Effectiveness of brief training in cognitive behaviour therapy techniques for palliative care practitioners

Kathryn A Mannix Marie Curie Hospice, Newcastle upon Tyne, **Ivy Marie Blackburn** Newcastle Cognitive Therapy Centre, Newcastle upon Tyne, **Anne Garland** Nottingham Psychotherapy Unit, Nottingham, **Jennifer Gracie** Marie Curie Hospice, Newcastle upon Tyne, **Stirling Moorey** Maudsley Hospital, London, **Barbara Reid** Marie Curie Hospice, Newcastle upon Tyne, **Sally Standart** Newcastle Cognitive Therapy Centre, Newcastle upon Tyne and **Jan Scott** Institute of Psychiatry, London

We describe training in CBT techniques for 20 palliative care practitioners delivered as 12 days' equivalent teaching plus skills-building supervision over a six month period. Audiotapes of trainees' interactions with patients during their usual work were rated using a specially devised 'Cognitive First Aid' rating scale (CFARS). The CFARS was highly internally consistent (Cronbach's Alpha 0.93) and inter-rater reliability was high. Trainees showed significant gain in CBT skills competency over six months (p=0.001). After initial training, half the trainees were randomised to discontinue supervision; their measured CBT skill dropped as did their self-reported confidence when reassessed six months later, whereas those who continued in supervision gained further skill and maintained confidence (p=0.007). Palliative care practitioners can be trained in CBT skills by a simple and brief training course and supportive, skills-building supervision. These skills are compatible with national guidelines on delivery of psychological support to patients at all stages of cancer. Supervision is necessary to ensure maintenance of skills and confidence to use them. *Palliative Medicine* 2006; **20**: 579–584

Introduction

Emotional distress is a common symptom of advanced and terminal illness,[1,2] and is frequently encountered among patients and their family/carers by staff working in palliative care.[3] Traditionally, palliative care staff are from non-mental health backgrounds, and offer psychological support based on person-centred models of care. These skills may be sufficient to facilitate emotional expression and relief for transient emotional distress during adjustment to bad news, however, there is no evidence to suggest that these models produce lasting emotional improvement in the face of continuing ill-health and consequent emotional disorders, such as depression, anxiety or adjustment disorder.[4]

It has been shown that cognitive behaviour therapy (CBT) is an effective psychological treatment for depression, anxiety and panic in patients with physical health problems, with a reduction in psychological morbidity and enhancement of coping skills, eg, chronic pain,[5] irritable bowel syndrome,[6] and cancer.[7] No formal studies have been undertaken in a palliative care setting,

but extrapolation of work with cancer patients, who subsequently proved to have short life expectancy,[8] and clinical experience of delivering CBT in a hospice setting by one of the authors (KAM), suggest that people with advanced and end-stage illness can benefit from CBT. Such people often have complex care needs and there is a danger of 'too many cooks' involved in their care. Previous research into delivering CBT to cancer patients has relied on referral to an expert cognitive therapist. This may not be desirable or practicable for very ill people with small energy reserves and a limited capacity for new therapeutic relationships, and adds considerably to the cost of delivering care. This study aimed to establish whether (i) a brief training course would enable palliative care practitioners to deliver CBT-based interventions for their patients; and (ii) whether they could maintain their skills after cessation of the training course. The study, therefore, assessed the effect of training on the skills of the whole group (before and after, no controls), and the effect on skills of continuing supervision after training for half the group only, the other half acting as a control set. In current cancer and palliative care practice, it is unusual for practitioners to have access to supervision; the second part of our study was intended to investigate whether skills are sustainable in the absence of supervision.

Address for correspondence: Dr Kathryn Mannix, Marie Curie Hospice, Marie Curie Drive, Newcastle upon Tyne, NE4 6SS, UK.
E-mail: kathryn.mannix@nuth.nhs.uk

Method

Participants

A sample of 22 volunteer trainees was obtained by local advertisement. Trainees' demographic characteristics, previous experience in palliative care and previous training and experience in management of emotional distress were recorded. All trainees were palliative care practitioners of at least five years' standing, and included 16 nurses – either palliative care clinical nurse specialists ('Macmillan nurses') or experienced hospice nurses, two palliative care occupational therapists and two hospice social workers. All were CBT naïve. One hospice nurse had trained and worked briefly as a Registered Mental Nurse (RMN) in the 1970s before moving into a physical health nurse role. All but one trainee were female. All trainees agreed to attend the training and supervision components of the training course and had the written support of their managers; they also agreed to supply audiotapes of their interviews with patients at prescribed intervals. Trainees did not have access to any source of psychological practice supervision prior to participation in the study, and none, apart from that provided within the study, during the study period.

Training

The trainers (I-MB, AG, KAM and SM) were all experienced cognitive therapists and teachers of CBT. One trainer (SM) was also experienced in delivering CBT

Table 1 Content of brief training course in CBT techniques

1. Initial three-day introductory sessions
Day 1:
    Thoughts – mood links
    Thought distortions and their consequences
    Assessing mood
    CBT 'style': collaborative empiricism and guided discovery
Day 2:
    Examining and modifying negative automatic thoughts (NATs)
    Testing thoughts against evidence
    Behavioural and cognitive techniques for thought testing
Day 3:
    Coping strategies in serious illness
    Specific psychological considerations in advanced illness
    Problem solving

2. Weekly half-day sessions
  1. Use of measurement in CBT; rating scales; thought/activity diaries
  2. Assessment: diagnosing the problem, agreeing the problem, setting realistic goals
  3. Structuring a CBT session
  4. Cognitive model of panic
  5. Cognitive models of depression; dealing with hopelessness
  6. Anxiety and worry
  7. 'Ifs and shoulds': underlying assumptions
  8. Conceptualization and maintenance of mood disorders
  9. Cognitive therapy rating scale
 10. Session used to answer specific practice points raised by trainees

to cancer patients, and another trainer (KAM) was a palliative care consultant with a hospice-based CBT practice.

The training consisted of:

- Nine days' equivalent taught sessions, which included basic theory of CBT and introduction of models for depression, anxiety and panic and for specific adjustment responses to serious illness; relevant behavioural interventions and cognitive interventions; role play and skills practice; modelling of interventions by the trainers; reflective diary-keeping by all trainees. The course content is summarized in Table 1. The taught component was delivered over a 12-week period and consisted of an initial block of three days, followed by a half day each week plus homework exercises based on CBT interventions, eg, thought diary.

- Three months of fortnightly skills-building supervision in groups of four trainees, for 2 hours, each group working with a supervisor who was both familiar with delivering CBT in a physical health setting and an experienced CBT trainer. Supervision was structured to build skills and to model guided discovery for the trainees. Trainees were encouraged to bring audiotapes to supervision for reflection and comment.

- Each trainee was allocated either to continue or discontinue supervision using a randomization procedure (random number table), which was independent of the trainers or supervisors. For those randomized to ongoing supervision, the approach remained as described above and was intended to maintain competent delivery and appropriate application of skills already acquired. Those not allocated to a supervision group continued to apply CBT skills independently.

Outcome measure

The primary outcome measure of the level of competency in the trainees' application of CBT techniques was change over time, as rated from audiotapes of actual clinical sessions with patients seen by the trainees during routine palliative care practice. Secondary outcome measures included the trainees' self-reported experience of learning CBT techniques and using CBT techniques in their clinical practice, and measures (not reported here) of personal emotional well-being and job-related stress.

Assessment of competency

(a) Competency rating scale:

Training was intended to enable the trainees to recognise emotional distress arising from distorted thinking and to select and use appropriate techniques to help the patient to gain insight, change behaviour and regain a sense of control. The training was an introduction to CBT and its application in palliative care settings;

it was not our intention (nor would it be feasible in the training time available) to achieve the level of competency and sophistication in CBT expected from mental health professionals attending extended post-graduate CBT training courses. Our goal was likened, by one of the trainees, to enabling them to apply 'cognitive first aid'. Use of a rating scale to measure competence as a cognitive therapist, eg, the Revised Cognitive Therapy Rating Scale (CTSR),[9] was therefore not appropriate. However, the principles underlying the CTSR (namely, skilful application of an appropriate technique to an appropriate problem and adherence to a cognitive model and style of therapy) were felt appropriate. This approach has been successfully used in other research undertaken by JS.[10] The research team, therefore, developed a 10-item scale, based on the CTSR, but adjusted to measure the skills and competencies taught in our training schedule and appropriate in a palliative care setting. Each item was measured on a seven-point scale (0–6), giving a maximum possible score of 60 for each tape.

The 10 items of the Cognitive First Aid Rating Scale (CFARS) thus derived were: focus/structure of session; pacing; chunking and feedback including capsule summaries; integrating CBT into the therapist's professional model of care; building and maintaining a collaborative relationship; guided discovery; interpersonal effectiveness; eliciting key components of a CBT-based model; application of appropriate CBT change techniques; and appropriate closure.

(b) Assessment procedure:

Trainees from both groups were asked to provide audiotapes of clinical sessions at regular intervals throughout the study. However, we were interested in three specific time points to assess skills before training (baseline, month 0), after training and the supervised practice received by all trainees (month 6), and at the end of the study, after one group had experienced a further six months of supervision and the other group had continued to practice CBT interventions without this extended supervision (month 12).

All tapes were anonymized and were rated independently, blind to month of recording (0, 6, 12) by two raters. Using a balanced design, the four raters were paired with each other an equal number of times, across all time points. The trainee provided a brief written statement of the circumstances in which the session had taken place – eg, home visit for pain control assessment, hospital in-patient worried about telling her children that she was dying, hospice day-care patient worrying about his breathlessness – to enable the raters to judge such domains as pacing and appropriate closure in context.

Self-reported use of skills

All trainees participated in a structured clinical interview, detailing their experiences of learning CBT and their use of skills. We compared the self-reported frequency of use of 23 different CBT skills in each group at the end of training (at the point of randomization) and at the end of the study.

Statistical analysis

We used repeated measures analysis of variance (ANOVAs) of the competency rating scale score CFARS (the score was the mean of the two independent tape ratings at that time point) with the baseline score as a co-variate. All analyses were checked for homogeneity of variances, and the Greenhouse–Geisser co-efficient used to correct for autocorrelation. Examination of missing values (ie, tapes of sessions not recorded or submitted for CFARS rating) suggested that these were randomly distributed in the whole sample and within each group. Although it was important to preserve the sample size, the last observation carried forward (LOCF) approach might make unwarranted assumptions about an individual trainee's progress (as baseline ratings suggested a broad spread in skills levels prior to training, and rate of change in competency also varied). We determined that the most appropriate approach was to replace missing values with the group mean.[11] However, this approach may lead to an underestimate of the standard deviation and increase the likelihood of Type 1 errors. The analysis was, therefore, weighted according to number of ratings available for the trainee, ie, towards trainees in both groups with actual competency rating scale scores as opposed to imputed scores.[12] Dunnet's tests were used for post-hoc assessments of group differences at each time point.

Non-parametric analyses, such as Pearson-corrected χ^2, Fisher's exact and Mann–Whitney U-tests were also used as appropriate. For all analyses, a $P \leq 0.05$ on two-tailed testing was regarded as statistically significant.

Table 2 Baseline characteristics of trainees randomized to continue or discontinue supervision

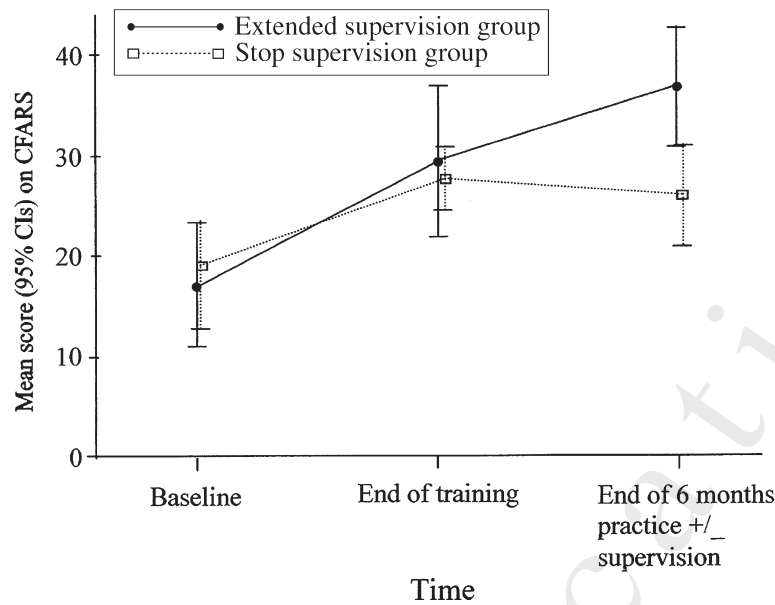|	Trainees continuing in supervision ($n = 10$)	Trainees stopping supervision ($n = 9$)
Baseline mean CFARS score (SD)	17.4 (8.6)	18.8 (7.1)
Previous psychological skills training	7	7
No previous training	3	2
Mean years in palliative care (SD)	8.45 (3.4)	8.27 (5.9)

Figure 1 Graph showing change in CFARS score over time between groups randomized to continue or to stop supervision after the training period.

Results

Two participants dropped out during the first part of the course (ie, prior to randomization), one cited pressure of other work and one did not wish to use role-play as a learning tool. Another trainee was unable to complete data collection due to illness.

Reliability of CFARS rating scale
Inter-rater reliability was measured by intraclass correlation coefficient (ICC). Six rater pairs were examined. The six ICCs ranged from 0.66 to 0.82 (median: 0.75), $P < 0.001$, showing high inter-rater reliability.

The internal consistency of the CFARS, as examined using Cronbach's Alpha, was 0.93 (high). All items contributed equally to the reliability of the scale; the lowest alpha coefficient was 0.92 and the highest was 0.94.

Effect of training phase on trainees' CFARS score
The mean baseline competency level scores suggested that trainees had some basic skills in the techniques of

CBT (mean baseline CFARS score for whole group: 18.1; standard deviation: 7.7; range: 14.5–21.7). As shown by the range and standard deviations of baseline scores for each group, the trainees demonstrated a range of competence in the key domains assessed, with some trainees already possessing significant skills (Table 2). There were no differences at baseline assessment in years of clinical experience, previous psychological therapy training or CFARS score between trainees who were and those who were not allocated to the extended supervision group.

As shown in Figure 1, competency levels in both groups improved from baseline assessment to final follow-up. The repeated measures ANOVA (Table 3) demonstrated an overall significant change in the level of competency over time ($F = 37.03$; df 1.18; $P = 0.001$) and a statistically significant group by time interaction ($F = 7.51$; df 2.17; $P = 0.013$). The group receiving the initial training and skills-building supervision without the extended supervision showed a significant increase in mean CFARS score between baseline (group mean: 18.8)

Table 3 Competency in use of CBT techniques measured by change in mean CFARS scores over time

Time of assessment	Training subgroup	Mean CFARS score (95% CI)	F (df 1.18)	Significance	Repeated measures ANOVA of change in CFARS (df 1.18)
Baseline	Group 1	17.4 (11.2–23.5)	$F = 0.165$	0.69	Time: $F = 37.03$, $P = 0.001$
	Group 2	18.8 (13.7–23.8)			
End of training	Group 1	29.5 (22.0–37.0)	$F = 0.24$	0.629	Group by time: $F = 7.51$, $P = 0.013$
	Group 2	27.7 (24.5–30.9)			
End of study	Group 1	36.6 (30.7–42.5)	$F = 9.11$	0.007	
	Group 2	26.1 (20.8–31.3)			

Group 1: continued supervision. Group 2: discontinued supervision.

and six months (group mean: 27.7), but no further improvement, indeed a slight decline in mean CFARS score between six and 12 months (group mean: 26.1). The group receiving extended supervision showed continued gains of the CFARS (group means = 17.4; 29.5; 36.6). Post-hoc assessments of group differences at each time point showed no differences at the end of training (six months), but a statistically significant difference in competency level at 12 months ($F = 9.11$; df 1.18; $P = 0.007$).

A review of self-reported use of CBT skills revealed no between-group differences in skills utilization at the point of randomization. However, four statistically significant between-group differences were noted at final follow-up. In each case, the group receiving extended supervision were more likely to report using the identified skill than the group no longer receiving supervision. The four items were: modifying automatic thoughts (Fischer's exact test, 10 versus 4; $P = 0.05$); use of formulation (Fisher's exact test, 9 versus 2; $P = 0.023$); using a cognitive model of depression (Fisher's exact test, 8 versus 3; $P = 0.045$); modifying core beliefs (Fisher's exact test, 8 versus 2; $P = 0.043$).

Discussion

Our study has demonstrated that brief, focussed training in CBT techniques supported by supervision, produces a significant improvement in the ability of palliative care professionals to recognize emotional distress in their patients which arises from distorted thinking, and to select and use appropriate CBT techniques, to enable their patients to gain insight, change their behaviour and regain control. The objective evidence of change in practice, as measured by the CFARS scores of audio-taped sessions with patients, is reflected by the self-reported data, where the group randomized to discontinue supervision reported significantly reduced use of the key skills of modifying automatic thoughts, use of formulation, using a cognitive model of depression and modifying core beliefs.

The CFARS scale we devised for this study reflects the competencies included in the training. Our study did not assess patient outcomes. A future study will investigate the relationship between competency, as measured by CFARS, and patient outcome. This will require a large-scale study in order to have sufficient power to detect significant relationships.

Most palliative care patients are psychologically robust individuals who are distressed because they are under extraordinary stress.[4] They may not need the input of a mental health professional in order to manage their emotional distress. However, they may need the benefit of a structured, time-limited, problem-focussed approach to solve their emotional distress, as is offered by CBT. There is evidence emerging that CBT is an appropriate and effective intervention for such patients,[13] thus reinforcing the recommendation in the Improving Supportive and Palliative Care for Adults with Cancer Guidance issued by the Department of Health for England and Wales in 2004,[14] that CBT is a suitable therapy for cancer patients with psychological distress.

The Improving Supportive and Palliative Care Guidance suggests that four levels of expertise are required for the management of the emotional/psychological needs of cancer patients, from diagnosis through to palliative care and dying. Level 1 is a statement of basic communication skill requirements of all health and social care professionals; level 4 is defined as mental health professionals, who can diagnose psychopathology and deliver specialist interventions, including CBT. Practitioners at level 2 (health or social care professionals with additional expertise; competent to screen for psychological distress and with competencies in some psychological techniques, such as problem solving) and level 3 (trained and accredited professionals; competent to assess for psychological distress and diagnose some psychopathology, and with competencies in specific psychological interventions delivered according to an explicit theoretical framework), will be professionals involved in the normal care of patients, who require additional training to be competent in the assessment of emotional distress and to deliver appropriate therapeutic interventions.

We have demonstrated that brief training in CBT techniques, supported by adequate supervision, can train non-mental health palliative care practitioners to the required standard for level 3 of this framework. Further, our results suggest that training alone is insufficient to equip health or social care professionals with sustainable skills, and that supervision is necessary to ensure that skills and the confidence to use them are maintained.

Conclusion

Our study demonstrates that palliative care practitioners can be trained in CBT skills by a simple and brief training course and supportive, skills-building supervision. This model is easily reproducible, and compatible with national guidelines on the delivery of psychological support to patients at all stages of cancer.

Members of the research team are now engaged in investigating patient outcomes in palliative care patients whose professional carers have completed a similar training programme.

Acknowledgements

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