeim, H. A., Conway, C. R., Bunker, M. T., Hollon, S. D., Demyttenaere, K., Young, A. H., Aaronson, S. T., Dibué, M., Thase, M. E., & McAllister-Williams, R. H. (2022). Clinical research challenges posed by difficult-to-treat depression. *Psychological Medicine*, *52*, 419–432. doi: 10.1017/S0033291721004943

Schwartz, S. J., & Petrova, M. (2018). Fostering healthy identity development in adolescence. *Nature Human Behaviour*, *2*, 110–111. https://doi.org/10.1038/s41562-017-0283-2

Sherdell, L., Waugh, C. E., & Gotlib, I. H. (2012). Anticipatory pleasure predicts motivation for reward in major depression. *Journal of Abnormal Psychology*, *121*, 51–60.

Sherratt, K. A. L., & MacLeod, A. K. (2013). Underlying motivation in the approach and avoidance goals of depressed and non-depressed individuals. *Cognition and Emotion*, *27*, 1432–1440. https://doi.org/10.1080/02699931.2013.786680

Siddaway, A. P., Taylor, P. J., Wood, A. M., & Schulz, J. (2015). A meta-analysis of perceptions of defeat and entrapment in depression, anxiety problems, posttraumatic stress disorder, and suicidality. *Journal of Affective Disorders*, *184*, 149–159.

Sloman, L. (2000). How the involuntary defeat strategy relates to depression. In L. Sloman & P. Gilbert (eds), *Subordination and Defeat: An Evolutionary Approach to Mood Disorders and their Therapy* (pp. 47–67). Hove: Lawrence Erlbaum Associates Publishers.

Starr, S. & Moulds, M. (2006). The role of negative interpretations of intrusive memories in depression. *Journal of Affective Disorders*, *93*, 125–132.

Taylor, P. J., Gooding, P., Wood, A. M., & Tarrier, N. (2011). The role of defeat and entrapment in depression, anxiety and suicide. *Psychological Bulletin*, *137*, 391–420. https://doi.org/10.1037/a0022935

Teasdale, J. D., & Barnard, P. J. (1993). *Affect, Cognition and Change: Re-modelling Depressive Thought*. Hove: Lawrence Erlbaum Associates

Teasdale, J. D., Segal, Z. V., Williams, J. M., Ridgeway, V. A., Soulsby, J. M., & Lau, M. A. (2000). Prevention of relapse/recurrence in major depression by mindfulness-based cognitive therapy. *Journal of Consulting and Clinical Psychology*, *68*, 615–623

Treadway, M. T., Bossaller, N. A., Shelton, R. C., & Zald, D. H. (2012). Effort-based decision-making in major depressive disorder: a translational model of motivational anhedonia. *Journal of Abnormal Psychology*, *121*, 553–558.

Trew, J. (2011). Exploring the roles of approach and avoidance in depression: an integrative model. *Clinical Psychology Review*, *31*, 1156–1168.

Waltz, J., Addis, M. E., Koerner, K., & Jacobson, N. S. (1993). Testing the integrity of a psychotherapy protocol: assessment of adherence and competence. *Journal of Consulting and Clinical Psychology*, *61*, 620–630. doi: 10.1037/0022-006X.61.4.62

Watkins, E., & Teasdale, J. D. (2001). Rumination and overgeneral memory in depression: effects of self-focus and analytic thinking. *Journal of Abnormal Psychology*, *110*, 353–357.

Watkins, E. R., & Moberly, N. J. (2009). Concreteness training reduces dysphoria: a pilot proof-of-principle study. *Behaviour Research and Therapy*, *47*, 48–53.

Watkins, E. R., Mullan, E., Wingrove, J., Rimes, K., Steiner, H., Bathurst, N., Eastman, R., & Scott, J. (2011). Rumination-focused cognitive-behavioural therapy for residual depression: phase II randomised controlled trial. *British Journal of Psychiatry*, *199*, 317–322.

Watkins, E. R., & Roberts, H. (2020). Reflecting on rumination: consequences, causes, mechanisms and treatment of rumination. *Behaviour Research and Therapy*, *127*, 103573.

Watson, D., Wiese, D., Vaidya, J., & Tellegen, A. (1999). The two general activation systems of affect: structural findings, evolutionary considerations, and psychobiological evidence. *Journal of Personality and Social Psychology*, *76*, 820.

Weck, F., Bohn, C., Ginzburg, D. M., & Ulrich, S. (2011a). Assessment of adherence and competence in cognitive therapy: comparing session segments with entire sessions. *Psychotherapy Research*, *21*, 658–669. doi: 10.1080/10503307.2011.602751

Weck, F., Hilling, C., Schermelleh-Engel, K., Rudari, V., & Stangier, U. (2011b). Reliability of adherence and competence assessment in cognitive behavioral therapy: influence of clinical experience. *Journal of Nervous and Mental Disease*, *199*, 276–279. doi: 10.1097/NMD.0b013e3182124617

Wisco, B. E., & Nolen-Hoeksema, S. (2009). The interaction of mood and rumination in depression: effects on mood maintenance and mood-congruent autobiographical memory. *Journal of Rational-Emotive Cognitive-Behaviour Therapy*, *27*, 144–159. https://doi.org/10.1007/s10942-009-0096-y

Wojnarowski, C., Firth, N., Finegan, M., & Delgadillo, J. (2019). Predictors of depression relapse and recurrence after cognitive behavioural therapy: a systematic review and meta-analysis. *Behavioural and Cognitive Psychotherapy*, *47*, 514–529. https://doi.org/10.1017/S1352465819000080

Wu, H., Mata, J., Furman, D. J., Whitmer, A. J., Gotlib, I. H., & Thompson, R. J. (2017). Anticipatory and consummatory pleasure and displeasure in major depressive disorder: an experience sampling study. *Journal of Abnormal Psychology*, *126*, 149–159. https://doi.org/10.1037/abn0000244

Zettle, R. D. (2007). *ACT for Depression: A Clinician's Guide to Using Acceptance and Commitment Therapy in Treating Depression*. New Harbinger Publications.

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