CHAPTER 17

Working with Emotion and Emotion Regulation in Behavioral Activation Treatment for Depressed Mood

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In this chapter, we consider the core conceptual and technical aspects of behavioral activation through the lens of emotion regulation. We begin with an overview of the empirical support for behavioral activation and then describe its origins in behavioral analysis and cognitive-behavioral therapy. Next, we discuss the role of emotion in behavioral activation. In particular, we focus on how assessment strategies in behavioral activation facilitate clients' increased awareness of emotion–behavior relationships. Finally, we apply the core treatment components of behavioral activation to problems in emotion regulation using the framework set out by Gross and colleagues (Gross, 1998b, 1999; Gross & Thompson, 2007).

It should be noted that although behavioral activation has been developed primarily as treatment for major depressive disorder (MDD), the treatment techniques and their relationship to emotion regulation processes can be linked conceptually to other disorders. Depressed mood is a common feature of social anxiety disorder, posttraumatic stress disorder (PTSD), generalized anxiety disorder, and dysthymia, as indicated by high comorbidity rates, high correlations among symptoms measures, and loadings on a shared, higher order factor (Brown, Campbell, Lehman, Grisham, & Mancill, 2001; Cox, Clara, & Enns, 2002; Krueger, 1999; Sellbom, Ben-Porath, & Bagby, 2008; Watson, 2005). Behavioral activation, although not a treatment for all aspects of these disorders, may be an important complement to standard treatments by providing a set of skills for managing depressed mood. For example, the skills learned during behavioral acti-

vation (e.g., countering avoidance) may reinforce the skills necessary to target avoidance and emotional suppression present in other anxiety and mood disorders. Accordingly, behavioral activation has been applied as a stand-alone treatment for comorbid anxiety and depression, PTSD, eating disorders, smoking cessation, substance abuse, comorbid depression and obesity, and the prevention of mental health disorders in college students (Anderson & Simmons, 2008; Bercaw, 2008; Daughters et al., 2008; Hopko, Lejuez, & Hopko, 2004; Jakupcak et al., 2006; Pagoto, Bodenlos, Schneider, Olendzki, Spates, & Ma, 2009; Schneider et al., 2008). In the following section, we describe behavioral activation's roots as a treatment for depression, and later we discuss how behavioral activation can treat depressed mood occurring across different disorders.

The Development of Behavioral Activation

In the late 1960s and early 1970s, the predominant understanding of depression was based on psychodynamic theory, which viewed depression as a type of anger turned inward against the self. Dollard and Miller (1950) had explained many of the psychodynamic notions in behavioral terms, and Wolpe (1958) had developed his psychotherapy by reciprocal inhibition, but these works did not concern depression directly. Wolpe had specified avoidance behavior as characteristic of many neurotic disorders. C. B. Ferster (1973) wrote a behavioral analysis of depression, and around the same time Peter Lewinsohn and colleagues were explaining depression as the result of low levels of response-contingent positive reinforcement or from response-contingent punishment (Lewinsohn, Biglan, & Zeiss, 1976; Lewinsohn & Libet, 1972).

Rather than considering depression to be characterized by internal conflicts as the psychodynamic theorists did, these behavioral researchers considered the impact of person–environment interactions. According to both Ferster and Lewinsohn, behaviors that are antidepressant in nature are not positively reinforced, and this contributes to the development and maintenance of depression. Lewinsohn and colleagues paid particular attention to the limited number of pleasant events in the lives of depressed clients (Lewinsohn & Libet, 1972). Likewise, Ferster (1973) noted that it was actually the absence of behavior, or the inertia, frequently seen in depressed clients that needed to be the target of treatment. These two clinical researchers were the first to suggest that activating depressed clients, increasing engagement in pleasant activities, and combating avoidance behaviors were necessary and sufficient components of treatment.

During this same period, Beck, Rush, Shaw, and Emery (1979) proposed a comprehensive cognitive theory of depression. Rather than seeing negative cognition as merely symptomatic of depression, Beck considered the negative thinking of people with depression as the cause. As Beck's

cognitive therapy for depression developed, it included both behavioral activation scheduling as well as methods for restructuring clients' negative beliefs and attitudes (Beck et al., 1979). Beck and colleagues also recognized that it was important to activate people with severe depression, and that this was often the first intervention in a comprehensive cognitive therapy. The behavioral and the cognitive treatments continued to be practiced throughout the next two decades, but cognitive therapy became the more popular approach.

In the early 1990s, Neil Jacobson and colleagues (1996) proposed that it was activation that accounted for positive outcomes in cognitive therapy for depression. They conducted a component analysis of cognitive therapy and found that behavioral activation alone was as efficacious as the full cognitive therapy protocol. The study was limited by the lack of a no-treatment control group, and subsequently a large-scale, randomized controlled trial was conducted comparing behavioral activation, cognitive therapy, paroxetine, and a pill placebo control group (Dimidjian et al., 2006). During the course of this project, behavioral activation was conducted as a stand-alone treatment (Addis & Martell, 2004; Martell, Addis, & Jacobson, 2001), and the results of this trial suggested that behavioral activation was superior to cognitive therapy and as efficacious as antidepressant medication in the acute treatment of MDD (Dimidjian et al., 2006).

A Behavioral Conceptualization of Depression

Consistent with the earlier formulations of Ferster and Lewinsohn, current approaches to behavioral activation consider person–environment interactions to be paramount in the development and maintenance of depression (Martell et al., 2001). In many cases, negative life events trigger depression. In other cases, lifelong stress, coupled with biological–hereditary vulnerabilities, can lead to the development of depression. As Lewinsohn noted, this leads to a decrease in response-contingent positive reinforcement (Lewinsohn, 2001). For vulnerable individuals, a natural reaction to decreases in response-contingent positive reinforcement is to develop the affective symptoms of depression. It, therefore, makes sense that someone feeling blue, lethargic, and anhedonic and losing interest in activities would begin to decrease his or her activities. However, responding to negative affect through inactivity and withdrawal only serves to worsen the client's mood and keep him or her from opportunities for pleasurable experiences that may actually increase response-contingent positive reinforcement. The client's inertia and avoidance behaviors thus become secondary problems in themselves. These are the targets of behavioral activation.

Behavioral activation targets inertia and avoidance in order to help clients engage in life to increase chances that active, antidepressant behavior will be positively reinforced and increased. Behavioral repertoires

characterized by escape and avoidance are often maintained via negative reinforcement. A person with depression often feels relief from emotional distress by withdrawing from the world, even though this increases apathy. As the behavioral repertoire of the client narrows, there is less and less that the client feels motivated to do. Without environmental reinforcement for activating and engaging, the client's motivation continues to decline, and there is a vicious cycle of depression leading to inactivity and then to more depression.

In the following sections, we present the interventions comprising behavioral activation that have been used primarily to target decreases in response-contingent positive reinforcement and increases in avoidance. These behavioral processes not only affect the onset and maintenance of depression but also depressed mood more generally. In our discussion of the treatment components, we attend to how behavioral activation can also be conceptualized as a treatment for problems in emotion regulation that contribute to and exacerbate depressed mood. For conceptual clarity, we organize the interventions into six core components: assessment, activation, countering avoidance, attention to experience, and acceptance. We begin by examining how behavioral activation approaches emotions theoretically and in treatment. We also draw connections between current theories of emotion that are consistent with the metaphor of "emotions as data" underlying assessment strategies in behavioral activation. Finally, we conceptualize how the remaining treatment components can remediate deficits in emotion regulation identified by Gross and colleagues (Gross, 1998a, 1999; Gross & Thompson, 2007).

The Word *Emotion* in Behavioral Activation

Historically, behaviorists tried to avoid conceptualizing emotion as an internal state independent of behavior. One might, therefore, expect that a treatment focused on changing behavior would not have much use for the concept of emotion. However, more recent behavioral and philosophical approaches to language emphasize how the meaning of a word is a function of the context in which it is used (Gifford & Hayes, 1999; Rorty, 1982). In behavioral activation, it is possible to use the concept of emotion clinically in the service of the interventions without committing to a particular ontological view of emotion at a scientific or theoretical level.

There are three ways in which the concept of emotion is most commonly used in behavioral activation. First, emotion is not seen as an internal state but as a repertoire of activity; "emotion" becomes "emoting." For example, sadness can be conceptualized as a set of behaviors (e.g., crying, ruminating about unresolved conflicts, withdrawing from social situations) that one engages in while verbally reporting sadness. This conceptualization of emotion avoids mentalistic explanations that locate emo-

tions "inside" the person as an entity of some sort. From this perspective, emotions and the ways one regulates them are one and the same. This is helpful when considering the function of emoting. By conceptualizing the setting, behavior, and consequences of emoting as acts-in-context, therapists can often ascertain the function of clients' emoting.

Another approach to emotion is viewing "emotions as data." This use of the word highlights how emotions are data or information about person–environment relationships. Emotions can tell people whether positive reinforcement or aversive conditioning is maintaining their actions. This use of the word is consistent with the frequent focus on assessment of behavior–environment–mood relationships in behavioral activation.

Emotions can also be thought of as discriminative stimuli. In this way, the experience of negative and positive emotion can cue different behavioral responses. Sadness may be a cue for seeking social support or for social withdrawal depending on a person's learning history. This conceptualization is consistent with models of emotion regulation that view emotions as stimuli themselves that occasion different types of responses. Each of these three metaphorical conceptualizations of emotion has potential clinical utility depending on the particular interventions therapists use with different clients.

We distinguish emotions from moods, where moods are a more general affective experience extending across contexts and time; perhaps several hours, days, weeks, or months (Gross, 1998b). As a goal of treatment, behavioral activation targets depressed mood and not isolated emotional episodes. At the same time, identifying specific emotional episodes can be helpful for clients in learning the association between what they do and how they feel.

Emotions as Data in Assessment

The concept of core affect is conceptually related to the metaphor of emotions as data used in the assessment component of behavioral activation (Russell & Barrett, 1999). Barrett (2006) theorized that core affect underlies all emotional experience. Core affect is defined as "the constant stream of transient alterations in an organism's neurophysiological state that represent its immediate relationship to the flow of changing events" (Barrett, 2006, p. 21). Core affect consists of two components: valence (positive or negative) and arousal (activation/deactivation). It can be thought of as a "neurophysiological barometer" capturing person–environment relationships that measures how positive or aversive the current context is (p. 21). Barrett further theorizes that core affect is a primarily biological process that is present since infancy.

In behavioral activation, assessment strategies direct the clients' attention to their emotional barometer. Clients are taught that their emotions

are data that suggest how the current context is affecting them. In particular, the therapist and the client examine how the clients' activities influence their emotional barometer, raising and lowering positive and negative affect. Data gathered from assessment are then used to guide adaptive behavior.

The Process of Assessment

In treatment, assessment is carried out using self-monitoring, symptom inventories, and functional analyses. All of the therapeutic work in behavioral activation is informed by assessment data, and the other treatment components cannot be used effectively without continuous, accurate assessment information. Except for assessing mood, surveys are less frequently used in the assessment process than in some other treatment approaches because it can be difficult to discern the function of a behavior from a survey. Instead, more ideographic methods like self-monitoring and functional analyses are used.

Martell and colleagues (2001) delineate several specific functions for activity monitoring. Early in treatment, activities and mood are tracked so the client can observe how activity and emotion are usually synchronized. Therapists rely on these data when teaching clients how to analyze the function of their own behaviors. It is important for the clinician to assist the client in seeing how emotion fluctuates over a normal day and to identify which activities enhance mood. Mood and activity data are also important information for assessing how restricted the client's behavioral repertoires and mood are.

After the first few sessions, self-monitoring can be used to evaluate how new activities influence mood. In addition, data from self-monitoring can measure progress toward life goals and reveal whether new activities are positively reinforced. Later in treatment, clients are introduced to activity monitoring as a first step during relapse. In this case, self-monitoring can be helpful in diagnosing problematic behavioral patterns that may be exacerbating mood and contributing to relapse. For example, a client previously treated with behavioral activation was experiencing increased stress at work and problems at home. When these events occurred, she tended to stop listening to enjoyable music, started watching more television, and withdrew from friends. Self-monitoring in this situation helped her notice how these activities were negatively affecting her mood, and she adjusted her activities to prevent a relapse.

Symptom inventories such as the Beck Depression Inventory–II (BDI-II) and Beck Anxiety Inventory (BAI) are important metrics for measuring anxiety and depressed mood over a 1- to 2-week period (Beck, Epstein, Brown, & Steer, 1988; Beck, Steer, & Garbin, 1996). Data from these mea-

sures indicate how current activities are influencing mood over time. In some cases, data from symptom inventories can reveal interesting discrepancies. For example, some clients will be very active yet find their BDI-II or BAI continuing to increase. These findings may indicate that their active lifestyle is functioning to avoid other aversive feelings and situations rather than to contact potential positive reinforcers. Other clients may be active in activities that, from a topographical perspective, should be mood enhancing but are not functioning this way. This is informative for a different reason, because it may be that current activities are not consistent with life goals. Data from symptom inventories can be a big-picture barometer of person–environment relationships.

The final component of assessment is conducting a functional analysis. Functional analysis is a hallmark of behavioral activation that teaches clients how to identify factors maintaining their mood disturbance. This requires no new data collection but instead involves a careful analysis and interpretation of existing data. Many clients are unaware of the antecedents and consequences of their behaviors. For example, they may sit in front of the television for most of the evening without ever realizing that this has deleterious effects on their mood. By enhancing awareness of the function of different mood-regulating behaviors, clients can then be more deliberate in how they want to approach activities affecting their mood.

The therapist directs clients in using self-monitoring data to assess how specific behaviors influence mood. A functional analysis approaches this task by investigating the antecedents and consequences of a behavior. A clinician may ask several questions, including "What happened before you did this?", "What was going on and how were you feeling?", "What happened after you took that action?", "How were you feeling during and after?" By answering these types of questions and sifting through their assessment data, the client and therapist can discover how different activities are maintaining depressed mood.

Emotion Regulation in Behavioral Activation

Different uses of the word "emotion" in behavioral activation lead to different conceptualizations of the relationship between emotion and emotion regulation. Following from the perspective of emotions as behavior, emotion regulation and emotion are not conceptually distinct. Emoting behavior is a response to environmental stimuli and entails what is traditionally called *emotion* and *emotion regulation.* For instance, thinking about an anxiety-provoking situation and even reappraising the potential threat of the situation can both be parts of "emoting anxiety" rather than a consequence or antecedent of some internal state called *anxiety.* This definition is consistent with assumptions of behavioral theory that locate causal

elements in the environment and not in internal entities or states. Consequently, interventions targeting emoting behavior are directed at modifying the environment and not at modifying internal states.

For pragmatic reasons, it can also be helpful to parse emotion and emotion regulation. By viewing emotions as a psychophysiological barometer and simultaneously as a discriminative stimulus, emotion and emotion regulation become separate processes. One advantage of this approach is its ability to account for the role of private events like psychophysiological arousal and activation in behavior. This approach also allows emotion regulation to be broken down further into the antecedent-focused and response-focused strategies, consistent with those proposed by Gross (1998b).

Gross and Thompson (2007) define emotion regulation as a process comprising different strategies used by individuals to alter the incidence and intensity of an emotion. In this model, emotions emerge along a continuum, including situation, attention, appraisal, and response (Gross, 1998b; Gross & Thompson, 2007). Emotion regulation strategies are on a parallel continuum and are classified according to their location on the emotion generation continuum (Gross, 1998b). Emotion regulation strategies consist of situation selection, situation modification, attentional deployment, cognitive change, and response modulation. Along the emotion regulation continuum are several points of potential intervention for behavioral activation. In the following sections, we describe each of the emotion regulation strategies, identify overlapping concepts shared by emotion regulation and behavioral theory, and detail the associated core treatment components.

Situation Selection

Gross (1998b) contends that altering situations can be a potent form of emotion regulation. Situations are assumed to set the stage for emotions, and some situations are associated with more desirable emotions while other situations bring about less desirable emotions. Because of this, people approach and avoid situations based on their history of experiences with situations and emotions. Gross argues that the cost and benefits of situation selection may differ over time. In some cases, selecting a situation can bring about a desirable change in emotions in the short term yet be maladaptive over time.

This form of maladaptive situation selection identified by Gross can be thought of as a negative reinforcement contingency. Behavioral theory explains that through the process of negative reinforcement, avoidant behavior tends to relieve negative affect momentarily. Such behavior then becomes more likely in the future. A person with depressed mood may thus begin to stay at home to avoid a pile of work in the office and feelings

of guilt and incompetence. In the short term, the feelings of guilt and incompetence will likely subside. Over time, though, avoidance can lead to a narrowed repertoire, reduced contact with positive experiences, and increased negative consequences, as in the case of avoiding work, which may lead to job loss, social isolation, and more depressed mood. Social withdrawal can also be conceptualized as another form of maladaptive situation selection that functions to regulate sadness and to avoid interpersonal rejection in the short term (Campbell-Sills & Barlow, 2007). As these examples suggest, it can be more adaptive in the long term to approach some aversive situations and feelings rather than to avoid them.

Behavioral activation connects participants to situations that produce more adaptive behaviors that will eventually be positively reinforced by the environment. Skinner (1971) noted that behavior maintained by positive reinforcers rather than negative reinforcers is associated with people feeling free and in control. The opposite is true for negative reinforcement and punishment, which are associated with feeling controlled and helpless. Thus, it is more desirable for situation selection to occur by a history of receiving reward, feeling pleasure, and reaching meaningful goals than by a vicious cycle of avoiding punishment and negative affect.

Clinically, this theory suggests that the clinician should direct effort toward altering the client's context to give rise to adaptive situation selection by means of positive reinforcement. This can be accomplished by placing the client in contact with positive reinforcing contexts or by the therapist verbally reinforcing the client until the client habituates to the situation or until natural reinforcers begin to maintain the behavior (e.g., accomplishing work in the office, feeling mastery, and receiving praise from supervisors).

Therapists can foster adaptive situation selection by implementing three interventions in behavioral activation. First, the assessment process for clients elucidates how situation and emotion are inextricably linked. General trends in emotion can be observed as well as times of the day and problematic situations associated with negative affect. On the basis this information, therapists and clients will isolate problem areas for closer examination. It is possible that assessment alone may even be beneficial for clients, because the ability to differentiate emotions is associated with better negative emotion regulation (Barrett, Gross, Christensen & Benvenuto, 2001).

Second, behavioral activation teaches clients how to analyze the function of their situation selection and identify avoidant behavior. TRAP is a useful acronym that therapists use to summarize the three steps leading to avoidance. **T**riggers are internal or external events of emotional significance such as losing a job, a colleague's interpersonal slight, or thinking of past failures. **R**esponses are emotional experiences following a triggering event. The specific emotional response (e.g., feeling anxious, sad, lonely) depends on the type of trigger. **A**voidance **P**atterns are functionally related

sets of behaviors that alleviate an aversive emotional experience in the short term while often maintaining the aversive emotional experience in the long term. Using the TRAP acronym, therapist assist clients in identifying avoidance patterns and in recognizing the short-term and long-term consequences of the situation selection.

Therapists pay particular attention to how a client's activities influence different types of consequences. It is important to note that emotional consequences and goal-oriented consequences of a behavior (e.g., mending a broken relationship, finding employment) may not always agree. For example, when a client avoids a difficult situation, he or she may feel some positive affect while, at the same time, it further displaces the client from his or her goals. In contrast, engaging in an uncomfortable situation may do the inverse, increasing short-term negative affect while facilitating long-term goal achievement. In cases similar to the latter situation, the therapist may need to revisit the treatment rationale with the client in order to motivate him or her to select situations previously avoided. The treatment rationale can accomplish this by laying out how contingencies maintain the client's behavior, by providing an alternate pathway for overcoming the immediate punishment of the aversive situation, and by setting up more distal rewards.

The third strategy for enhancing adaptive situation selection is activity scheduling. Using the findings from assessment, clients will begin scheduling activities into their week and monitoring the emotional and goal consequences of their situation selections. The clients will then begin to adjust their routine to include activities that function to bring them closer to their goals and, in the long term, to reduce negative affect and increase positive affect.

Situation Modification and Attentional Deployment

The second point on the continuum of emotion regulation is situation modification. Although situations may set the stage for emotions, situations themselves are mutable and thus are the associated emotions. Gross (1998b) posits that people can adaptively or maladaptively modify their environment with diverging effects on their emotions.

For instance, Campbell-Sills and Barlow (2007) construe safety signals in anxiety-provoking situations, such as the use of items like medication, cell phones, and food, as maladaptive situation modification when such safety signals function to dampen anxiety (see also Corcoran, Farb, Anderson, & Segal, Chapter 14, this volume). Safety signals are argued to be maladaptive in the long term because they interfere with habituation and maintain fear of the situation. In cases more indicative of depression, a person may be in an antidepressive context and yet not actually be

engaging in the situation and reaping the benefits of the potentially mood-enhancing situation.

Gross (1998b) differentiates situation modification from attentional deployment, referring to the latter as attempts at modifying internal experiences and to the former as direct attempts to modify the external environment. This discrepancy arises from the assumption that mechanisms causing behavior are internal processes such as attention and cognition. From a behavioral perspective, there is little difference between attentional deployment and situation modification. Both attentional deployment and situation modification characterize how actions in a situation influence the generation of emotion.

An implicit consensus has emerged across theories of emotion and psychopathology concluding that rumination consists of multiple maladaptive processes leading to considerable deleterious mood and anxiety sequelae. From a behavioral perspective, rumination is self-focused attention that takes the form of recalling past failures and memories or of worry related to anticipated problems and events. The lack of effectiveness and progress toward goals differentiates rumination from problem solving (Lyubomirsky & Nolen-Hoeksema, 1995; Watkins & Baracaia, 2002). Nolen-Hoeskama and colleagues built a program of psychopathology research investigating rumination (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). Thus far, a large body of correlational and experimental work links rumination to increased risk for negative affect, depressed mood, depression onset, relapse following positive treatment outcomes, and poor treatment response (Lyubomirsky, Caldwell, & Nolen-Hoeksema, 1998; Moberly & Watkins, 2008; Nolen-Hoeksema & Morrow, 1993). As with avoidance, rumination can be relatively insidious and intractable. Rumination can also negate the positively reinforcing function of activities. In interpersonal interactions, rumination interrupts active social exchanges, and in other activities, it spawns negative feelings that may overshadow a positively reinforcing context. These examples illustrate how rumination occurs in context, not only in a person's mind.

As a consequence of viewing behaviors in context, the interventions for maladaptive situation modification and attentional deployment differ very little. Alternative adaptive behavioral responses are fostered to replace prior behaviors that intensified negative affect and reduced positive affect. Assessment data are used to identify problematic situations. In session, the therapist and the client can analyze the function of the client's behaviors and generate more adaptive responses to situations. These new responses can be included in the activity schedule if the situation occurs periodically or can be role-played if the situation is intermittent in nature.

Behavioral activation also draws on more basic behavioral interventions that modify situations to produce the greatest likelihood of success. When an adaptive action is initially too complex and difficult for a client,

the therapist can disassemble the activity into manageable tasks. Graded task assignments are therapeutic techniques that teach clients how to achieve complex and formidable goals one step at a time. Similar to exposure hierarchies used in anxiety treatments, long-term goals are operationalized into concrete activities that help achieve the larger the goal. These activities are then rated for difficulty and organized hierarchically. As treatment progresses, activities are selected with increasing difficulty. Recurring activities can be included each week as an activity goal until the client has achieved the goal several weeks in a row and appears to have successfully integrated the behavior into his or her repertoire. More difficult or intimidating tasks may require verbal rehearsals or role-playing. A therapist may ask a client to imagine the activity, including the steps involved and potential barriers to completing the task. More challenging tasks, or ones that involve interpersonal interactions, may necessitate role-playing the situation. Here the therapist can reinforce effective interpersonal behavior, give feedback to a client about less effective behavior, and offer opportunities for the client to try different approaches.

Attention to Experience

Attention to experience is the second core treatment component in behavioral activation. This set of interventions interrupts maladaptive attentional deployment and facilitates adaptive situation modification. Often ruminative thinking patterns serve an escape or avoidance function that can exacerbate situations and mood. Attention to experience exercises counter passive rumination by teaching clients how to fully engage in activities. Such exercises are akin to mindfulness techniques used in a number of contemporary behavioral therapies. Mindfulness originated in Eastern traditions and was more recently incorporated into several different psychotherapy approaches (see Hayes, Follette, & Linehan, 2004). Attention to experience provides a strategy for clients to engage in lived experience rather than go through the motions while ruminating about distress (Martell et al., 2001).

Before attention to experience work can begin, a functional analysis is usually carried out to identify contexts where rumination occurs and what its consequences are. Once clients and their therapist have come to a consensus about the occurrence and consequences of rumination, a simple rule is introduced to aid in identifying rumination when it is occurring. The rule states "If you find yourself thinking about a particular topic over and over, continue do what you are doing and see if you have made progress in 2 minutes" (Addis & Martell, 2004). If clients do this and answer "No," they are encouraged to tell themselves, "You're ruminating." For some situations, identification alone is sufficient to redirect attention to the present moment. For other situations, the cycle of ruminative thoughts

can be dislodged by engaging in the current context. There are several different ways to do this. For interpersonal contexts, engagement can involve attending to what the other person is saying, wearing, and doing. In other contexts, clients are taught to attend to the physical environment, including sights, sounds, smells, tastes and so on. It is usually necessary to assign a specific activity as homework and discuss different behaviors for the clients to do to engage in the present moment.

Cognitive Change

The fourth point on the continuum of emotion regulation is cognitive change. Considerable empirical and theoretical work has investigated the role of appraisal in emotion regulation (Gross & Thompson, 2007; John & Gross, 2004). The assumption underlying this research is that situations do not directly influence emotion; instead, cognitive processes mediate the pathway between situation and emotion (Gross, 1998b). Researchers cite empirical work indicating that positively reappraising negative situations is associated with lower levels of negative affect (Gross, 1998a). However, it could also be the case that positive reappraisal is an outcome of emotion regulation. In other words, cognitive appraisals may be a parallel process to behavioral and emotional responses to a situation but not the cause of the behavior or emotional response.

Consistent with this explanation, treatment outcome research has questioned the necessity of targeting cognitive processes in treatments for depression and anxiety (Dimidjian et al., 2006; Jacobson et al., 1996). As discussed earlier, Jacobson and colleagues (1996) dismantled cognitive-behavior therapy into cognitive and behavioral components. The treatments including cognitive components were found to be no more effective than behavioral activation, which proscribed interventions targeting the content of people's cognitions. Of particular interest to this discussion was the finding that attributional style and explanatory flexibility, both hypothesized cognitive mediators, were affected by behavioral activation (Fresco, Schumm, & Dobson, 2007; Jacobson et al., 1996). Specifically, posttreatment scores indicated that participants viewed the causes to their problems less pessimistically and as more context specific.

Consequently, behavioral activation does not intervene at the point of cognitive appraisal to alter the content of thinking. Rather, a therapist may decide to focus on the process and function of a client's thinking (e.g., focusing on rumination as discussed previously). Thinking behavior like worry and rumination can serve people very poorly if it prevents them from engaging in situations and progressing toward their goals. Behavioral activation simply modifies maladaptive thinking behavior rather than maladaptive appraisals of situations. In general, the question as to the efficacy of these behavioral interventions in promoting adaptive emotion

regulation, particularly in comparison to cognitive interventions, can best be answered empirically.

Response Modulation

Until now, we have discussed regulatory processes occurring prior to emotion generation. In contrast, response modulation refers to processes that regulate behavioral, physiological, and experiential components of emotion after an emotion is generated (Gross & Thompson, 2007). Research indicates that how a person responds to an emotion produces different emotional consequences. For instance, it has widely been demonstrated that expressing an emotion is associated with a small increase in the self-reported experience of an emotion (Izard, 1990; Matsumoto, 1987).

Researchers have also investigated the effects of suppressing emotions. Deliberate attempts to mask emotional experience have been shown to reduce positive affect, to have mixed effects on negative affect, and to increase sympathetic activation (Campbell-Sills, Barlow, Brown, & Hofmann, 2006b; Gross, 1998a; Gross & Levenson, 1997). Additionally, both mood and anxiety disorders are associated with increased use of emotional suppression (Campbell-Sills, Barlow, Brown, & Hofmann, 2006a). Kring and Werner (2004) posit that deficits in response modulation maintain negative affect and may function as a diathesis for depression.

A response to an emotion not only modulates the current emotional experience but also shapes future emotional experiences (Gross & Thompson, 2007). Behavioral conceptualizations of response modulation focus on the interrelatedness and cyclical nature of response modulation and emotional experience. For example, avoiding an emotional experience not only reinforces the avoidant behavior in the future but also increases the likelihood that the emotion will occur again in the presence of the stimulus. With regard to depression and anxiety, it is plausible that pathological levels of avoidant behavior and emotional suppression are essentially the same process at different levels of analysis.

The behavioral approaches to emotion discussed earlier can be applied to explain the interconnectedness of response modulation and emotion. An aversive situation, or an aversive stimulus more globally, can set in motion a constellation of experiential, physiological, and behavioral responses that function to mitigate the aversive stimulus. This process is labeled "suppression" when emotions are monitored and "avoidance" when behaviors are monitored. Consequently, adaptive changes made in emotional responses will not only benefit current emotional experiences but also the next cycle of emotion and emotion regulation.

Three core components of behavioral activation target the maladaptive use of response modulation. First, behavioral activation coaches clients to increase engagement in their lives through activation strategies. Sec-

ond, interventions aimed at countering avoidance are included to reduce negative affect and consist of generating alternative forms of coping with negative emotions. Third, behavioral activation fosters acceptance of emotions to facilitate goal-directed action.

Activation

It has been suggested that activation alone is the active ingredient of behavioral activation (Lejuez, Hopko, LePage, Hopko, & McNeil, 2001). Low energy, low levels of positive affect, and diminished response to positive experiences are primary symptoms and perpetuators of depression (Kring & Werner, 2004; Sloan, Strauss, & Wisner, 2001). Behavioral activation teaches clients how to respond differently to depressed mood and how to make progress in their life in spite of feeling lethargic and helpless. From an emotion regulation perspective, activation strategies function to generate alternative, active responses to depressed mood to replace maladaptive, sedentary responses that exacerbate mood. These active responses interrupt depressed mood by introducing experiences that increase positive affect.

Obviously, activation is a tall task to ask of a person who is feeling down and low in energy. The role of a therapist in behavioral activation is to coach a client through the process of reengaging in their life. Good coaching involves anticipating obstacles, enhancing motivation, and providing helpful feedback and advice. Activation is not an end in itself, nor are pleasurable activities. Instead, activation is a means to living a more fulfilling life, guided by one's goals and not by deprivation. Activation, in its ideal form, is also not motivated by prizes and rewards or avoidance of other more aversive situations. Therapists assist clients in selecting activities that potentially could be positively reinforced by the environment. Self-monitoring data are good indicators of what activities have a history of being mood enhancing and the potential to be positively reinforced.

Behavioral activation uses several therapeutic techniques to motivate the client and increase the likelihood of sustained activation. During each session, the therapist and client collaborate in selecting and scheduling activities for the client to complete between sessions. The therapist usually frames these activity goals as a means both to reengage in life and to empirically establish which activities enhance mood. Akin to acceptance and commitment therapy (Hayes, Strosahl, & Wilson, 1999), the client makes a commitment to complete the activity. Depending on the level of difficulty and prior successes, the client can commit by simply listing a day and time to complete the activity on the activity-monitoring sheet or by making a verhal commitment to the therapist, friends, or family members. To increase motivation, it is essential that the therapist present scheduled activities as commitments. In a meta-analysis, activity scheduling alone

evidenced a large effect on depression symptoms and did not differ significantly from cognitive therapy (Cuijpers, van Straten, & Warmerdam, 2007).

When sending a client off with activity experiments, several skills can be useful in combating obstacles like feeling overwhelmed, low energy, depressed mood, and "good intentions but poor follow-through." Graded task assignments discussed earlier can be helpful not only in modifying responses to situations but also in increasing active responses to depressed mood. A hierarchy can be created with activities differing in the amount of activation required to complete them, and each week the client is assigned a new, more difficult task. In some cases, feeling down and lethargic can preclude a client from even starting the first task on the hierarchy. "Doing the next best thing" is a rule taught in behavioral activation, stating "When you feel like you cannot do a task, just commit to doing the very first part of it." Consider an example of a client who struggled to activate and complete school homework. To counter the feelings of lethargy, she would set up her work space as the next best thing to completing her homework. This slight shift in mood following minimal activation may provide sufficient motivation to take further steps toward completing the larger task.

The acronym ACTION used in behavioral activation integrates findings from functional analyses and activation strategies: **A**ssessing whether the behavior is approach or avoidance, **C**hoosing to either activate or avoid, **T**rying the new behavior, **I**ntegrating the behavior into a routine, **O**bserving the consequences of the behavior, and **N**ever giving up. The "I" and the "N" steps are the most difficult for many clients. By tracking several occurrences of a behavior, though, the therapist and client can more accurately infer the function of the behavior and determine whether it is currently adaptive in their present context.

Countering Avoidance

Behavioral activation teaches clients how to counter avoidant responses to emotions and situations and regain control of their lives. Countering avoidance is a particularly difficult task that involves breaking entrenched patterns of behavior, depriving oneself of immediate relief from aversive stimuli, and exposing oneself to uncomfortable thoughts, feelings, and experiences. Strategies are used to connect clients with more distal, positively reinforcing contingencies and to disconnect them from more proximal, negative reinforcing contingencies. These contingencies are usually first identified while reviewing self-monitoring and completing functional analyses. Careful functional analyses are critical to treatment outcomes because they may reveal behaviors associated with pleasure that still function, in an insidious way, to avoid more aversive feeling and situations.

TRAC is the second acronym used for avoidance work following the identification of avoidance patterns using the acronym TRAP, discussed earlier. When in the presence of a **T**riggering event and the corresponding emotional **R**esponse, clients are taught to break the avoidance cycle with **A**lternative **C**oping. In short, therapist use the phrase "Get out of the TRAP, and get back on TRAC (K)" (Martell et al., 2001, p. 102). Alternative coping is "activation" applied to avoidance patterns. Naturally, the therapist can draw upon activation strategies such as activity scheduling, graded task assignments, role-plays, and so on, as tools for building active coping repertoires. The therapist and client apply the TRAC acronym to current situations to teach alternative forms of modulating emotions. The transition from TRAP to TRAC is a shift from coping to avoid negative emotions (e.g., not going to the gym because of fear of what others will think) to pursuing the experience of pleasure, mastery, and meaning in one's life.

Acceptance

Acceptance interventions are directed at maladaptive forms of response modulation. Acceptance is a fundamental shift in response modulation away from many people's natural inclination to directly dampen their experience of aversive emotions and toward the lived experiencing of their emotions. It can also been seen as a shift away from investing energy into fighting one's own psychophysiological barometer, which is a battle against one's own body, toward investing energy in goal-directed action. This can happen once emotions are no longer cues for emotional suppression and avoidance. Instead, when individuals are more accepting of their aversive emotions, they can take steps in goal-driven activity that are independent of their emotions.

A stance of acceptance may seem counterintuitive when, as a psychological treatment for depressed mood, feeling better is a desirable outcome. Behavioral activation views bad feelings as part and parcel of life and not as causes of depressed behavior or things to be directly altered. Instead, the therapist speaks of feelings as signs of depressed behavior. In fact, feelings are considered helpful cues that something in the context is either positively reinforcing or aversive. At first glance, a positive treatment outcome of feeling better appears to contradict the notion of acceptance. However, this confuses long term goals and mechanisms of change. In the long-term, therapists want clients to feel better. This is measured by active pursuit of goals and fewer depression and anxiety symptoms. However, this is accomplished by acceptance of emotion. Acceptance is conceptualized as engagement in goal-driven behavior despite one's emotional state. As treatment progresses, clients shift from mood dependency to mood independence, where, at the end of treatment, negative emotions and moods are no longer cues for depressed and anxious behavior.

Acting from the "outside in" is an easy-to-understand way to describe acceptance (Martell et al., 2001). Clients are taught that moods on the "inside" are best affected by engaging in meaningful activity on the "outside." "If only I had more motivation or felt better, I would do . . . " is a phrase endemic to depressed mood that captures mood dependency. When clients attribute their inactivity to lack of motivation or depressed mood, the therapist can draw on data from a functional analysis that contradicts this statement or can invite the clients to experiment with mood-independent behavior as homework. Using verbal rehearsals, the clients walk through alternative responses to feelings of depression or anxiety that are consistent with their goals. This may entail engaging in behaviors that are not mood enhancing (e.g., cleaning the house) but are consistent with goals (e.g., selling a house). If acceptance behaviors are successively reinforced by the environment, clients will learn how to change behavior without changing mood.

Future Directions

Behavioral activation evolved from programs of research applying principles of radical behaviorism to the treatment of depression. Consequently, many of the conceptual links between behavioral activation and emotion regulation described in this chapter are best viewed as hypotheses in need of empirical evaluation. Foremost is our application of behavioral activation to depressed mood present in different disorders. Although there is a nascent body of literature investigating the effects of behavioral activation on different disorders, this area of research is in its infancy (Anderson & Simmons, 2008; Bercaw, 2008; Daughters et al., 2008; Hopko et al., 2004; Jakupcak et al., 2006; Pagoto et al., 2009; Schneider et al., 2008). More research is needed to build on the present body of pilot studies examining behavioral activation as a treatment for individual and comorbid disorders. This research can use a truly transdiagnostic approach that examines the effectiveness of behavioral activation in treating depressed mood occurring across disorders.

Future research grounded in an emotion regulation framework may shed light on processes occurring in behavioral activation. There are several possible mechanisms of change in behavioral activation (e.g., increased response-contingent behavior, reduced social withdrawal); however, researchers have not explicitly examined emotion regulation processes as potential mechanisms of change. In addition, using concepts from emotion regulation research provides a common language for clinical researchers to compare and contrast mechanisms of change across treatments. Different treatments may affect different emotion regulation strategies, or different treatments could affect the same emotion regulation strategies using distinct interventions.

At the same time, emotion regulation research can benefit from the contextual perspective underlying behavioral activation. By investigating emotions and emotion regulation in context, researchers can better understand the complexity of emotional phenomena without parsing the emotion generation and regulation process into mechanisms. A more functional approach to emotion will focus the field on aspects of emotion that can be controlled in the environment and that are amenable to intervention.

Summary

In this chapter, we conceptualized behavioral activation as a treatment for problems in emotion regulation. We conceptualized emotions as data about person–environment interactions and as discriminative stimuli that cue particular behavior–environment relationships. We then illustrated how each of the treatment components of behavioral activation can shape more adaptive emotion regulation. Finally, we highlighted future avenues of investigation that can synthesize theory, methodology, and technology from behavioral activation and basic emotion research to answer critical questions confronting the field. Because theory on both emotion regulation and behavioral activation rests on foundations of strong empirical finding, an integration of these fields can be a catalyst for innovation in understanding and treating psychopathology.

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