

Effect of cognitive-behavioural training on job-finding among long-term unemployed people

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Summary

Background The principles of cognitive-behavioural therapy (CBT) have been applied successfully through individual psychotherapy to several psychiatric disorders. We adapted these principles to create a group-training programme for a non-psychiatric group—long-term (>12 months) unemployed people. The aim was to investigate the effects of the programme on measures of mental health, job-seeking, and job-finding.

Methods 289 volunteers (of standard occupational classification professional groups) were randomly assigned to a CBT or control programme, matched for all variables other than specific content, that emphasised social support. 244 (134 CBT, 110 control) people started the programmes and 199 (109 CBT, 90 control) completed the whole 7 weeks of weekly 3 h sessions (including three CBT, seven control participants who withdrew because they obtained employment or full-time training). Questionnaires completed before training, on completion, and 3–4 months later (follow-up data available for 94 CBT, 89 control) assessed mental health, job-seeking activities, and success in job-finding. Analyses were based on those who completed the programmes. Participants were not aware that two interventions were being used. Investigators were aware of group allocation, but were accompanied in all programmes by co-trainers who were non-investigators.

Findings Before training, 80 (59%) CBT-group participants and 59 (54%) controls scored 5 or more on the general health questionnaire (GHQ; taken to define psychiatric caseness). After training, 29 (21%) and 25 (23%), respectively, scored 5 or more ($p < 0.001$ for both decreases). Improvements in mean scores with training on the GHQ (between-group difference 3.91, $p = 0.05$) and in other measures of mental health were significantly greater in the CBT group than in the control group. There were no significant differences between the groups in job-seeking activity during or after training, but significantly more of the CBT group than of the control group had been successful in finding full-time work (38 [34%] vs 13 [13%], $p < 0.001$), by 4 months after completion of training.

Interpretation These results suggest that group CBT training can improve mental health and produce tangible

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benefits in job-finding. Application of CBT among the unemployed is likely to benefit both individuals and society in general.

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Introduction

People attribute events, particularly successes and failures, to causes, whether they are real or imagined.¹ Such causal attributions may be classified in several dimensions, such as internality (due to oneself or to external factors), stability, pervasiveness, and controllability.² These dimensions can be used to measure, by questionnaire,³ or content analysis,⁴ an individual's characteristic attributional style, which correlates with susceptibility to clinical depression⁵ and physical illness,⁶ risk of relapse in depression,⁷ low motivation and poor achievement in education and athletics,⁸ job satisfaction,⁹ and sales performance.^{10,11} Individuals who typically attribute their failures to internal, stable, and global factors, and their successes to external, temporary, and specific causes, are most vulnerable to poor persistence, impaired performance, and depression.¹² Clinically, cognitive-behavioural therapy (CBT) can modify attributional style,⁷ and can have beneficial effects in depression¹³ and other psychiatric disorders.¹⁴

Unemployment is associated with personal, financial, and social restrictions, which can affect psychological health.¹⁵ The proportion of unemployed people who score above the cut-off point for "psychiatric caseness" on the general health questionnaire (GHQ)¹⁶ is typically 60%, compared with 20% among employed groups.¹⁷ Long-term unemployment typically brings further difficulties, such as psychological changes that can prevent re-employment.¹⁸ Reduced self-esteem, self-efficacy, and expectations of success all decrease the likelihood of a successful outcome in job-seeking, or may reduce the motivation to seek work at all. Many long-term unemployed people cease to believe in their ability to regain employment.¹⁹ The personal cost of unemployment can, therefore, be substantial. There are also, of course, substantial costs to society.

There is a clear need for interventions to assist unemployed people to reduce the negative psychological impacts of unemployment and to help them back into work. However, little psychological assistance is given. Most re-employment programmes aim to clarify job goals, to provide job-seeking or job-related skills, or to resocialise unemployed people to the work environment. There have been few empirically assessed interventions, and those assessed so far have proved to be of little use.²⁰ Three studies that described psychological interventions, however, have reported encouraging results. A

	CBT programme	Control programme
Structure	Seven 3 h seminars, one per week. Assignments between sessions to assist experimentation with and application of strategies	Seven 3 h seminars, one per week. Assignments between sessions to extend each topic
Content	Seminar 1 Introduction to cognitive model Seminar 2 Automatic thoughts, goal-setting, time management, task breakdown Seminar 3 Thought-recording and common thinking errors, planning Seminar 4 Techniques to change unhelpful thinking Seminar 5 Gaining access to deeper beliefs, dimensions of attributional thinking Seminar 6 Specific applications to personal and work situations Seminar 7 Integration of strategies, action planning, and relapse prevention	Concept of social support, health, and unemployment Life satisfaction graphs, peaks and troughs, importance of people Role-mapping, satisfying relationships, personal support networks Social awareness, how to create a positive impression, rules of relationships Listening and conversation skills People as resources, individual presentations Goal-setting, course summary
Training processes	Socratic questioning, group discussions, self-observation, experimentation, individual and group activities, homework assignments	Small group activities, group discussions, individual presentations
Session format	Review of previous seminar Discussion of homework assignments Introduction of seminar topic Individual or group activities Feedback and discussion Suggestion of weekly homework tasks Summary of session Survey of participants' response to session	Review of previous seminar Discussion of homework assignments Introduction of seminar topic Discussion Individual or group activities Feedback Outline of homework task Summary of session

Table 1: Structure of CBT and control programmes

programme to improve self-efficacy in job-seeking led to higher rates of re-employment; job-search behaviour was the major mediator through which high self-efficacy was converted into re-employment.¹⁹ A social-support and problem-solving intervention resulted in increases in quantity and quality of re-employment, but no difference in job-seeking behaviour.²¹ Expressive writing by job-seekers about the thoughts and feelings surrounding job loss increased re-employment success, but did not change job-seeking behaviour.²² To date, however, no psychological intervention derived from an empirically validated psychotherapy technique has been formally investigated.

Our occupational training programme, based on the principles of CBT (table 1), aims to help people identify and modify their attributional style. We assessed the effectiveness of the programme in a group of long-term unemployed professional people, who were likely to experience repeated failure in job-finding. We compared the effects on mental health, job-seeking activities, and success in job-finding with those of a social-support programme in a similar control group. The primary outcome measure of the study was obtaining full-time employment.

Methods

Professional people of standard occupational classification²³ groups 1, 2, 3, and 7 (managerial, administrative, professional, technical, and sales) who had been unemployed for longer than 12 months were recruited via newspaper advertisements, mail shots, the UK Employment Service, and a major out-placement company (Sanders & Sidney). Calculations to ascertain the sample size needed for sufficient statistical power were based on the endpoint of change in attributional style (effect size calculated by subtracting mean attributional style in control group from that in CBT group, divided by 1 SD); the calculations were based on a previous study.²⁴ We found that 70 participants per group were needed (effect size 0.6, significance level 0.05, power 80%). To allow for attrition and to ensure sufficient power by the follow-up phase of the experiment, a sample size of 95 people per group was set. We used a controlled, experimental, two-group design.

We initially planned to have an additional no-training control group. However, recruitment was unexpectedly difficult, perhaps because of the very psychological sequelae of long-term unemployment that our programme was targeting. To maintain sufficient statistical power in the study we therefore dispensed

with this control group. The CBT programme had been previously compared with a wait-list control condition in our study of insurance sales personnel, among whom there is also a high rate of rejection and failure.²⁴ To compensate for the lack of a no-treatment control group, outcome figures from the UK Department of Employment programmes, attendance at which is a standard requirement for all people registered as unemployed, were used as a baseline comparison.

289 people volunteered to take part in the study (figure 1). They were randomly assigned to two groups: the CBT group (n=145) or, to control for the Hawthorne effect,²⁵ the control group, which undertook a programme that emphasised social support²⁶ (n=144). Social support has been shown to moderate the negative psychological consequences of unemployment²⁷ and was, therefore, thought to be a suitable control for the CBT programme. Allocation was generated by a random numbers table. Throughout the study, participants were not aware that two different interventions were being used. Investigators were aware of group allocation, but were accompanied in all programmes by co-trainers who were non-investigators. 244 people started the programmes (CBT n=134, control n=110). The mean age was 43 years in both groups (ranges 23–62 CBT, 23–61 control). The mean duration of unemployment was 25.8 months in the CBT group, and 23.1 months in the control group (range <12 months to 12 years). 83% of participants were male.

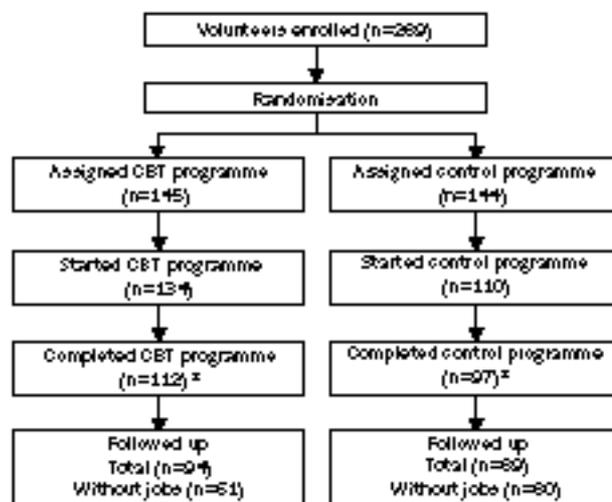


Figure 1: Trial profile

*Includes participants who withdrew from the programme because they gained employment or full-time training: CBT, n=3; control, n=7.

Questionnaire	Scale	High score indicates
Professional self-esteem scale ^{29*}	0 to 6	Strong self-esteem
Job-seeking self-efficacy scale ²¹	1 to 6	Strong self-efficacy
GHQ 30 ¹⁶	0 to 30	High mental strain
Attributional style questionnaire ³	-21 to 21	Strong attributional style for positive and negative events
Motivation for work ^{30,†}	1 to 50	Strong motivation to find work
Life satisfaction ³¹	1 to 7	Highly satisfied

*Plus three additional items: capable/not capable; effective/not effective; confident/not confident.

†Composite of value of work and expectation of re-employment.

Table 2: Summary of psychological tests used

The two programmes (table 1) were based on widely accepted principles of training²⁸ and matched for all variables (eg, format, structure, inclusion of "homework") except detailed content and specific strategies. Both programmes targeted professional people (although the techniques are equally suitable for manual workers) to enable specific job-seeking issues and activities to be addressed. The CBT programme included techniques such as eliciting, recording, and testing the validity of thoughts, reattribution, behavioural monitoring, and experimentation. Weekly homework projects between the sessions helped participants to apply the techniques to their job-seeking activities. In the final session, participants

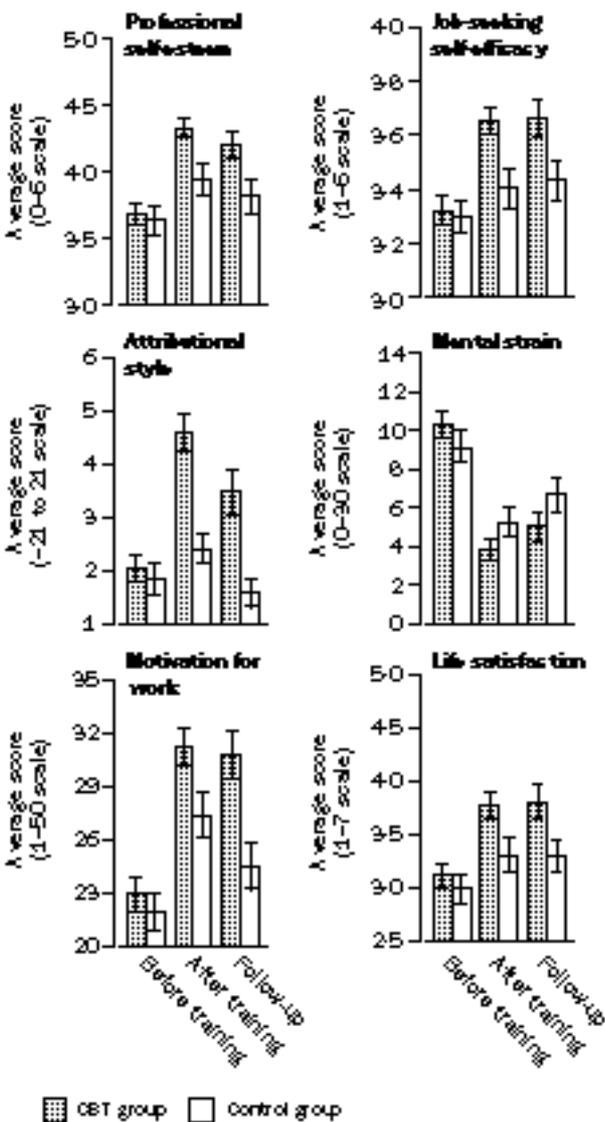


Figure 2: Mean (SE) scores before training, after training, and at follow-up for CBT and control groups

	Group differences in mean score (F df1, df2)			
	Before vs after training	p	Before training vs follow-up	p
Self-esteem	6.25 (1,187)	0.01	1.60 (1,178)	0.2
Job-seeking/self-efficacy	11.20 (1,183)	0.001	4.62 (1,175)	0.03
Mental strain (GHQ)	3.91 (1,172)	0.05	3.85 (1,166)	0.05
Attributional style (composite)	18.11 (1,169)	0.001	11.12 (1,154)	0.001
Motivation for work	3.83 (1,179)	0.05	5.86 (1,170)	0.02
Life satisfaction	4.71 (1,184)	0.05	0.99 (1,176)	0.32

GHQ=general health questionnaire.

Table 3: Group differences in psychological variables measured by χ^2 analysis at postcourse and follow-up

were taught how to use the programme strategies to maintain the changes they had made to their thinking and behaviour, and to overcome future difficulties they might encounter. The social support programme focused on helping participants to explore and strengthen their social and professional networks, with related activities to complete between sessions. (Full details of the programmes are available from the authors.) Both groups attended 3 h sessions once a week for 7 weeks in subgroups of between ten and 15 people. Each session was run by two psychologists, one of whom, in most cases, was JP. 209 participants completed the training and were included in the analyses. This total includes ten (three CBT, seven control; $p=0.23$) who obtained jobs or went on full-time courses during the training period. 31 (20 CBT, 11 control; $p=0.34$) withdrew from the study, mostly after the first and third sessions. The data were incomplete for a further four participants.

Before training started, all participants completed several questionnaires to assess psychological characteristics relevant to job-seeking (table 2). The questionnaires were administered again after the final session and 3-4 months later. Analysis of covariance (ANCOVA), with pretest scores as covariates and post-test or follow-up scores as dependent variables, was used to test for differences between the groups resulting from the intervention. Data were analysed with SPSS/PC version 4.

We collected data on job-seeking activity from daily entries by each participant into a log-book to record the number of different job-seeking activities (eg, seeking information about an advertised job, making a speculative approach to a potential employer, attending an interview, making telephone calls, completing a job application) and the number of hours spent each day in job-seeking. We collected information on job-finding success 4 months after course completion by means of a questionnaire. Differences between the two groups in measures of job-seeking activity were assessed by ANCOVA. Where the assumptions underlying ANCOVA were not met, the data were plotted to ascertain the exact nature of the slopes and converted to change scores (before to after intervention; before intervention to follow-up), and an analysis of the change scores was done by t tests. This method for testing group differences is less satisfactory than ANCOVA, but it does provide a way of taking into account the effect of preintervention scores on outcomes. Differences between the two groups in job-finding success were assessed by χ^2 tests or, for smaller frequencies, by Fisher's exact test.

Results

A score on the GHQ of 5 or above is taken to indicate "psychiatric caseness". At entry to the trial 80 (59%) of CBT-assigned participants and 59 (54%) control-assigned participants scored 5 or higher ($p=0.42$). The overall proportion (57%) is similar to that in previous reports on unemployed people.¹⁷ After training, the proportion scoring 5 or higher on the GHQ was significantly reduced in both the CBT group (to 29 [21%], $p<0.001$) and the control group (to 25 [23%], $p<0.001$), but again the difference between the groups was not significant ($p=0.78$). The post-training proportions are similar to those of people in

	CBT group			Control group		
	Before training (n=85)	During training (n=82)	After training (n=57)	Before training (n=104)	During training (n=104)	After training (n=87)
Job information	1.25 (2.4)	1.28 (2.56)	1.61 (4.23)	0.99 (2.79)	0.94 (2.29)	0.89 (2.58)
Speculative calls	2.61 (6.52)	1.31 (3.66)	1.69 (6.26)	0.74 (2.72)	0.88 (3.22)	0.60 (1.66)
Job applications	1.63 (2.74)	1.45 (2.06)	0.91 (1.76)	1.34 (3.42)	1.28 (3.05)	0.87 (2.37)
Interviews	0.17 (0.33)	0.35 (0.48)	0.35 (0.48)	0.25 (0.48)	0.27 (0.41)	0.33 (0.83)
Follow-up/contacts	3.08 (5.28)	2.44 (4.25)	2.27 (3.81)	1.20 (2.92)	1.17 (2.68)	0.96 (2.86)
Total hours	15.02 (10.36)	18.01 (9.29)	15.41 (10.07)	12.18 (10.32)	14.89 (9.98)	12.83 (9.68)

Table 4: Job-seeking activities

	Before vs during training		Before vs after training	
	t or F* (df1, df2)	95% CI	F or t† (df1, df2)	95% CI
Job information	0.48 (1, 135)	-0.47 to 0.49	1.2 (1, 130)	-1.42 to 0.41
Speculative calls	-1.81 (1, 105)	-1.16 to 0.94	0.15 (1, 130)	-1.73 to 1.16
Job applications	0.01 (1,173)*	-0.59 to 0.64	-0.95 (1, 125)†	-0.31 to 0.61
Interviews	3.27 (1, 173)*	-0.21 to 0.009	0.21 (1, 130)	-0.28 to 0.18
Follow-up/contacts	1.76 (1, 92)	-0.58 to 0.69	0.07 (1, 130)	-1.02 to 0.77
Total hours	0.08 (1, 128)	-2.71 to 0.76	0.42 (1, 130)	-3.38 to 1.71

Table 5: Between-group differences in job-seeking activities

employment.¹⁷ There was, however, a significant difference between the groups in mean GHQ score after training, with a greater improvement in the CBT group (figure 2, table 3, $p=0.05$).

After training, there were also significant differences between the groups in self-esteem, job-seeking and self-efficacy, attributional style, motivation for work, and life satisfaction (table 3). The greater improvement in the CBT group persisted until the 3-month follow-up in job-seeking self-efficacy, mental strain, attributional style, and motivation for work. At this point, 38 (34%) of the CBT group and 13 (13%) of the control group had full-time jobs; when the data for these participants were excluded from the analyses, the only significant group difference at follow-up was in attributional style. There were no significant differences between the groups in job-seeking activity (tables 4 and 5), except among participants who, before therapy, had spent little time job-seeking (less than 8 h per week); in this subgroup there was a significantly greater improvement among those in the CBT group ($F=14.17$, $df=1, 61$, $p<0.001$). However, significant differences were found in the outcome variables for success in job-finding (table 6). In the control group, 13 (13%) people had found full-time jobs by 4 months after the end of training compared with 38 (34%) in the CBT group ($p=0.0006$). If part-time and temporary employment is included, the numbers successful were 27 (28%) in the control group and 55 (49%) in the CBT group ($p=0.0016$).

Discussion

Our results show that the principles of CBT can be applied in disciplines other than psychiatry, in which they were first developed. There were greater

improvements in the CBT than in the control group on several measures of mental health, though the controls also improved (figure 2). Participation in the CBT programme produced substantial changes in job-finding, a good measure of real-life performance. Compared with participants assigned to the social-support programme, almost three times as many CBT participants successfully found full-time employment. No data are available from which to estimate the rate of job-finding in this population if they are given no training at all. However, data from a 6-month Employment Department course for professional people, the "Open Learning" scheme, suggest that 27% of 2900 learners obtained full-time, part-time, or temporary employment,³² the same proportion as in our control group. Therefore, the high proportion who found jobs after CBT probably represents a real effect from our programme.

Participants on the CBT course benefited from improvements in psychological well-being, as well as finding a job. For those who did not find employment, however, the benefits had dissipated by the 3-month follow-up in all variables except attributional style, which suggests a need for regular "top-up" seminars once the programme has finished. Nevertheless, for nearly half of the CBT group, the psychological effects were accompanied by success in job-finding. 15% of the CBT group gained part-time or temporary work. Although these people may become unemployed again in the future, part-time or temporary work is recognised as an effective way to resocialise unemployed people back into the world of work, and to improve full-time job prospects. 34% of the CBT group gained full-time employment. Each long-term unemployed professional who gains a full-time job saves the UK welfare budget about £14 700 a year and generates at least £5000 a year revenue in tax paid. Therefore, the application of CBT to the employment sector has potential benefits for individuals and society at large. The estimated cost of the CBT programme is £400 per person, largely owing to trainers' fees; however, we are developing a multimedia computerised version of the programme, which will substantially reduce the cost.

Of course, this is only one approach to helping unemployed individuals. Job creation and other policy issues in the labour market (such as "social guarantees" of employment and training), and the individual job-

Job-seeking outcomes	CBT participants (n=112)	Control participants (n=97)	p for differences
Full-time job	38 (34%)	13 (13%)	0.0006
Part-time job	7 (6%)	4 (4%)	0.49
Contract/temporary work	10 (9%)	10 (10%)	0.73
Work placement/training for work	10 (9%)	6 (6%)	0.46
Further education, full-time	6 (5%)	7 (7%)	0.58
Further education, part-time*	4 (4%)	1 (1%)	0.38
Voluntary work/community action*	4 (4%)	4 (4%)	1.0
Set up own business	5 (4%)	6 (6%)	0.57
Unemployed	28 (25%)	46 (47%)	0.0007

*Fisher's exact test, others by χ^2 test.

Table 6: Job-seeking outcomes for CBT and control groups

related and job-seeking skills need to be addressed. Nevertheless, our results show the value of psychological interventions such as our CBT programme in reducing negative effects of long-term unemployment and helping the unemployed to gain jobs.

Contributors

This research was carried out by Judith Proudfoot as part of her PhD project. Jeffrey Gray and David Guest supervised the research project. Graham Dunn provided advice on the research design and data analysis. Jerome Carson developed the social skills training programme against which the CBT programme was compared.

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