



Murdoch
UNIVERSITY

MURDOCH RESEARCH REPOSITORY

<http://researchrepository.murdoch.edu.au>

This is the author's final version of the work, as accepted for publication following peer review but without the publisher's layout or pagination.

Della-Posta, C. and Drummond, P.D. (2006) Cognitive Behavioural Therapy increases re-employment of job seeking worker's compensation clients. Journal of Occupational Rehabilitation, 16 (2). pp. 217-224.

<http://researchrepository.murdoch.edu.au/1994>

Copyright © Springer

It is posted here for your personal use. No further distribution is permitted.

Cognitive Behavioural Therapy Increases Re-Employment of Job Seeking Worker's Compensation Clients

Corina Della-Posta and Peter D. Drummond

School of Psychology, Murdoch University, Perth, Western Australia

Address for correspondence: Dr Peter Drummond, School of Psychology,
Murdoch University, Perth, 6150, Western Australia

Email: p.drummond@murdoch.edu.au

Phone: 61-8-9360-2415

Running head: Cognitive Behavioural Therapy and Re-Employment

Acknowledgements

We wish to thank the staff at WorkFocus Australia; in particular Ms Kirrily Manning for opportunity to conduct this research, Ms Camille Greenwell, for her support and advice, Ms Kerrie Ann Pental for her assistance in co-ordinating the groups and Ms Adrianna Voong for secretarial assistance.

ABSTRACT

Introduction. The aim of this study was to determine whether cognitive behavioural therapy (CBT) would enhance employment outcomes in worker's compensation clients who were seeking employment. *Methods.* Participants were randomly assigned to a standard job search assistance group or to a group that also received CBT for two hours/week for four weeks. Depression, Anxiety and Stress scores were measured prior to and on completion of the intervention, and employment outcomes were assessed at four- and ten-week follow-up. *Results.* Affective states decreased and employment was found more rapidly after CBT than after standard job search assistance. *Conclusions.* These findings indicate that CBT has a useful role in the rehabilitation of people on worker's compensation who are seeking employment.

Key words: cognitive behavioural therapy; worker's compensation; employment; anxiety; depression

Introduction

The development of anxiety and depression following a work-related injury may delay physical recovery and the return of normal functioning (1-3). This can be particularly problematic for individuals involved in litigation or receiving worker's compensation benefits (4), presumably because the adversarial approach to settling worker's claims adds to their distress.

Much of the recovery and rehabilitation process is focused on physically treating the condition and enhancing the injured worker's capacity to participate in work activities. Rehabilitation aims to return the worker to their pre-disability job or to a new position that is physically appropriate through vocational counselling, work experience and training. Clients who have the physical capacity and vocational skills to secure work are given assistance with job seeking and job placement. However, in Western Australia, rehabilitation providers are currently successful in returning only 68% of the workers who participate in a full redeployment program to work (5). Since around 30% of workers do not find employment after a full rehabilitation programme, new approaches are needed to prepare these people for work.

Worker's compensation claimants who experience serious injuries often become estranged from their workplace. They perceive their capacity to be limited and the odds of returning to work as low (6). They develop negative cognitions about their current state due to a lack of encouragement and an inability to assess their situation objectively. These behavioural characteristics often have a greater influence on the length of recovery than factors such as the severity of the injury (7).

A multidisciplinary treatment approach that incorporates psychosocial as well as biomedical approaches appears to be optimal for preparing rehabilitation clients to return to work (1). A programme developed by Corey et al. (8) focused on functional restoration and included work conditioning, group education and behavioural counselling. This approach helped clients to be “work ready”, as defined by the client’s active involvement in training or in securing employment. Cole (9) investigated the effect of psycho-education on self management of chronic pain in clients who had experienced work-related injuries. The intervention promoted general coping skills necessary for good mental health (e.g., being positive, boosting self esteem, meditation, relaxation and assertiveness). At the completion of the programme, decreases in depression and affective distress were greater than in a control group. The psycho-education programme also resulted in greater re-employment and decreased reliance on worker’s compensation benefits at one year follow-up. Sullivan and Stanish (10) developed a 10-week cognitive behavioural therapy (CBT) programme aimed at increasing daily involvement in goal directed activity and reducing or minimizing psychological barriers to recovery from a work-related injury. The programme assisted 60% of its participants to be ready to return to work. Proudfoot et al. (11) suggested that long-term unemployment promotes psychological disturbances which prevent re-employment. In particular, many long-term unemployed people cease to believe in their ability to regain employment, which reduces their motivation to secure work. Importantly, CBT enhanced psychological well being and re-employment in the long-term unemployed (11).

Since affective states contribute to work incapacity and increase worker’s compensation costs by increasing the claim duration, providing

individuals with basic skills to address these affective states may assist the worker to return to work, and reduce their claim duration and cost. Thus, the present study aimed to investigate the effect of CBT on affective states and re-employment in job seeking worker's compensation clients. It was hypothesized that CBT would reduce depression, anxiety and stress whilst increasing perceived work potential and employment outcomes.

METHOD

Participants

The sample consisted of 28 men and 11 women aged between 19 and 60 years (mean age 41 years) who participated in a rehabilitation program at WorkFocus Australia, an approved worker's compensation vocational rehabilitation provider. Four additional people declined to participate in the study. To be eligible for the study candidates had to be receiving redeployment assistance and to have been referred for a Job Search Programme as a part of their rehabilitation. Participants had been classified as ready to secure employment, in regards to their physical capacity and vocational skills, and were seeking employment with a new employer. Twenty-nine of the participants had previously been employed in physical occupations (labourers, tradesmen, drivers, storemen, and a gymnasium instructor), and the other ten participants had previously been employed in sedentary occupations (administrators, customer service attendants and a dental therapy assistant). Each participant provided their informed consent for the procedures, which were approved by the Murdoch University Human Research Ethics Committee.

Measures

The Depression Anxiety Stress Scale (DASS) is a 42-item self-report instrument with excellent psychometric properties (12). The Depression scale of the DASS assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia. The Anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and the subjective experience of anxious affect. The Stress scale is sensitive to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. The internal consistency (Cronbach's Alpha) for the scales is high (0.91, 0.84, and 0.90, respectively, for Depression, Anxiety, and Stress). The DASS Anxiety scale correlates 0.81 with the Beck Anxiety scale, and the DASS Depression scale correlates 0.74 with the Beck Depression scale (12). Crawford and Henry (13) concluded that the DASS has adequate convergent and discriminant validity, and is a reliable and valid measure of the constructs that it intends to assess.

The Work Potential Profile is a self-report screening instrument that provides measures of employment-related characteristics (14). The scales used in this research included: Coping (self image, self discipline, time sense, stress and anxiety, general satisfaction), Freedom from Major Barriers (preoccupation with health, agitation and aggression, depression, resentment, delusions), Motivation (work, intrinsic and extrinsic motivation, need for status) and Physical Capacity. The higher the scores obtained, the higher the potential of the client for success in employment. Rowe (14) found that the Work Potential profile had high construct and face validity and described the reliability of the Work Potential Profile as excellent. In particular, the factor

structure was found to be consistent across five data sets. Test-retest reliability for the various scale scores averaged 0.91 (standard deviation 0.08) in 21 unemployed people after a 9-day interval, and 0.87 ± 0.13 in 21 employed people after a 5-7 week interval (14).

Procedure

Nineteen participants were randomly assigned to the CBT condition and 20 participants were assigned to the standard Job Search programme. A similar proportion of participants in each condition had previously worked in physical occupations. Depression, anxiety, stress, perceived work capacity, as measured by the subscales of the Work Potential Profile, and employment status were assessed by self-report before and immediately after the intervention. Employment outcome was also assessed at four- and ten-week follow-up via telephone contact, and work status was verified independently by the participant's rehabilitation provider. The programmes were delivered to groups of around five participants, and comprised eight two-hour sessions spread over four weeks. The group format consisted of directed discussion and practical exercises, as follows.

Participants in the standard Job Search programme received four weekly two-hour Job Search sessions, and met for another two hours/week to practice implementing the Job Search strategies. They were introduced to goal setting and resume preparation, and were shown where to look for employment, how to register with the government employment agency, to use the internet to search for jobs, to employ appropriate telephone techniques and to prepare written applications, and how to handle rejection. What to say during an interview, how to say it and what not to say were also addressed.

The psychological intervention was aimed at reducing depression, anxiety and stress levels, thus increasing perceived work capacity and employment outcomes. Participants met for two hours/week for four weeks to discuss stress and relaxation, planning pleasant activities, communication, and positive and negative thinking. The importance of clear communication, and differences between passive, aggressive and assertive styles of communication, were discussed. Participants were taught how to use simple breathing techniques and guided imagery to more effectively manage stress. In addition, the importance of incorporating pleasant activities into their daily routine, and distinguishing between positive and negative thinking, were discussed. To maintain uniformity in the sessions, participants worked through a series of exercises contained in a treatment manual (available upon request) which was developed by one of the authors (CD-P). In addition, participants also received four weekly two-hour Job Search sessions.

RESULTS

The CBT Group and the Job Search Group were similar in terms of age, sex, years of education, time since injury, and period of rehabilitation (Table 1). Before treatment, anxiety was greater in the CBT group than in the standard Job Search group (Table 1), but none of the other psychological or work potential measures differed between the groups.

After treatment, depression, anxiety and stress scores decreased in the CBT group but did not change in the Job Search group (Figure 1). In addition, physical capacity scores increased in the CBT group after treatment but did not change in the Job Search group (Figure 2). The effects of treatment were investigated in Group (CBT, Job Search) by Time (pre- versus post-treatment) analyses of variance for repeated measures. The Group x Time interaction

achieved statistical significance for anxiety [$F(1,37)=8.45, p<0.01$], stress [$F(1,37)=11.7, p<0.01$], and physical capacity [$F(1,37)=5.46, p<0.05$], and approached but did not achieve statistical significance for depression [$F(1,37)=3.74, p=0.061$].

As shown in Table 2, participants in the CBT group secured employment more rapidly than participants in the standard Job Search group. In particular, the mean time (\pm S.D.) taken to secure employment in those who obtained employment was 6.6 ± 2.2 weeks after the onset of treatment in the CBT group compared with 8.3 ± 1.3 weeks in the Job Search group [$t(15.9)=2.16, p<0.05$]. It is noteworthy that seven of the 21 participants who were unemployed at ten-week follow-up were no longer medically fit for work, and another three were pursuing litigation (Table 3). Conversely, three other participants found work shortly after they had settled their claim.

DISCUSSION

Overall, the research demonstrated that affective symptoms decreased in job seeking worker's compensation clients after a brief course of CBT. Importantly, this was associated with an increase in physical capacity and an earlier return to work in the CBT group than in the standard Job Search group. Physical Capacity scores are largely determined by the individual's perceived level of physical fitness and well being, and are related to general health. The significant influence of CBT on physical capacity is congruent with the findings of Turner et al. (15) and Lin et al. (16), who reported that treating affective disorders and increasing coping skills increased physical functioning.

Despite random assignment to treatment conditions, anxiety was greater before treatment in the CBT group than in the Job Search group. If anything, this should have hindered re-employment, because anxiety and depression

following a work-related injury is associated with an inability to predict the future, and with reduced participation in physical activities (7). Thus, the decrease in anxiety after CBT was an important outcome that may have encouraged greater physical activity and ultimately re-employment.

Importantly, participants in the CBT programme reported that they found work sooner after the onset of treatment than those in the Job Search programme. Similarly, Proudfoot et al. (11) found that providing job seekers with CBT significantly increased the likelihood of finding employment. Thus, adding a brief CBT module to a standard Job Search programme may result in significant cost savings as well as alleviating symptoms of anxiety and distress in unemployed clients on worker's compensation benefits.

Workers pursuing litigation are often required to repeat the history of their injury from one medical specialist to another, and to demonstrate disability. Given the length of time taken to successfully pursue litigation settlement, the worker may feel compelled to continue to report high levels of pain to ensure they receive the compensation that they believe they are entitled to. This obviously presents a conflict in the goals of vocational rehabilitation and in securing employment, and may impact on the individual's perception regarding their work abilities. The data collected during the 10-week follow-up provides some support for this view. All three participants who had settled their litigation claim secured employment shortly afterwards. Conversely, clients who were still pursuing settlement remained unemployed 10 weeks after completing the intervention. The negative effects of compensation and litigation on re-employment are well-recognized (17).

Implications

The longer an injured worker is absent from work, the higher the consumption of medical and rehabilitation services (18). An extended period of time off work is usually explained by secondary factors such as anxiety, depression and a lack of appropriate coping skills (19), and by involvement in a prolonged worker's compensation claim that outlasts the recovery period estimated for the physical pathology (7). For example, chronic low back pain appears to depend more on demographic, psychosocial and occupational factors than on the medical characteristics of the condition (20). Thus, it is worrying that mental health care represents only 0.4% of overall health care costs for occupational low back pain whereas diagnosis, surgery and physical therapy accounts for 66% of the overall cost of health care (18).

The current findings suggest that a brief CBT intervention may assist in increasing return-to-work rates in rehabilitation clients whilst reducing associated timeframes and costs, at least in the short-term. CBT appears to reduce the negative psychological impact of work-related injuries, and encourages injured workers to move toward physical and financial health. However, the long-term effects of CBT on return to work requires further investigation, because workplace injuries often result in several spells of work disability (21).

REFERENCES

1. Sullivan MJ, Feuerstein M, Gatchel R, Linton SJ, Pransky G. Integrating psychosocial and behavioral interventions to achieve optimal rehabilitation outcomes. *J Occup Rehabil* 2005; 15: 475-89.
2. Lancourt J, Kettelhut M. Predicting return to work for lower back pain patients receiving worker's compensation. *Spine* 1992; 17: 629-40.
3. Deyo RA, Diehl AK. Psychosocial predictors of disability in patients with low back pain. *J Rheumatol* 1988; 15: 1557-1564.
4. Greenough CG, Taylor LJ, Fraser RD. Anterior lumbar fusion. A comparison of noncompensation patients with compensation patients. *Clin Orthop Relat Res* 1994; (300): 30-7.
5. WorkCover Western Australia (2005) Case Activity Reports, Table 11. Retrieved June 9, 2005, from <http://www.workcover.wa.gov.au>
6. Burns JW, Sherman ML, Devine J, Mahoney N, Pawl R. Association between workers' compensation and outcome following multidisciplinary treatment for chronic pain: roles of mediators and moderators. *Clin J Pain* 1995; 11: 94-102.
7. Hadjistavropoulos HD, Craig KD. Acute and chronic low back pain: cognitive, affective, and behavioral dimensions. *J Consult Clin Psychol* 1994; 62: 341-9.
8. Corey D, Koepfler L, Eltin D, Day H. A limited functional restoration program for injured workers. A randomized trial. *J Occup Rehabil* 1996; 6: 239-249.
9. Cole JD. Psychotherapy with the chronic pain patient using coping skills development: outcome study. *J Occup Health Psychol* 1998; 3: 217-26.

10. Sullivan MJ, Stanish WD. Psychologically based occupational rehabilitation: the Pain-Disability Prevention Program. *Clin J Pain* 2003; 19: 97-104.
11. Proudfoot J, Guest D, Carson J, Dunn G, Gray J. Effect of cognitive-behavioural training on job-finding among long-term unemployed people. *Lancet* 1997; 350: 96-100.
12. Lovibond PF, Lovibond SH. The structure of negative emotional states: comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behav Res Ther* 1995; 33: 335-43.
13. Crawford JR, Henry JD. The Depression Anxiety Stress Scales (DASS): normative data and latent structure in a large non-clinical sample. *Br J Clin Psychol* 2003; 42: 111-31.
14. Rowe H. *Work Potential Profile Manual*. Melbourne: The Australian Council for Educational Research, 1997.
15. Turner JA, Jensen MP, Romano JM. Do beliefs, coping, and catastrophizing independently predict functioning in patients with chronic pain? *Pain* 2000; 85: 115-25.
16. Lin EH, VonKorff M, Russo J, Katon W, Simon GE, Unutzer J, Bush T, Walker E, Ludman E. Can depression treatment in primary care reduce disability? A stepped care approach. *Arch Fam Med* 2000; 9: 1052-8.
17. Greenough CG, Fraser RD. The effects of compensation on recovery from low back injury. *Spine* 1989; 4:947-955.
18. Williams DA, Feuerstein M, Durbin D, Pezzullo J. Health care and indemnity costs across the natural history of disability in occupational low back pain. *Spine* 1998; 23: 2329-36.

19. Feuerstein M, Huang GD, Haufler AJ, Miller JK. Development of a screen for predicting clinical outcomes in patients with work-related upper extremity disorders. *J Occup Environ Med* 2000; 42: 749-61.
20. Valat JP, Goupille P, Vedere V. Low back pain: risk factors for chronicity. *Rev Rhum Engl Ed* 1997; 64: 189-94.
21. Baldwin ML, Johnson WG, Butler RJ. The error of using returns-to-work to measure the outcomes of health care. *Am J Ind Med* 1996; 29: 632-41.

Table 1

Pre-treatment scores in the CBT and standard Job Search groups

	Mean \pm S.D.		t	p
	CBT Group (11M, 8 F)	Job Search Group (16M, 4F)		
Age (years)	43.3 \pm 9.8	37.7 \pm 11.0	1.68	-
Education (years)	10.3 \pm 1.1	10.5 \pm 1.1	.39	-
Time since injury (weeks)	65.0 \pm 45.8	62.5 \pm 49.1	.17	-
Time in rehabilitation (weeks)	41.1 \pm 30.9	37.7 \pm 41.7	.29	-
Depression	12.7 \pm 12.0	9.1 \pm 10.8	1.01	-
Anxiety	10.6 \pm 9.7	5.0 \pm 5.9	2.20	<0.05
Stress	13.6 \pm 9.6	10.5 \pm 10.6	.97	-
Coping	7.2 \pm 1.2	7.4 \pm 1.0	.54	-
Freedom from major barriers	7.3 \pm 2.3	8.3 \pm 1.3	1.66	-
Work motivation	6.4 \pm 0.8	6.5 \pm 1.1	.43	-
Physical capacity	5.2 \pm 3.0	6.5 \pm 2.8	1.34	-

Table 2

Number employed in the CBT and Job Search groups

	CBT group (N=19)	Job Search group (N=20)	χ^2	p
Pre-treatment	0	0	-	-
Post-treatment	4 (21%)	0	4.69	<0.05
4 weeks later	10 (53%)	4 (20%)	4.51	<0.05
10 weeks later	11 (58%)	7 (35%)	2.06	-

Table 3

Reasons for not finding employment at 10-week follow-up in the CBT and Job Search groups

	CBT group (N=8)	Job Search group (N=13)
Continues to job seek	3 (37.5%)	6 (46.2%)
Medically no longer fit for work	4 (50%)	3 (23.1%)
Pursuing litigation	1 (12.5%)	2 (15.4%)
Non-compliant	0	2 (15.4%)

Figure legends

Figure 1. Change in DASS scores (\pm S.E.M.) after treatment in the CBT group and the standard Job Search group. Decreases in depression, anxiety and stress were statistically significant in the CBT group (* $p < 0.05$), but scores did not change significantly after treatment in the Job Search group.

Figure 2. Change in Work Potential scores (\pm S.E.M.) after treatment in the CBT group and the standard Job Search group. The increase in the physical capacity score was statistically significant in the CBT group (* $p < 0.05$), but scores did not change significantly after treatment in the Job Search group.



