Innovations in Practice: Mindfulness-based cognitive therapy for depression in adolescents

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Background: Mindfulness-Based Cognitive Therapy (MBCT) has been shown to be effective in preventing relapse of depression in adults, but has not previously been applied to adolescents who have residual symptoms of depression following treatment. Method: An 8-week MBCT group was adapted for adolescents, and evaluated using qualitative and quantitative measures. Results: Participants report high levels of satisfaction with the group intervention. Qualitative analysis of semi-structured interviews provides areas for future development of this intervention. Pilot data indicate reductions in depressive symptoms, alongside positive change in mindfulness skills, quality of life and rumination. Conclusions: Preliminary evidence for the use of MBCT with this group of adolescents is provided.

Key Practitioner Message

- It is known that the course of depression from childhood is characterized by relapse and continuity into adulthood.
- There is a need to develop interventions that ameliorate the course of this disorder.
- Mindfulness-based approaches have good evidence in adults in reducing symptoms of depression and in relapse reduction. They have also been seen to be acceptable to children and adolescents, though not yet with a clinically referred group of adolescents with symptoms of depression.
- A group programme of MBCT for adolescents with symptoms of low mood is presented here.
- This research demonstrates the feasibility of this approach.

Keywords: Depression; Mindfulness-based cognitive therapy; adolescents

Introduction

NICE guidelines recommend psychological therapy as the first-line treatment of depression in young people (National Institute for Health and Clinical Excellence, 2005, 2011). However, the evidence for the efficacy of psychological therapy, particularly Cognitive Behavioural Therapy, among children and young people is discordant, and in the main, disappointing (Klein, Jacobs, & Reinecke, 2007; Weiss, McCarty, & Valeri, 2006). Many remain symptomatic at the end of treatment (Wood, Harrington, & Moore, 1996) and even among those who respond to psychological therapies most gains are not maintained at 1-year follow-up (Wood et al., 1996).

Identifying effective interventions to reduce psychological vulnerability to future depressive episodes is a priority in the overall management of the disorder (National Institute for Health and Clinical Excellence, 2005) as the long-term prognosis for young people with depression includes high rates of recurrence (Birmaher, Arbelaez, & Brent, 2002), and continuity of depression into adulthood (Costello et al., 2002). However, although NICE currently recommends psychological therapy for relapse prevention with young people, the form of this therapy is as yet unspecified. Individual CBT or group-based Mindfulness Behavioural Cognitive Therapy (MBCT) is recommended for adults at significant risk of relapse (National Institute for Health and Clinical Excellence, 2009) and meta-analyses have indicated that MBCT is effective in relapse reduction (Piet & Hougaard, 2011) and in the reduction in mood and anxiety symptoms (Hofmann, Sawyer, Witt, & Oh, 2010). MBCT is proposed to reduce risk in part through increasing awareness of the ruminative cycles and thinking styles associated with relapse vulnerability (Teasdale et al., 2000). Ruminative behaviour has also been identified in adolescence and research evidence suggests that it may play a comparably toxic role in depression amongst young people (Abela, Brozina, & Haigh, 2002). Ruminative thinking as a potential target of treatment points to the potential value of MBCT among this population.

MBCT has been extended and adapted for use with children and adolescents and there is growing evidence of its acceptability and efficacy (for reviews see...
Burke, 2009; Greco & Hayes, 2008; Black, Milam, & Sussman, 2009). The evidence base has developed from early case series reports targeting anxiety and rumination in school-based samples (Mendelson et al., 2010; Semple, Reid, & Miller, 2005) to more recent RCTs in a community child sample (Semple, Lee, Rosa, & Miller, 2009) and a sample of adolescents referred for a range of psychiatric difficulties (Biegel, Brown, Shapiro, & Schubert, 2009). These have demonstrated preliminary indications of benefits for a range of emotional and behavioural outcomes. However, there has been no published evaluation of an MBCT group intervention for referred adolescents with residual symptoms of depression.

This study sought to evaluate the feasibility of developing MBCT provision for young people, who had received individual psychological therapy and who continued to have residual symptoms of depression. In addition, the study provided the opportunity to conduct a pilot evaluation of the efficacy of MBCT in reducing symptoms of depression in adolescents, and to measure the impact of MBCT on cognitive factors implicated in depressive relapse. This study has been designed in line with the Medical Research Council Framework for the Development of Complex Interventions (2008) recommendation that feasibility and pilot studies are undertaken prior to controlled studies. The study aims to evaluate the feasibility and acceptability of the qualitative and quantitative measures and of the MBCT intervention to guide future controlled evaluations.

Method

Participants

Young people (aged 12–18), who had received psychological treatment for a mood disorder or low mood alongside an anxiety disorder, but continued to present with residual symptoms of depression were recruited by care coordinators. Those that presented with a high level of risk; who were experiencing an acute episode of depression; with active substance misuse difficulties; or who had not completed one course of psychological therapy were excluded. Young people prescribed antidepressant medication were not excluded from the group, but at the time of recruitment none were prescribed.

The data presented here is derived from two MBCT groups. The first was conducted at the Mood Disorder Clinic (National & Specialist CAMHS service, Maudsley Hospital) and the second in Lewisham CAMHS. This research received ethical approval from the South West London REC 3 NHS National Research Ethics Committee (ref: 10/H0803/47). Informed consent to participate in this research was given by both young people and their parents.

Treatment protocol

The full 8-week protocol (see Table 1) was based primarily on the 8-week adult MBCT programme (Williams, Teasdale, Segal, & Kabat-Zinn, 2007). It was also informed by the 12-week MBCT-Children protocol (MBCT-C, Semple & Lee, 2008) and the 8-week adolescent programme developed by Bogels, Hoogstad, van Dun, de Schutter, and Restifo (2008) to ensure it was developmentally appropriate. The protocol used here was designed to make mindfulness as accessible as possible to young people through our choice of simple sensory exercises, for example, the use of visual illusions to illustrate processes of ‘describing’ and ‘judging’ as well as directing attention. In separate precourse sessions for participants and parents the rationale of the treatment and attendance and homework expectations were outlined and suitability for MBCT confirmed.

Measures

Measures of acceptability. Acceptability was assessed using semistructured interviews. Transcripts were analysed using Interpretive Phenomenological Analysis (Smith & Osborn, 2003) by one of the group facilitators experienced in this approach (JR). This researcher has a personal and professional interest in MBCT. In line with principles for evaluating qualitative research by Elliott, Fischer, and Remnie (1999) a clinical psychology colleague, unconnected to this project, audited parts of the data by checking that themes corresponded with the raw data. Questions focused on perceived benefits of the intervention, useful and unhelpful aspects of the course, barriers to attendance and ideas for adaptations for future groups.

Measures of efficacy. The effects of the MBCT intervention were examined using a battery of well-validated self-report measures at pretreatment, end-treatment and at 1 month follow-up. These assessed depression (Moods and Feelings Questionnaire; Angold et al., 1995), rumination (Child Response Style Questionnaire; Meiser-Stedman, Dalgleish, Smith, Yule, & Glucksman, 2007), worry (Penn State Worry Questionnaire; Meyer, Miller, Metzger, & Borkovec, 1990), mindfulness skills (Child Acceptance and Mindfulness Measure; Greco, Dew, & Ball, 2005) and perceived quality of life (Paediatric Quality of Life Enjoyment and Satisfaction Questionnaire; Endicott, Nee, Yang, & Wohlberg, 2006) as well as the overall impact of symptoms and emotional distress (Strengths and difficulties Questionnaire; Goodman, 1997).

Results

Eleven (10 female adolescents, 1 male adolescent) young people met inclusion criteria at the time of recruitment. Seven completed the course (7 female adolescents, aged 12–18) and four did not (aged 14–17). Of the seven completers four attended 100% of sessions, two attended 75% and one attended 50%. Three participants left the study in the first 3 weeks, two following a relapse and one because of a complex family situation. The only male adolescent did not specify his reason for non-completion.

Acceptability

Analysis of the semistructured interviews with IPA generated 6 themes, with two superordinate themes. These were conducted with all young people who completed the course.

I. Superordinate Theme: Mindfulness Helps. Theme 1: Increased awareness

All participants talked about increased awareness of thoughts and actions.

I try to sort of accept my thought and its there and go back to what I am doing (P5).

Three participants described thinking more positively. Two reported stepping back from strong emotions and consequently enjoying and engaging in life more.

It’s like your life is in slow motion and you see everything you’re doing and understand it more… life is more exciting knowing mindfulness exists (P4).
I’ve been thinking don’t panic if you haven’t done every bit of homework, you go into school and at least you don’t miss more stuff (P2).

Theme 3: Using mindfulness when distressed
Most participants talked about mindfulness as a tool to manage distress.

Before if I was feeling in a low mood then I wouldn’t want to do anything... but now after the mindfulness... I think about all the things we talked about and I put on the breathing space and it makes me feel a bit better (P7).

However, some of the same young people said that when feeling very distressed they did not believe mindfulness would work and therefore did not practice.

II. Superordinate Theme: The Group Experience. Theme 4: Working it out together
Three participants gave feedback on the size of the group, with two finding a smaller group more comfortable. Two participants thought the age range was too broad. Several participants said they enjoyed being in the group and sharing the experience with others.

It was nice listening to others’ problems and how I could relate to them was useful (P6).

Theme 5: Formal meditation versus simple sensory exercises
Three participants reported finding formal meditation too long or difficult.

I find I sometimes get a bit lost in the body scan, maybe I don’t concentrate so much (P2).

Table 1. MBCT adolescent 8-week session outline

| Aims | Agenda | Exercises | Home practice |
|------|--------|-----------|---------------|
| 1. Tuning in | Introduction and orientation | Group rules, Orientation to mindfulness, Information about homework and barriers to practice, Mindful daily activities | Eating a strawberry, Awareness of the breath: 3-min breathing space | Mindful daily activity, 3-min breathing space |
| 2. Two sides to the same coin | Help YP identify thoughts, feelings, behaviour | Differentiating Thoughts, Feelings, and Behaviours—Where would MBCT fit it? | Body scan | Body scan |
| 3. Listen up | Mindfulness in all the senses | Mindful listening (holding on/letting go), Review of body scan, Introduction to unpleasant event recording | Receptive listening, Body scan | Unpleasant and pleasant events diary, 3-min breathing space |
| 4. Seeing is believing | Mindfulness in all the senses | Mindful seeing and smelling, Practising directing attention from describing, Differentiating judging | Optical illusions, Mindful smelling | Pleasant and unpleasant events diary, Body scan |
| 5. The five senses | Mindfulness in all the senses | Mindful movement, Staying in the present, accepting difficult feelings | Mindful walking, Exploration of photographs of other people’s reactions to an aversive stimulus (bees) | Pleasant and unpleasant events diary, Mindful walking |
| 6. Thoughts are not facts | Discriminating thoughts from facts, Accepting difficult thoughts/feelings in the present | Noticing and staying with difficult thoughts/feelings in the present | Breath and body sitting meditation, Discussion: automatic thoughts | Mindful awareness of negative event, 3-min breathing space, Breathing space for coping |
| 7. Putting mindfulness into practice | Building mindfulness into everyday life | Discuss how to integrate mindfulness into everyday life, Review of previous sessions, Acceptance of experiences and mindfulness, 3-min breathing space to choose what to do, Identifying signs of relapse (action plan) | 30 min sitting practice, introduce a difficulty, Pleasure/mastery activities, Small groups—action plans | Experiment with alternative daily exercises, Action plan |
| 8. Moving on mindfully | Concluding | Generalizing mindfulness to everyday life, Exploring and sharing reflections, Graduation ceremony | Individual 1-month plan | |

Note: From week 2 every session started with a breathing space and enquiry and finished with another breathing space without enquiry.
There were several comments about not prioritizing or remembering home practice. However, all participants said they most enjoyed the sensory exercises and reported applying these to their everyday life.

Theme 6: Keeping mindfulness going
There was a wish to keep going with ‘mindfulness’ alongside recognition that this was challenging. Three participants wanted more group sessions and one wanted a longer term plan.

Even when I become aware of the fact that I want to be mindful at a particular point it’s really hard to keep that going (P3).

Efficacy
Analysis of outcome measures is limited by the small number of participants. Effect sizes of change in measures are reported in Table 2. Large effect sizes are seen in the reduction in depression and the impact of symptoms. Modest decreases in worry and rumination, increase in quality of life, and a smaller increase in mindfulness are evident.

Discussion
This study has indicated that MBCT with adolescents, targeted at symptoms of low mood, is feasible. The retention rate is reasonable and attendance rates were good. The qualitative assessment indicates that MBCT was acceptable to this group. Participants reported enjoying the group experience. Participants were positive about the premise of MBCT and the material and format of the sessions. They valued the range of material, indicating that the combination of protocols was appropriate. Following the CONSORT Group (Consolidated Standards of Reporting Trials, Moher, Schulz, and Altman 2001) guidance for clinical trials it is clear that at this stage, the primary outcome for this study is feasibility. The secondary findings reported below are offered as indications of areas for further development in future research.

Participants described how mindfulness had benefited them through increasing their awareness and facilitating distance from thoughts and strong emotions. Participants found the 3-min breathing space helpful, requested having a longer course and support in continuing their practice. However, they also indicated difficulties with home practice and longer formal meditations. The development of mindfulness relies on the encountering of one’s changing mind states, recognizing them and disengaging from them (Segal, Williams, & Teasdale, 2002). These can be encountered in regular meditation and also ‘practiced in all situations’ (Segal et al., 2002, p. 76). When working with adolescent groups greater emphasis might be put on practice in everyday life.

Our analysis of the efficacy of MBCT for this group is limited by the small number of participants and the absence of a control group. It is also limited by the use of self-report measures and the absence of triangulation of information from other informants. However, we can tentatively conclude that the intervention was associated with a reduction in symptom and impact scores and an increase in perceived quality of life.

These conclusions are made with a significant caveat, which is that with this low number of participants, the absence of a control group or full assessment of non-completers, and follow-up only at 1 month, the data may reflect natural recovery rather than a meaningful and lasting response to treatment. Furthermore, future research might also consider the impact of mindfulness intervention with a greater number of male participants (given the predominance of female adolescents in this study) and deploy measures of treatment integrity. Therefore, these encouraging findings are seen to provide justification for future research and are informative about how best to adapt the adult MBCT course to suit the needs of young people.

Acknowledgements
This study received no external funding support. The authors thank Mark Williams for his generosity in encouraging us to use the adult MBCT protocol and materials, Jane Hutton for her support and encouragement with the development of the protocol, Wendy Geraghty for clinical supervision and Adenique Galway for conducting and transcribing interviews. The authors have declared that they have no competing or potential conflicts of interest.

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Table 2. Descriptive statistics for outcome measures

| Measure          | Pre Mean (SD) | End Mean (SD) | Follow-up Mean (SD) | Pre-end d | Pre-FU d |
|------------------|---------------|---------------|---------------------|-----------|---------|
| MFQ              | 36.57 (11.18) | 27.17 (8.52)  | 23.67 (9.52)        | .79       | .77     |
| CRSQ             | 35.29 (11.95) | 31.83 (8.61)  | 24.33 (13.17)       | .22       | .48     |
| PSWQ             | 22.86 (8.28)  | 23.17 (7.41)  | 19.50 (5.13)        | .02       | .41     |
| CAMM             | 46.14 (9.53)  | 47.33 (3.56)  | 49.00 (4.90)        | .11       | .33     |
| PQ-LES-Q         | 35.29 (10.69) | 42.33 (3.98)  | 44.83 (8.52)        | .59       | .56     |
| SDQ emotional    | 7.57 (1.90)   | 7.33 (1.21)   | 6.50 (1.38)         | .15       | .35     |
| SDQ impact       | 5.86 (1.22)   | 5.00 (2.00)   | 3.33 (1.21)         | .51       | 1.13    |

MFQ, Moods and Feelings Questionnaire; CAMM, Child Acceptance and Mindfulness Measure; PSWQ, Penn State Worry Questionnaire; CRSQ, Child Response Style Questionnaire; PQ-LES-Q, Paediatric Quality of Life Enjoyment and Satisfaction Questionnaire; SDQ, Strengths and difficulties Questionnaire.
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Accepted for publication: 31 May 2013
Published online: 28 August 2013