

Cognitive–behavioural skills training for medical students: development and evaluation

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Aims and method The effective management of patients with anxiety, depression or somatisation, who commonly present across all medical disciplines, requires an understanding of both pharmacological and psychological approaches such as cognitive–behavioural therapy (CBT). However, there is little research addressing effective ways of delivering CBT training that is relevant for doctors. We provided CBT skills training that included supervised casework to medical students at Oxford University and assessed participants' experiences.

Results The training was feasible, sustainable and highly valued. Students reported marked improvements in knowledge and skills related to CBT and felt more convinced of its effectiveness for patients and its relevance for doctors. They also gained generic medical skills and an increased understanding of mental health problems.

Clinical implications Supervised casework appears to be an effective format for learning. It allowed students enhanced responsibility for patient care and an opportunity to practise using cognitive–behavioural strategies, some of which would be transferable to medical consultations.

Declaration of interest None.

The effective management of patients with anxiety, depressive disorder or somatisation, who commonly present across all medical disciplines, requires an understanding of both psychological and pharmacological treatments.^{1–3} The UK's Improving Access to Psychological Therapies (IAPT; www.iapt.nhs.uk) multimillion pound programme reflects a political commitment to a stepped-care model of care for patients, with an emphasis on cognitive–behavioural therapy (CBT). It is therefore important for doctors to have an awareness of basic cognitive–behavioural principles and skills, together with an understanding of which patients might derive benefit. Medical education, which has traditionally focused on a pharmacological approach, needs to evolve to reflect this.^{4,5}

There are no published reports of CBT teaching for medical students and little research addressing the delivery of relevant training for health professionals who are not planning to be career cognitive therapists.^{6,7} A randomised trial of 116 general practitioners (GPs) in the UK found that a training package of four half-day sessions about brief CBT for depression, which did not include an opportunity to practise skills through supervised casework, had no impact on the GPs' knowledge and attitudes towards depression.⁸ The form of training may be important – two before-and-after studies in the UK and Canada evaluating CBT training for 20 palliative care practitioners and 34 mental health practitioners, in which the educational programme did incorporate supervised casework, demonstrated effective

learning of skills.^{9,10} Training also needs to focus on teaching skills that are feasible for use in the practitioners' routine setting.^{11,12}

This paper describes and evaluates an innovative cognitive–behavioural skills training programme for medical students, which includes a clinical opportunity to take enhanced responsibility for patient care.

Method

Participants

All 54 medical students at Oxford University who had chosen to undertake the clinical component of the cognitive–behavioural skills training programme between October 2004 and May 2007 were included in the evaluation.

Training programme

We aimed to provide training that would be specifically relevant for doctors, focusing on the need to use psychological services efficiently within a stepped-care model. Training takes place during the psychiatry attachment when students are in the penultimate year of their training. Students are encouraged to develop skills in using brief psychological interventions such as guided self-help and to consider applying cognitive–behavioural strategies within medical consultations.

Structure of training

The programme comprises two 3-hour interactive workshops 1 week apart followed over the next 4 weeks by the optional supervised clinical experience (Box 1). All medical students are expected to attend the first workshop but subsequent training is not part of the core curriculum and is one of many student-selected components in the medical course which are limited by the available resources. Three-quarters of students are able to undertake workshop 2 and a quarter can be accommodated for the clinical placement. The clinical experience is therefore undertaken only by students who are interested in developing their understanding of CBT.

Student supervision during the clinical experience

Group supervision of students during the clinical placement followed the format commonly used for training and supervision of CBT therapists and was compulsory. There were weekly group meetings (60–90 min) for students (up to 7) to discuss patient progress with the psychologist. It was an opportunity for reflection on both clinical and professional issues arising from the work, further skills training for the students, planning for future management of the patient, including provision of appropriate CBT-based self-help materials, and personal support of the student.

Patients

Patients were typical of those presenting with mild to moderate mental health problems in a primary care setting. We excluded patients at risk of self-harm, those with severe alcohol or drug problems and those with a track record of non-attendance.

Patients attended a joint assessment session with a student and a psychologist and were then given the option of continuing to see the student for guided self-help if this was appropriate. They were fully informed verbally and in writing of the student's experience and supervision arrangements, and all patients were aware that they could withdraw at any time. Clinical responsibility for the patient remained with the GP and the psychologist monitored each student-patient contact. Patients were offered the intervention while on a 6-month waiting list for psychological treatment and therefore could benefit from an early assessment from a consultant clinical psychologist and by the provision of appropriate self-help resources.

Evaluation instruments

The evaluation included both quantitative and qualitative elements. The student learning experience was collected and analysed through in-depth interviews with five students from the first three cohorts. These experiential data were then used to design a semi-quantitative anonymous questionnaire for all other students who had undertaken the training. This process ensured that the questionnaire addressed issues of relevance for the learners.

Self-reported changes in knowledge, skills and attitudes related to both CBT and clinical practice, plus the perceived educational value of a learning experience, which included enhanced responsibility for patient care, were evaluated

Box 1 Content of training

Workshop 1 (available to 100% of participating students)

- Introduction to the CBT model
- Indications and evidence of effectiveness
- Modalities of delivering CBT (e.g. individual therapy, guided self-help, computerised CBT)
- Explaining CBT to a patient
- Potential uses of CBT skills in routine medical consultations

Workshop 2 (available to 75% of students)

- Assessment and formulation in CBT
- Goal setting
- Questioning style
- Identifying and challenging negative automatic thoughts
- Behavioural experiments

Workshops are interactive and include video material demonstrating CBT techniques, experiential elements in the form of role-play exercises with actors, comparison of a range of patient self-help materials, group discussion and presentation of information by both psychologist and GP.

Clinical experience (available to 25% of students)

- Joint assessment with psychologist for conceptualisation of patient problems, selection of appropriate self-help resources, risk assessment
- Weekly independent sessions with patient for guided self-help
- Weekly student group supervision with psychologist
- *Ad-hoc* support from psychologist/GP
- Brief record of each session on GP computer system
- Student summary at end of intervention

CBT, cognitive-behavioural therapy; GP, general practitioner.

retrospectively using Likert and visual analogue scales. We continued to collect qualitative data related to the learning experience using open-ended questions about the perceived benefits and problems of the training. In this way we were able to check our original qualitative analysis and to gather additional information to augment and explain the quantitative results. Students were asked to rate on a 4-point Likert scale whether they had sufficient access to supervision and support (no, definitely not; no, probably not; yes, probably; yes, definitely).

Acceptability to patients was assessed using a modified version of a validated satisfaction measure with additional questions related to medical student involvement and the perceived quality of care.¹³ Patients were also asked to complete standardised clinical measures at assessment and the final guided self-help session.

Analyses

We used a mixed-methods approach, an increasingly acknowledged research design for an educational evaluation,

as it provides both depth of understanding and triangulation of data.¹⁴ Thematic analysis was used for the in-depth interviews and for the responses to the open-ended questions in the semi-quantitative questionnaire. We summarised the scores for knowledge, skills and attitudes graphically using means and standard errors.

Results

Students

Almost all students (92%) completed the semi-quantitative questionnaire: 29% were graduate-entry students, 36% were male and 16% already had a psychology qualification. Students delivered a median of three sessions (range 1–5) of guided self-help to patients.

Patients

Two-thirds of patients (61%) had a diagnosis of moderately severe anxiety disorders (mean Beck Anxiety Inventory¹⁵ 19.9), 33% were experiencing moderate levels of depression (mean Beck Depression Inventory¹⁶ 18.8) and 5% presented with other problems such as anger or relationship difficulties. Patients were aged between 17 and 83 years, with a mean age of 40 years; 77% were female and the majority (82%) were White British.

Main findings

Students

The overall rating of the course by students was very positive: 71% ranked the learning experience as excellent and 27% as good; 82% would definitely recommend the course to another medical student who was interested in participating.

Acceptability to patients

Of the 23 patients who were sent satisfaction questionnaires, 15 responded: 47% felt very satisfied, 40% mildly satisfied and 13% mildly dissatisfied; 72% were very or mostly happy to see a medical student and 79% rated the quality of care received as good or excellent. Data collection of standardised clinical measures after the self-help intervention was incomplete and is not reported.

Change in knowledge, skills and attitudes

Students reported marked improvements in their knowledge and skills related to CBT after the training and felt significantly more convinced of both its effectiveness for patients and its relevance for doctors. Figure 1 shows both the increase in learning as a result of the experiential workshops and the additional benefit of the clinical experience. Qualitative data showed that the supervised casework changed students' attitudes towards using CBT in clinical practice.

Seeing how it made a difference with someone definitely helped me... people were sceptical after the lecture... so it was useful to have a positive experience. (Student 1)

I am more willing as a clinician to consider non-medical therapies in the management of patients. (Student 2)

I learned a skill that I would not otherwise have thought was important to clinical practice. (Student 3)

Enhanced responsibility for patient care

Students had particularly valued the opportunity to take a greater level of responsibility for patient care; 96% rated this greatly (5) or very much (4) on a 5-point Likert scale. For many students the experience was empowering.

It's the first time that a patient was coming specifically to see you – that's a different sense of responsibility which was a really positive thing. (Student 1)

It was challenging and rewarding to take on the role of a therapist...to be directly involved in patient care and be treated more like a doctor. (Student 4)

Sometimes you get a bit downhearted as a student – it was a real confidence booster. (Student 5)

The majority of students (89%) reported having had no other opportunities to take a similar level of responsibility during the medical course – but all indicated on a 4-point Likert scale that they would 'definitely' or 'probably' value more opportunities to do this.

Reflection and learning concerning professional in addition to clinical issues occurred as a result of the students taking responsibility for the guided self-help sessions. The weekly group supervision was an opportunity for discussion and support from peers as well as tutors. Having time to focus in depth on a particular patient was also felt to enhance learning.

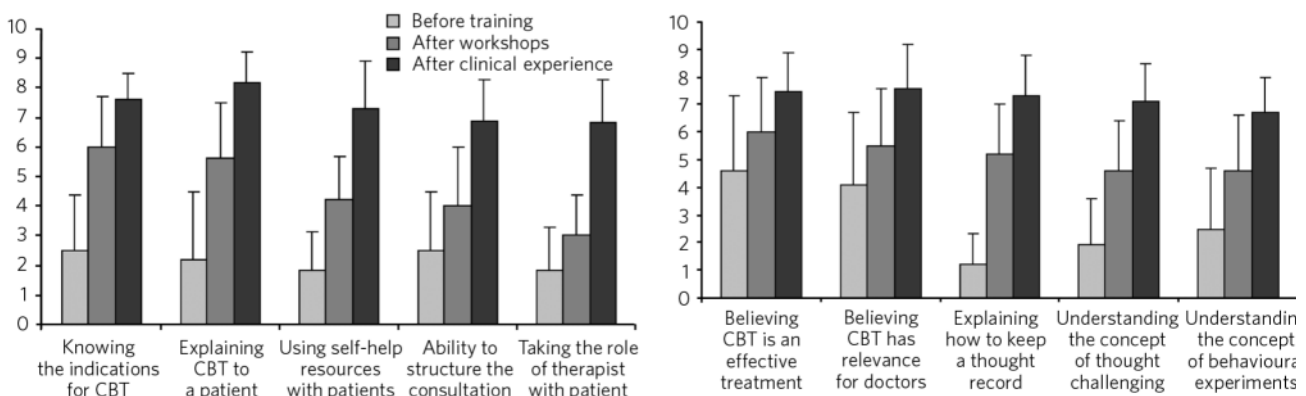


Fig 1 Change in knowledge, skills and attitudes before and after training (n = 42).

CBT, cognitive-behavioural therapy.

It helped me to reflect on my professional responsibilities as a doctor, to prepare for patient care, ensure sessions were organised and that care progressed. (Student 6)

Even if you are on a medical ward seeing a patient for 6 or 8 weeks you still haven't spent 3 hours talking to them in all that time. (Student 7)

Generic skills

Although the primary aim of the programme was to teach medical students about CBT, it emerged from both qualitative and quantitative data that it had also been a vehicle for generic learning about communication skills and common mental health problems. A significant proportion of students believed their skills and clinical knowledge had improved 'moderately' or 'very much' (on a 4-point Likert scale; communication skills – 73%, clinical skills relating to mental health – 75%, clinical knowledge relating to mental health – 43%). Fewer students reported improvements in clinical knowledge; this reflects a variety of clinical experiences and baseline knowledge but also demonstrates that the students did not automatically report that they had benefited from the training. Qualitative feedback revealed benefits relating to structuring the consultation, setting achievable goals, facilitating patient participation and using active listening skills together with increased insight into the patient experience of having a mental health problem.

Looking back, I was amazed how little I knew about the massive impact of such a common problem as depression and believe this experience will change the way I interact with similar patients in the future. (Student 8)

To have the role as the therapist and not be the friend, to take a step back and redirect and focus things. (Student 9)

Giving a structure to the meeting... setting an agenda together at the beginning. (Student 7)

Prompting patients to draw their own conclusions is more effective than giving advice. (Student 10)

Most students (91%) felt that they had 'probably' or 'definitely' been able to help the patient and this had been rewarding (Box 2); 42% students commented that time to talk had been helpful for the patient.

I'd like to think it helps who you are talking to as well. It's a two-way street – you learn and the patient gets something out of it as well. (Student 7)

Patients value a sympathetic objective listener, however inexperienced. (Student 11)

Need for support and supervision

Students reported the need to feel well supported, both professionally and emotionally, during the clinical experience; 98% students felt that there had probably or definitely been sufficient access to supervision when seeing the patient (4-point Likert scale).

I was very nervous in my first session and came out quite despondent – however, I received brilliant support following this. (Student 12)

If I'd felt it was just down to me that would have been awful. (Student 1)

Problems identified

The majority of students reported that there had been no problems with the training. Several students mentioned patient non-attendance or unsuitability for CBT, difficulty with fitting the experience in with their psychiatry

placement, especially if this was outside Oxford, or logistic issues such as room availability. The most commonly reported problem was oversubscription of places for the clinical experience, with some students missing an opportunity they were keen to take up.

Discussion

The CBT skills training programme was feasible, sustainable and highly valued by students, who particularly appreciated the opportunity to take responsibility for patient care. Students reported learning not only about cognitive-behavioural interventions but also generic skills related to becoming a practitioner such as communication skills and understanding of mental health problems. Within the well-supported framework of group supervision, the challenge of taking the role of therapist was empowering, allowing the student to experience positive feedback related to treating a patient. Students reported having few other opportunities to do this during their undergraduate medical training but overwhelmingly expressed a desire to do so. The student-delivered intervention was found to be acceptable to patients, some of whom derived clinical benefit and did not need further psychological help.

The addition of the clinical experience to the class-based workshops enhanced learning about CBT relevance

Box 2 Student perceptions of ways in which they were able to help the patients

Generic skills

- Time to talk
- Patient realising not alone
- Safe/encouraging/non-judgemental approach
- Facilitation
- Regular contact
- Focusing on what could change
- Identifying needs and strengths
- Confidence building
- Lifestyle advice to reduce alcohol consumption
- Self-help resources
- Relaxation exercises
- Giving insight into perspective of a young person
- Patient liked idea they could help with training

CBT-specific skills

- Strategies for managing anxiety or anger
- Thought diaries/thought challenging
- Behavioural experiments
- Objective approach based on evidence
- Structured approach

CBT, cognitive-behavioural therapy.

and effectiveness. It allowed the students to practise using cognitive-behavioural strategies with patients; some of those strategies might be transferable to a medical consultation, such as behavioural activation, identifying and challenging negative thinking and guided self-help. Strategies to elicit and address the cognitive and behavioural factors contributing to medical conditions can be very helpful for doctors. Failing to elicit a patient's ideas and concerns about symptoms and failure to address behavioural factors may lead to persistence of symptoms, repeated consultation and inappropriate referral or treatment, which has costs not only for patients and their carers but also the healthcare system as a whole.^{17,18}

Students reported that having time to focus in depth on one patient with the support of an experienced practitioner particularly facilitated their learning. In line with similar interventions for qualified practitioners, supervised case-work appeared to be an effective format which had particular value for medical students as it allowed them more responsibility than usual for patient care and was an opportunity to practise and reflect on professionalism.

Self-report was a valid way to explore the learners' experience of the training, particularly as we based our questionnaire on information which was derived from in-depth interviews with the learners themselves. However, it was a less robust method for assessing change in knowledge and skills as it has been shown that estimates of improvement made by individual doctors may be optimistic when compared with objective measures.¹⁹ Responses to the questions related to knowledge and skills should therefore be interpreted with some caution, especially as the data collection was retrospective. Nevertheless, there were consistent trends and a substantial increase in learning before and after training, which were reported by students in separate groups across three consecutive year groups. Within the sample, we noted evidence of variability in self-reported improvement in different areas of learning, suggesting both an ability and willingness to be discriminating. These factors, together with the alignment of the qualitative and quantitative responses, strengthen the internal validity of the questionnaire. A particular advantage of the mixed-methods approach was demonstrated by the emergence of themes related to the value of taking responsibility and learning generic skills, which we had not anticipated.

Although the students could remain anonymous when replying to the semi-quantitative questionnaire, their relationship with both teachers may have coloured the responses, which were very positive. Some students may have felt unable to be critical of the programme. There was also a potential for bias in the study concerning interpretation of the qualitative data.

Conclusions

Undergraduate education would be enhanced by the introduction of CBT training. It would be highly desirable to create more opportunities for students to take some responsibility for patient care as this could facilitate professional development.²⁰ It was recently recommended by the General Medical Council that 'clinical placements

should move the student systematically to a more central role before they take on responsibilities of an FY1'.²¹

Training encouraged positive attitudes towards psychological approaches and raised student awareness of their relevance for doctors, therefore it seems well placed within an undergraduate curriculum. The interprofessional teaching format overcame the problem that at present few doctors are sufficiently skilled to teach CBT skills. The involvement of a medical practitioner in addition to a psychologist ensured students perceived how and why the training was relevant for them.

Is our training programme a generalisable model? A high level of student support and commitment from both clinical psychologist and GP is required. However, it may be possible in the future for the IAPT programme to provide opportunities for supporting and supervising medical students undertaking this type of clinical experience. In our study, students were self-selecting and motivated; as it is a challenging experience it is possible that less confident students could be overwhelmed rather than empowered. It also requires appropriate patient selection.

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