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Behavioral activation therapy for return to work in medication-responsive chronic depression with persistent psychosocial dysfunction

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Abstract

Objective: Chronic depression is associated with significant impairment in work functioning, relationships, and health. Such impairment often persists following medication-induced remission of depressive symptoms. We adapted and tested Behavioral Activation therapy with a goal of return to work (BA-W) in subjects with chronic depression who had responded to medication treatment but remained unemployed.
Method: Sixteen adults aged 18–65 with DSM-IV diagnosed Dysthymic Disorder or chronic Major Depression were recruited from clinical trials taking place at the New York State Psychiatric Institute between 4/2009 and 12/2012 and enrolled in 12 weeks of individual manual-driven BA-W. Functioning was measured at intake, post-treatment and at 24 week follow-up.
Results: Eighty-seven percent (n = 14) of subjects completed the full 12 weeks of BA-W. Hours of work related activity ($p < .005$, d = 0.83), hours of paid work ($p < .0003$, d = 0.54), and work productivity ($p < .0004$, d = −0.48) increased significantly over the study period. Earned income increased post-treatment ($p = .068$) with significant changes by 24 week follow-up ($p = .011$). Secondary outcomes including behavioral avoidance ($p < .004$, d = −0.56), and global functioning ($p < .0003$, d = 1.42) were also significantly improved post-treatment. Effect sizes, including for outcomes with non-significant changes, were generally in the range of 0.5–0.8.
Conclusions: This pilot study provides preliminary evidence of the efficacy of a work-targeted psychotherapy to remediate vocational impairment in subjects with chronic depression. Data suggests that further testing of BA-W using a randomized controlled trial is warranted and may represent a significant advance in treatment for the residual disability present after successful pharmacotherapy.

1. Introduction

Research has demonstrated a consistent and powerful link between depression and functional impairment [1]. Depressed individuals test significantly worse on measures of social proficiency than their non-depressed cohorts [2,3], experience more marital and familial strife [4], are more likely to be rejected by their peers [5], and have fewer and less rewarding friendships [6]. The severity of these combined impairments is often comparable to or worse than those associated with chronic medical conditions including diabetes, hypertension and arthritis [7]. Chronic depression (CD), whether dysthymic disorder (DD), double depression, or major depressive disorder, chronic type (CMDD), has particularly devastating effect on psychosocial functioning [8]. A recently published epidemiological study demonstrated that individuals with DD were significantly more likely to be unemployed, on social security income and to receive Medicaid than individuals with episodic major depressive disorder or the rest of the community sample [9].

Even after chronic depression remits, many patients treated with antidepressant medication remain unable to resume normal

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social roles [10,11]. For instance, in 46 desipramine-responsive adults with dysthymia [12], work outside the home improved only slightly over 6 months on the Social Adjustment Scale (SAS-SR) [13] (from 2.5 (1.3) to 2.2 (1.3)), reflecting persisting impairment compared to the community norm (1.4 (0.5)). Adler et al. [14] found continued work impairment in employed medication-responsive individuals. In our research center, 56% of CMDD subjects are un- or under-employed (JW Stewart, unpublished). Although Miller and colleagues [15] found that medication-induced remission of CMDD was associated with normalization of work function, results have limited generalizability to unemployed CMDD, as most (73.8%) subjects were employed at baseline. Thus, while effective antidepressant treatment lessens CD-associated functional impairment, work deficits often persist [14].

The public health burden of impaired work functioning in depressed individuals is significant: in 2000, depression cost the US economy $83 billion. Workplace costs including absenteeism and decreased productivity contributed to 62% ($51.5 billion) of this figure [16–18], far exceeding that accounted for by depression-related medical costs ($31.6 billion).

Research to improve residual work impairment is limited despite the significant financial and social implications. Some researchers have studied adjunctive psychotherapy following medication-induced remission in efforts to improve social functioning [19,20]. A stepped-care approach offers distinct advantages over a concurrent treatment design: it allows clinicians to start treatment simply with medication management alone, then add more expensive and intensive psychotherapy only when medication effects incomplete functional remission.

Behavioral activation therapy [21,22] may be particularly beneficial for individuals with chronic depression. Chronic depression is associated with high levels of behavioral avoidance; demoralization; social isolation; cognitive impairment; decreased reward-related activity. Many of these conditions persist even after medication-induced remission [23]. While there are various BA approaches [22,24,25], generally BA theorists view depression as a function of increased reinforcement for depressive behaviors and decreased reinforcement of non-depressive, healthy behaviors [22,24]. To meet its goals of increasing the frequency of behaviors that are rewarding, BA uses graded activity scheduling and employs measurable outcomes. It has a focus on problem-solving activities through a disciplined use of activity monitoring, assessment of goals and values, activity scheduling, skills training, relaxation training, contingency management, and procedures targeting verbal behaviors and avoidance [22]. On a practical level, it is a time-limited, manualized treatment, which aims to provide measurable results, and can be administered by paraprofessionals. Thus, it can be adapted for various uses including improved health-related behaviors [26,27] and enhancing the effectiveness of job-seeking [28]. As Baruch et al.'s [28] paper on improving homework completion in career counseling demonstrates, BA requires relatively minor adaptation to focus on improving behavioral function rather than mood symptoms. Similarly, relatively minor adaptations should be required to adapt BA to address a broad range of vocational issues.

The purpose of the current study was to administer Behavioral Activation (BA) psychotherapy to improve work and social functioning in individuals with CD who have responded to antidepressant medication. Briefly, BA [25] is a behavioral psychotherapy that focuses on using stable, naturally occurring positive reinforcers in the environment to alleviate depressive symptoms. Such interventions can help patients overcome avoidant patterns of thinking and behavior [29], factors hypothesized to play a key role in maintaining depressive symptoms [30]. For the functionally impaired but euthymic patients recruited for this study, BA was tailored to activate them explicitly towards the goal of return to work, hence BA-W. We hypothesized that they would benefit from BA-W by demonstrating: 1) improved work functioning, 2) improved social functioning, 3) decreased patient-rated avoidant behavior, and 4) increased patient-rated behavioral activation.

2. Method

2.1. Subjects

2.1.1. Inclusion criteria

Adults aged 20–75 years; primary diagnosis of DD, CMDD or double depression; >50% decrease in 17 item Hamilton Rating Scale for Depression (HRSD-17) [31,32] score and a final HRSD-17 score ≤10 with an adequate antidepressant medication trial (>4 weeks on >50% Physician's Desk Reference [33] maximum dose), a rating of 1 ("very much improved") or 2 ("much improved") on the Clinical Global Impressions-Improvement scale (CGI-I) [34], continued functional impairment, defined by scores >1.9 on the SAS-SR [13], i.e., >1 SD above (worse than) the community norm; and unemployment (jobless and looking and available for work) according to the Bureau of Labor Statistics [35].

2.1.2. Exclusion criteria

SCID-diagnosed cognitive or psychotic disorders; bipolar disorder; active eating disorders; severe borderline personality disorder; alcohol or drug dependence (except nicotine) in the last 6 months; current suicide risk; unstable medical conditions; and psychotropic medications other than antidepressants.

2.2. Procedure

Subjects were identified from clinical trials of antidepressant medications at the New York State Psychiatric Institute (NYSPI) between 4/2009 and 12/2012 based upon their diagnosis, and HRSD, CGI, and SAS scores. Those meeting all inclusion criteria and no exclusion criteria were offered study participation and if interested, informed consent approved by the NYSPI IRB was obtained. Enrolled subjects met with a BA-W therapist for 12 weekly 50-minute