Clinical Psychology Review 30 (2010) 608–620

Contents lists available at ScienceDirect

Clinical Psychology Review

What is behavioral activation? A review of the empirical literature

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ARTICLE INFO

Article history:
Received 6 October 2009
Received in revised form 14 March 2010
Accepted 1 April 2010

Keywords:
Behavioral activation
Depression
Clinical
Psychotherapy

ABSTRACT

Behavioral Activation (BA) for depression is an empirically supported psychotherapy with a long history dating back to the 1970s. To date there have been no systematic reviews of how BA treatment packages and their accompanying components have evolved over the years. This review sought to identify and describe the specific treatment components of BA based on the descriptions of techniques provided in empirical articles on BA and referenced treatment manuals when available. The following component techniques were identified: activity monitoring, assessment of life goals and values, activity scheduling, skills training, relaxation training, contingency management, procedures targeting verbal behavior, and procedures targeting avoidance. The implementation of these techniques is reviewed, along with their empirical support both as stand-alone components and as components of larger treatment packages. Whereas activity scheduling, relaxation, and skills training interventions have received empirical support on their own, other procedures have shown effectiveness as parts of larger treatment packages. Although BA interventions differed in tools used, activity monitoring and scheduling were shown to be constant components across interventions. Possible directions for the future evolution of BA are discussed.

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1. Introduction

Behavioral activation (BA) treatments for depression have a long history, spanning from early pleasant events scheduling of Lewinsohn (1974), to several treatments developed in the 1970s, to BA as a

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doi:10.1016/j.cpr.2010.04.001

component of Cognitive Therapy (CT; Beck, Rush, Shaw, & Emery, 1979), to more contemporary approaches of Martell, Addis and Jacobson (2001) and Lejuez, Hopko, and Hopko (2001). Several recent meta-analyses (Cuijpers, van Straten, & Warmerdam, 2007; Ekers, Richards, & Gilbody, 2008; Mazzucchelli, Kane & Rees, 2009) have comprehensively documented the efficacy of BA treatments. In fact, Mazzucchelli et al. evaluated BA's empirical support in light of standards developed by the American Psychological Association's Division 12 Task Force on Promotion and Dissemination of Psychological Procedures (Chambless et al., 1998; Task Force on Promotion and Dissemination of Psychological Procedures, 1995) and concluded that BA should be designated a "well-established empirically validated treatment."

The specific treatment components of current versions of BA and guidelines for their implementation are available in several manuals, primarily Martell et al. (2001) and Lejuez, Hopko, and Hopko (2001; also see Addis & Martell, 2004; Hopko & Lejuez, 2007; Lejuez, Hopko, Acierno, Daughters, & Pagoto, in press; Martell, Dimidjian, & Herman-Dunn, 2010) and the principles underlying these two interventions also have been clearly outlined (Hopko, Lejuez, Ruggiero, & Eifert, 2003). Research on these current versions of BA, while rapidly growing, however comprises only a small subset of the accumulated evidence for BA evaluated in recent meta-analyses (Cuijpers et al., 2007; Ekers et al., 2008; Mazzucchelli et al., 2009); only 6 of the 52 trials reviewed in these meta-analyses incorporated the Martell et al. (2001) or Lejuez, Hopko, and Hopko (2001) manuals. There has yet to appear a comprehensive catalog and description of BA techniques that have been employed over its entire history.

With this extensive history and empirical support, the term "activation" has entered the mainstream clinical psychology lexicon as a component of depression treatment and often the assumption by those without specific training in BA is that activation consists primarily or exclusively of the scheduling of pleasant activities. For example, the American Psychological Association, on the public information pages of its website, notes that one of the four aspects of effective depression treatment is to help clients "gradually incorporate enjoyable, fulfilling activities back into their lives" (the other three aspects briefly describe problem-solving, interpersonal and cognitive approaches; APA, 2009).

Examining BA's diverse history in more detail, it becomes clear that BA has included variants on the theme of scheduling of pleasant activities but is in fact much more than this and a variety of component techniques and strategies have been employed under the umbrella of BA for depression. This review begins with a short history of BA and a summary of its empirical support. Following this history, the empirical studies analyzed in the three published meta-analyses of BA are reviewed to 1) catalog the various BA component techniques, 2) describe their implementation, 3) review the research on them as components of the larger packages, and 4) review the research on them as stand-alone interventions. The intention is to provide readers with a clear overview of exactly what components make up BA and the empirical support for each component. The review ends with suggestions for implementing the full arsenal of BA techniques to maximize the efficacy and efficiency of the general approach and suggestions for future research directions.

2. History of behavioral activation

Lewinsohn (1974) provided the seminal description of the behavioral theory of depression in which depression is a function of 1) low rates of response-contingent positive reinforcement and 2) inadequate social skill. In 1976, he consolidated a number of previous intervention studies based on this theory into a comprehensive treatment manual (Lewinsohn, Biglan, & Zeiss, 1976). This manual primarily encouraged activity scheduling to address environmental deficits in positive reinforcement and social skills training to address behavioral deficits in the ability to obtain and maintain reinforcement, but also included a number of other behavioral interventions such as contingency management strategies to maximize session attendance and procedures such as thought-stopping to target covert verbal behavior.

Lewinsohn's model and treatment techniques inspired a number of interventions that were empirically evaluated (e.g., Gardner & Oei, 1981; Maldonado-Lopez, 1982; Taylor & Marshall, 1977; Wilson, 1982; Wilson, Goldin, & Charbonneau-Powis, 1983), including some variants that demonstrated the treatment's strength in diverse settings, such as a group behavior therapy approach for depressed Latinas (Comas-Díaz, 1981) and a treatment for low-income rural women with depression (Padfield, 1976). These treatments, however, varied considerably with respect to whether they were faithful to the entire set of techniques presented in Lewinsohn et al. (1976) or only included some techniques. While research on Lewinsohn's approach was accumulating, others were developing interventions based on alternative behavioral models. McLean (1976) developed a variant that emphasized training in a variety of behavioral, interpersonal and cognitive skills which outperformed a non-specific therapy and medication in a randomized trial (McLean & Hakstian, 1979). Rehm (1977) developed self-control therapy, which was consistent with Lewinsohn's interventions in many ways but also included techniques derived from Kanfer's (1970) behavioral model of self-control, including cognitive techniques.

Collectively all of the treatments included in these studies have been labeled activity scheduling or BA treatments by various reviewers (e.g., Cuijpers et al., 2007; Ekers et al., 2008; Mazzucchelli et al., 2009). These meta-analyses evaluated the effectiveness of these treatment packages as a group and found that they performed quite well in randomized trials, better than wait-list and no-treatment controls and—despite singular but influential results such as Shaw (1977)—equivalent to CT across acute treatment and follow-up periods (Cuijpers et al., 2007; Ekers et al., 2008, Mazzucchelli et al., 2009).

Despite this empirical support, in line with the zeitgeist of the late 1970s and early 1980s, behavioral treatment packages fell out of favor. Two studies of Lewinsohn's approach were noteworthy with respect to this fall. First, Shaw (1977) published a small but influential comparison that suggested the superiority of cognitive techniques over behavioral techniques. Second, Lewinsohn and his students completed an influential component analysis that demonstrated no differential effectiveness between activity scheduling, skills training, and cognitive techniques (Zeiss, Lewinsohn, & Muñoz, 1979), leading Lewinsohn himself to integrate the components into a cognitive–behavioral rather than purely behavioral approach (Lewinsohn, Muñoz, Youngren, & Zeiss, 1986).

The primary cognitive–behavioral approach to replace raditional behavioral approaches in popularity was, of course, CT by Beck et al. (1979). CT emphasized cognitive restructuring techniques but included a chapter on behavioral techniques that detailed activity monitoring and scheduling interventions focused on both increasing feelings of mastery and pleasure, and social skills training, all framed within a cognitive change model. CT became the most widely researched and employed of the empirically supported treatments for depression (DeRubeis & Crits-Christoph, 1998). While the hegemony of the cognitive model remained undisputed for many years, research on behavioral treatments continued, including continued research on self-control therapy (Rehm et al., 1981; Rehm, Kaslow, Rabin, 1987; Rokke, Tomhave, & Jocic, 1999) and a variant of BA modified for depressed elderly individuals (Gallagher, Thompson, Baffa, Piatt, Ringering, & Stone, 1981; Gallagher & Thompson, 1982; Thompson & Gallagher, 1984; Thompson, Gallagher, & Breckenridge, 1987).

Jacobson et al. (1996) renewed emphasis on behavioral techniques with a component analysis of CT that, like Zeiss et al. (1979), found no