Art & science | depression

Behavioural activation: an alternative to cognitive behaviour therapy

Jessica Price explains how a client with low mood and relationship difficulties was helped to set goals, increase her motivation for change and re-engage in life

Abstract
This case study describes how behavioural activation was used to treat a client with depression who had undergone previous psychological treatments including cognitive behaviour therapy. After assessment and formulation of problems and goals, a treatment plan was structured to increase contact with positive activities and previously avoided situations, people and pursuits. Collaborative recovery-orientated work on this plan resulted in improvements confirmed by self-rating scores and subjective reports. Thus, the behavioural activation sessions provided an effective alternative evidence-based treatment of the depression.

Keywords
Behavioural activation, cognitive behaviour therapy, depression, evidence-based practice

BEHAVIOURAL ACTIVATION (BA) is a psychosocial approach for the treatment of depression that is recommended by the National Institute for Health and Care Excellence (NICE) (2009). BA is based on the idea that depression persists because of behavioural changes arising from the person’s initial depression. Withdrawal and non-engagement can contribute to a lack of positive reinforcement that would normally result from everyday activities, and this in turn can lead to greater feelings of depression; thereby fuelling a negative vicious cycle.

Research has indicated that behavioural components of cognitive behaviour therapy (CBT) (Beck et al 1979) performed as well as the full CBT package at treatment (Jacobson et al 1996). This finding promoted the development of BA as a stand-alone intervention for depression and other disorders. Sturmey (2009) conducted a systematic review of BA treatment for depression. The outcomes of BA were found to be consistently superior compared with control groups.

Sturmey (2009) asserted that BA may be more effective than CBT in terms of lower client dropout and could be more useful with some people for whom CBT is less effective; these included those with severe, lifelong depression, people who misuse substances and those experiencing dementia with severe depression. BA has also been evaluated by several independent research groups for diverse problems, including post-traumatic stress disorder, depression associated with cancer, obesity, addiction (Kanter and Mulick 2007) and negative symptoms of psychosis (Mairs et al 2011). BA has been used successfully with clients of different ages, religious and ethnic backgrounds, and across a variety of settings (Kanter et al 2012). In short, there is sufficient evidence to conclude that BA is an effective, evidence-based therapy.

Variations
Several variants of BA have been developed and refined over the years, including that of Martell et al (2001, 2010) and Lejuez et al (2011). For the treatment of depression, NICE (2009) recommends BA for 16 to 20 sessions over a three to four-month period with subsequent follow up, using Martell et al’s (2001, 2010) model. This approach encompasses the following concepts:
Responses to events influence feelings – to change how people feel you must help them to change what they do. Acting in the opposite way to what the person feels an urge to do – for example, doing something when they feel like doing nothing – can help change an emotion.

The focus of BA is on the environment (‘context’) in which depression occurs and analysis of the relationships between the context, events and mood.

People may use various strategies to help them cope in the short term, for example, avoidance, rumination, escape. This is understandable but not helpful since these strategies make it less likely the person will do things differently – they are likely to continue feeling bad, for example, be ‘stuck’.

Basic routines are disrupted in depression but activation can increase behaviours. Not all clients are inactive, but there may be subtle forms of avoidance.

Examination of the function and consequence of behaviours is required. Which behaviours help the person to feel better? Which are associated with being depressed? What happens before and after such behaviours occur?

Behaviours are increased when naturally positively reinforced by the environment, and activity is enhanced by making use of client values.

Thoughts are addressed as changeable verbal behaviours. There is focus on the context of thinking rather than the content of thoughts.

The therapist acts as a coach who aids clients to solve problems and take practical steps through graded task assignments, shaping successive steps toward a goal and blocking ‘all or nothing’ actions and attitudes.

Clients are encouraged to act towards a goal and follow a plan regardless of feelings, thus changing patterns of behaviour previously governed by mood. The more activity, the more possibility of contact with positive reward that will reinforce behaviour. This may make the client feel better.

Case study

‘Shelley’ (not her real name) is a 52-year-old woman, living with her husband of 15 years and her 12-year-old daughter. Shelley self-referred to the Improving Access to Psychological Therapies (IAPT) service because of further deterioration in mood following a suicide attempt by her husband the previous year. Shelley described continuing relationship difficulties. She perceived her mother as ‘critical and manipulative... a physically violent drinker’ and her father as overly passive. Shelley’s daughter, who experienced panic attacks and school refusal, was the husband’s confidante and Shelley felt pushed aside by this dynamic. Shelley described becoming disillusioned with her marriage after the first year and finally, after many years of unhappiness and deliberation, requested separation. Her husband responded by attempting suicide, and Shelley reluctantly agreed to stay.

Shelley’s difficulties with low mood started 11 years ago when returning to her job after maternity leave. She found it challenging to juggle work demands with parental responsibilities. She has had numerous long periods of sick leave due to low mood. This led to ongoing conflict with the company’s human resources department and management. When her employer made a mistake with her pay, she struggled to make repayments. She resigned after the suicide attempt because she could not cope with work any more, nor with the difficulties that arose from being on sick leave.

Shelley tried many antidepressants over this 11-year period. She had private psychoanalysis for four years and only stopped when she could no longer afford it. She did not find it useful, but kept going as she hoped the psychoanalyst could ‘fix’ her. She subsequently had humanistic counselling for two years, but considered that the counsellor was ‘not doing enough to help’. She gave up computerised CBT after three sessions because she did not feel motivated enough to continue. She also dropped out of a course of face-to-face CBT with the IAPT service because, perhaps not unexpectedly, efforts at cognitive restructuring paradoxically triggered depressive rumination. As she tried to monitor, evaluate and challenge negative automatic thoughts, her thinking spiralled downward and generalised to other areas, reinforcing her belief that she was unable to improve her mood.

Treatment

Stepped care refers to different levels of service within mental health care. Step 1 generally refers to mental health care provided by GPs. Steps 2 and 3 are delivered by IAPT staff. Step 2 is sometimes referred to as ‘low-intensity’ interventions delivered by psychological wellbeing practitioners (PWPs), and step 3 as ‘high-intensity’ interventions delivered by psychological therapists. These three steps are all in primary care. If the client’s level of need is deemed greater than can safely and effectively be met in primary care, they are likely to be referred on to more specialist mental health services (step 4) in secondary care.

Stepped care has two main principles:

- Treatment should always have the best chance of delivering positive outcomes while burdening the patient as little as possible.
A system of scheduled review to detect and act on non-improvement must be in place to enable stepping up to more intensive treatments, stepping down where a less intensive treatment becomes appropriate and stepping out when an alternative or no treatment becomes appropriate. There are several reasons why the author, who was Shelley’s therapist, suggested Martell et al’s (2001, 2010) high-intensity BA at Step 3 for Shelley. Shelley had previously undertaken CBT at this level of service, with little success. She had a long history of depression that indicated that she might need more time and support than the step 2 low-intensity work that colleagues could offer. Additionally, Martell et al’s model was taught at step 3 on the IAPT course, which the author attended at Southampton University. This was in accordance with Roth and Pilling’s (2007) map of competencies for therapists.

Therapy was complemented by Lejuez et al’s (2011) treatment manual because of its clear and concise forms. Although behaviour change is the primary target of intervention, BA does not focus on ‘just doing it’ and is not a ‘one-size-fits-all’ therapy. The assumption behind BA’s direct behaviour change approach is not that behavioural issues are the only factors relevant to depression, but that depression is a multisystem disorder, and behavioural change, in the context of a positive therapeutic relationship, is a direct and pragmatic method for affecting the system (Kanter et al 2012). Depression is understood as a series of actions and events rather than the result of some internal cause or mechanism, and Shelley found this explanation less stigmatising than biological narratives about depression. It was explained that difficulties in her life and her avoidant behavioural responses could reduce her ability to experience positive reward, so increasing activation might achieve greater contact with sources of reward and help solve problems.

Measures and assessment Global and clarifying measures were used in Shelley’s assessment. The aim was to find out more about the difficulties she was experiencing.

On various rating scales (Table 1) Shelley scored herself as follows:

- **Patient Health Questionnaire (PHQ-9)** for depression (Spitzer et al 1999): 20, which indicated severe depression.
- **Generalised Anxiety Disorder (GAD-7)** scale (Spitzer et al 2006): 12, suggesting moderate anxiety.
- **Clinical Outcomes to Routine Evaluation (CORE-34)** scale (Barkhan et al 2005), where 0 indicates fewest symptoms and 4 indicates most symptoms: a mean score of 3.2 for wellbeing, 2.3 for problems and symptoms, 2.1 for functioning and 0.8 for risk.
- **Work and Social Adjustment Scale (WSAS)** (Mundt et al 2002): 22 out of 40, which indicated definite impairment in carrying out activities.

We revisited these brief self-rating measures at the start of every therapy session. This provided invaluable information about how the previous week had been. Discussion of the measures, as part of therapy, helped highlight Shelley’s experience of guilt, sadness and helplessness (Table 2). Results on the CORE-34, and subsequently on its shorter version CORE-10, indicated low risk.

Although Shelley expressed thoughts of cutting her face to show everyone the extent of her emotional anguish, the thought of physical pain stopped her doing this. Sometimes she thought, ‘I would be better off dead’. On further investigation, this was a desire that life could be different, and a sense of ‘wanting to hide’. Strong protective

<table>
<thead>
<tr>
<th>Measure</th>
<th>Referral</th>
<th>Assessment</th>
<th>Session 7 (present)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHQ-9</td>
<td>18</td>
<td>20</td>
<td>13</td>
</tr>
<tr>
<td>GAD-7</td>
<td>10</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>CORE-34 (means)</td>
<td>Risk=0.8</td>
<td>Wellbeing=3.2</td>
<td>Functioning=2.1</td>
</tr>
<tr>
<td></td>
<td>Problems and symptoms=2.3</td>
<td>(Overall=2.2)</td>
<td></td>
</tr>
<tr>
<td>CORE-10</td>
<td></td>
<td>21</td>
<td>16</td>
</tr>
<tr>
<td>WSAS</td>
<td>24</td>
<td>22</td>
<td>9</td>
</tr>
</tbody>
</table>

PHQ-9: nil = 0-9; mild = 10-14; moderate = 15-19; severe = 20+.
GAD-7: nil = 0-4; mild = 5-9; moderate = 10-14; severe = 15+.
CORE-34/10: 0 = not at all, 4 = all the time.
WSAS: five sections measuring 0 (no impairment at all) to 8 (very severely impaired).

<table>
<thead>
<tr>
<th>Self-rated symptoms</th>
<th>Assessment</th>
<th>Session 7 (present)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guilt</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Sadness</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Helplessness</td>
<td>8</td>
<td>5</td>
</tr>
</tbody>
</table>

10 = most severe, 0 = least severe, as rated on a Likert scale.
factors, preventing suicide, were her daughter and her religion. We also put together a timeline that provided a detailed symptom history and overall view of significant life events.

Daily monitoring was used as a tool for discovery, as part of the assessment and intervention strategy. It helped assess the baseline of activity, evaluate whether activities gave a sense of accomplishment or enjoyment, and identify ways to increase potential sources of positive reinforcement. Shelley's problem list included low mood, relationship difficulties, lack of social support, financial difficulties, unemployment and worries about her daughter's health. Shelley wanted her therapy focus to be the low mood, as she felt this contributed to the other problems she was having. Consistent with a DSM-IV diagnosis for major depressive episode, Shelley's low mood consisted of reduced activity, rumination, tiredness, under-eating and excessive sleeping. She had frequent feelings of helplessness, worthlessness and guilt, isolation, tearfulness, indecisiveness, anhedonia and occasional suicidal thoughts.

Her main strategy for managing problems was avoidance. Her problem statement read: 'When I feel low I do not feel like doing things, so I don't, and put them on my list to do. I sleep and read instead. This helps in the short term but has long-term consequences such as never doing anything constructive that may help me - then I feel worse.'

Goal-setting was achieved through a life area assessment (Lejuez et al 2011), where Shelley considered her values in terms of what was important in her life. Using a feature borrowed from acceptance and commitment therapy (Hayes et al 1999) we identified her valued directions and what she wanted her life to stand for. We discussed how she would like to live regarding different domains, such as family, social and romantic relationships, education/training, employment, hobbies, physical and psychological health issues, spirituality and daily responsibilities. Of particular interest are activities that provide immediate and positive reinforcement from the environment, that provide enjoyment and are important to the client. An activity selection and ranking sheet helped Shelley formulate a hierarchy (Table 3) of task difficulty.

Each activity was broken down into small steps, defined behaviourally and made more specific, measurable, achievable, realistic and time-orientated so that Shelley had outcomes to work toward. For example, earlier goals included:

- Go for a walk in the park on Tuesdays and Thursdays at 10.30am for half an hour.
- Pilates every Wednesday evening with my daughter at the leisure centre.

It was acknowledged that later goals might not be reached during therapy, but that earlier goals, such as those above, would be building blocks toward later goals.

Collaborative functional analysis (Table 4) was used to identify variables maintaining Shelley's depression, that were amenable to change. This understanding formed the basis of her formulation (Figure 1), which shows how Shelley's primary problems triggered her depression, and how secondary problems (coping strategies) maintained it. This could then guide specific strategies, such as using public commitment, aiming for actions with a high likelihood that the surrounding environment would naturally reinforce it. Reinforcement is anything that increases the probability that the response that preceded it will occur again. Therefore, it strengthens a response.

Vicious cycles

This formulation (Figure 1) also helped us identify individual vicious cycles (Figure 2) that we might interrupt. A negative reinforcer is the removal of, or escape from, anything unpleasant which increases the probability of the response recurring. For example, going to bed removed negative thoughts and painful emotions, and was likely to be repeated. Negative reinforcement contingencies are frequently appropriate targets in BA for depression. Positive
reinforcement is anything favourable that increases the probability of a response. Behaviour is positively reinforced and increased if followed by a positive consequence. In Shelley’s case, getting admiring comments for colouring her hair made it more likely she would do so again. A positive punisher, on the other hand, is anything unpleasant that decreases the probability that the event preceding it will occur again. Behaviour is punished and decreased when followed by something harmful: when Shelley asked her mother for help she received a critical response, so she stopped asking.

Shelley’s collaborative formulation helped us make sense of her difficulties and provided a roadmap for therapy. Motivational interviewing (Miller and Rollnick 1991) was used to help prepare her for change, and the treatment rationale was shared. We addressed the difference between a BA approach and those she had experienced before. The author also made her aware that, for moderate-to-severe depression such as hers, BA had been found to outperform CBT at the end of acute treatment at 24 weeks (Dimidjian et al 2006) and has been helpful in cases that have not responded well to CBT (Sturmey 2009).

She gave her informed consent to trying BA. The focus of homework in the process and the relationship to positive treatment outcome was emphasised. Homework was designed so that early success was more likely. Strategies were introduced in a step-by-step fashion. It was important to establish therapeutic rapport, review symptoms regularly and continue psycho-education about the BA model.

**Monitoring progress**
A baseline of her activity was gathered using daily monitoring forms, and we established relationships between situation, action and mood. Goal-setting was achieved through the life-areas assessment and functional analysis. We built on Shelley’s formulation, and there was exploration of the contingencies maintaining her depression. TRAP (Trigger, Response, Avoidance Pattern) was introduced and the therapist encouraged TRAC (Trigger, Response, Alternative Coping) (Box 1, page 32) and ACTION (Assess a situation, Choose a response, Try it out, Integrate new behaviour into routine through activity scheduling, Observe the result, Never give up) (Martell et al 2001, 2010). Shelley selected important

**Table 4 Examples of functional analysis**

<table>
<thead>
<tr>
<th>Antecedent (event/action/circumstances immediately before a behaviour)</th>
<th>Behaviour</th>
<th>Consequence (action/response immediately after a behaviour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daughter asks Shelley to go for a walk together</td>
<td>Says no and avoids daughter – goes to bed</td>
<td>Guilty, still tired, sad</td>
</tr>
<tr>
<td>Mother makes a critical comment toward Shelley</td>
<td>Says and does nothing – avoids confrontation</td>
<td>Hopeless, helpless</td>
</tr>
</tbody>
</table>

**Figure 1 Shared behavioural formulation**

**Primary problems – negative life events:**
- Key relationships difficult.
- Problems at work.
- Husband’s suicide attempt.

**Targets for change**
- Low levels of positive reinforcement.
- Narrowing of behaviour repertoires.
- ‘Less rewarding life’.

**Biochemical changes:**
- Tiredness, under eating, excess sleeping and poor sleep hygiene.
- Feelings of helplessness, worthlessness and guilt.
- Tearfulness, indecisiveness, occasional suicidal thoughts, anhedonia.

**Secondary coping behaviours – targets for change**
- Sleeping during day, reading excessively, writing lists, rumination, TV, avoiding people, stopping activities that once gave feelings of mastery and pleasure.

**Figure 2 Vicious cycles**

**Secondary problems – targets for change:**
- Increased negative reinforcement.
- Rumination.
- Coping by avoiding.
- Doing little.

**Low mood**

- Increased punishment.
- Decreased positive reinforcement.

- Increased punishment.
- Decreased positive reinforcement.

**Lack of energy**

**Rumination**

**Inactivity**
activities of various degrees of difficulty to bring a sense of enjoyment, completed activity selection and ranking sheets, and then built an activity hierarchy (Table 3). These activities were scheduled onto the monitoring chart with a star alongside them, to make it clear which activities (or intermediate steps towards them) were planned. If the activity was achieved, Shelley circled it on the monitoring form. If not, she put a line through it and wrote what she had done instead.

We considered barriers to activation, considered behavioural strategies for targeting rumination and promoted problem-solving skills. Shelley completed an activity level graph to show numbers of completed activities, and was shown a graph of her score measures to visualise change and notice patterns. She continuously reviewed her goals, formulations, activity hierarchy and routines, encouraging introduction of activities, building on daily monitoring sheets, TRAP, TRAC and ACTION. Self-coaching (in place of therapist coaching) was built into her life and BA expanded into new life contexts. Towards the end of therapy, we endeavour to cover relapse prevention and management, including a therapy blueprint and post-therapy goals.

When considering homework between sessions, the goal was not to complete all parts of any homework activity – rather, to get started, increase activation and disrupt avoidance. Possible and actual barriers were discussed when planning or reviewing homework. Shelley now routinely completes her walking task and Pilates lessons. She approaches secondary problems and experiences a domino effect – doing activities propels her to do other things. TRAP, TRAC and ACTION help her to notice that it is often her response to an environmental cue that leads to avoidance. She is generating new alternatives and recognising that she has a choice whether to avoid or activate, as demonstrated in Box 1. We chart progress on daily monitoring forms, and socialising Shelley to the model is a continual process.

Box 1 Example of Shelley getting out of a TRAP and getting back on TRAC

The TRAP:
TRIGGER: Tried on a pair of trousers in shop. Size 12 did not fit.
RESPONSE: Upset and despondent.
AVOIDANCE PATTERN: Rumination about being fat and ugly and not deserving new trousers (despite need for them). Eat chocolate. Home to bed.
PASSIVE APPROACH: Not solved problem and feel worse.

Getting back on TRAC:
Same TRIGGER and RESPONSE but ALTERNATIVE COPING: Try a different size and/or different shop. This is an active rather than avoidant response.

The problem of rumination
Shelley has noticed that, for her, the function of rumination is avoidance. She now considers the pros and cons of rumination versus accepting what is out of her personal control, making room for painful feelings, urges and sensations, and allowing them to come and go without a struggle. This is while committing to action that will improve her quality of life. A list was made of ways Shelley could spend time more productively. She has been trying to mindfully notice, label and step back from thoughts. By being fully present in the moment, she finds it harder to engage in repetitive self-talk. Attention training has helped her attend to environmental details and focus away from rumination.

Following the ‘what if?’ experiment documented in Wells (2008), Shelley discovered that using worry and rumination to solve problems or cope, or trying to reason with worry, can be counterproductive. The therapist played the role of her ‘what if?’ worrying style for a specific worry, and she was required to reason with and answer each ‘what if?’ question. With each response, the therapist presented a further negative ‘what if?’ possibility representing the worst case scenario. This demonstrated that the use of a ‘what if?’ worrying style generates its own problems and how trying to reason with worry prolongs rumination. Shelley subsequently trained herself to limit worrying to a 30-minute ‘worry time’ each day and has found it helpful to use worry and rumination as a cue to get active.

Problem-solving has taught Shelley to choose action over passivity by looking at the relevant facts, brainstorming solutions, selecting and implementing one of these, observing its effects and continuing to practise alternative behaviours.

Barriers to treatment
There have been obstacles to treatment. Some of these could be predicted on the basis of Shelley’s formulation. One obstacle is that her environment does not support healthy behaviour. Attempts have been made to overcome this by analysing her behavioural response to her mother, using functional analysis and problem solving.

A second obstacle is avoidance stemming from ‘not feeling like’ doing things, which is common in depression and indeed other disorders. Shelley is encouraged to revisit her BA knowledge and idiosyncratic formulation, while validating the difficulties of change. Interventions have been structured to help her engage in activities despite negative feelings, particularly as motivation to engage in anything can be low. There has been discussion concerning her perceptions of how motivation...
develops ('It's just something you have – it's either there or it's not') versus trying to begin a task to see if this increases motivation.

A 'five-minute' rule has been devised - she must begin a task, check in with how she feels after five minutes and then make an informed decision whether or not to carry on. Commitment to time, place and person, and explicitly linking to long-term goals and values, increases the likelihood that she will follow through with the behaviour. A helpful question has been, 'If you were not low, what would you do?' Looking at the advantages of behaviour, such as role-modelling behaviour to her daughter, and the disadvantages – she would do little or nothing otherwise - has also helped her to activate. Tables 1 and 2 summarise her progress.

The author is mindful of her own tendency to try to progress too quickly with clients. Attempts to overcome this have been made by attending to Shelley's understanding, feeding back progress, giving validation and being warm and genuine while remaining non-judgemental and matter-of-fact. There have been interpersonal issues in the relationship (Safran and Segal 1990): Shelley's thought, 'I am helpless' pulls from the therapist the willingness to work very hard and take a more directive, persuasive stance stemming from a desire to fix things. However, acting like this toward Shelley could potentially confirm her beliefs about helplessness and lack of self-efficacy.

Labelling what is happening in the relationship, pausing and stepping back have helped increase therapist objectivity. Self-coaching has been assisted by adopting a team approach to Shelley's difficulties, staying alert to her active involvement in therapy, using Socratic dialogue, direct suggestions and problem-solving. Physically sitting alongside her has reinforced this collaborative team approach.

Reflecting on the sessions
It was challenging to simultaneously learn and apply the approach as a trainee psychological therapist, and a difficult model to sell, given Shelley's low motivation. An analogy to medication was used: that is BA is like taking medication (doing the behaviour) while waiting for benefits.

Enjoyment from activity may not be immediate and clients can experience a lag between doing things differently and feeling different. However, it is hoped 'what the hands do, the head will follow' - and if not, at least the client is working toward their values to improve their lives.

Working with Shelley, the therapist has become increasingly aware that what clients want at a given moment is not necessarily what they need. When reviewing therapy, Shelley shared a desire to analyse her thoughts more in sessions. We discussed how she has done this in other therapies, and she noticed that excessive talking and intellectualising has fed her avoidance of doing things differently.

Likewise, the therapist (being a reflectivist/theorist) has experienced an urge to unpick Shelley's thoughts in therapy, so encouraging a pragmatic/activist approach and maintaining an activation focus has been challenging. However, following Martell et al's (2001, 2010) model and Lejuez et al's (2011) manual, understanding and structure for sessions have been achieved which, combined with therapist flexibility and clinical judgement and Shelley's hard work, have provided an effective, alternative evidence-based-based treatment. This appears to be working well for Shelley.

References


