Large-scale trial will assess effectiveness of teaching mindfulness in UK schools

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Paula Kearney (teacher at UCL Academy), Haroon Hussein (male), Patricia Markauskaite (female, red hair) and Enaya Ali (female, dark hair). Credit: Wellcome Trust

The three-part study includes the first large randomised control trial of

mindfulness training compared with 'teaching as usual' in 76 schools, which will involve nearly six thousand students aged 11 to 14. Other parts of the study are a programme of experimental research to establish whether and how mindfulness improves the mental resilience of teenagers, and an evaluation of the most effective way to train teachers to deliver mindfulness classes to students.

The £6.4 million research programme will be carried out by teams at the University of Oxford, UCL (University College London) and the MRC Cognition and Brain Sciences Unit, in collaboration with the University of Exeter, over seven years.

Teenage years are a vulnerable time in terms of onset of mental illness, with over 75% of mental disorders beginning before the age of 24 and half by the age of 15. This programme of research is based on the theory that, just as physical training is associated with improved physical health, psychological resilience training is associated with better mental health outcomes. By promoting good mental health and intervening early, i.e. in crucial teenage years, researchers are seeking to understand whether they can build young people's resilience and help to prevent mental illness developing.

Mindfulness training is a very popular technique that has been found to be very effective in preventing depression and promoting mental health in adults (see 'What is Mindfulness' box below). This programme of research seeks to answer whether mindfulness reduces the incidence of depression and associated mental disorders in teenagers by improving their ability to employ problem solving skills in the face of emotional distress, intrusive thoughts or behavioural impulses. This ability is known by researchers as 'executive control'.

The trial will involve children in classrooms across 76 mainstream schools recruited to the study. 38 schools will train 11-14 year old

students in mindfulness and 38 schools will act as a 'control', teaching standard personal, health and social education lessons. Mindfulness training, which takes place over 10 lessons within a school term, will be offered to all students as part of their normal school curriculum. The trial is expected to begin in late 2016 and will run for 5 years, including a follow-up period of 2 years for each student.

Mindfulness training is designed to be of benefit across a spectrum of mental health vulnerability, from those at high risk, to those that are low risk and/or flourishing - as you might see across any typical classroom. The goal is to evaluate mindfulness training across the whole population, and researchers want to assess both mental health problems and positive mental health. Key outcomes researchers will be looking for are: risk of depression, social and behavioural skills, and well-being.

Researchers are also looking at secondary outcomes of mindfulness training including peer relationships, anxiety, student attainment and teacher well-being.

In the second, lab-based, part of the study researchers from UCL and the MRC Cognition and Brain Sciences Unit are testing exactly how mindfulness affects wellbeing and whether mindfulness training is more beneficial at some stages of adolescence than others. Over 24 months researchers will assess whether mindfulness training in nearly 600 participants aged 11 to16 improves their self-control and emotion regulation.

In the third strand of the study, researchers at the Universities of Oxford and Exeter are assessing how best to train teachers to deliver mindfulness to their students. The study involves 200 teachers and is evaluating different training methods (intensive mindfulness short course versus guided self-help mindfulness training and web-learning) and how easily and cost effectively teacher training can be scaled up. The team is

also looking at barriers to implementing mindfulness in schools, although pilot work indicates that mindfulness has high rates of acceptability among teachers and students. This strand of research began in November 2014 and is informing the large-scale school trial.

Professor Willem Kuyken, a principal investigator from the University of Oxford, said: "Mindfulness is a form of 'mind exercise' as it's a way that we can improve our mental health. Just as brushing your teeth or going for a run are well known ways of protecting general physical health, mindfulness exercises develop mental fitness and resilience. What this project is trying to establish is whether teaching teenagers mindfulness techniques can improve their attention and resilience, two key skills for maintaining good mental health. We are launching a programme of research to find out how best to support the resilience and well-being of 11 to 14 year olds, working with teachers and young people in mainstream schools. We are interested in the full range of outcomes, including social relationships, school attendance and attainment, as well at teacher well-being and school culture."

Professor Sarah-Jayne Blakemore, a principal investigator from UCL, said: "It is becoming clear to neuroscientists that the early teenage years are a crucial time for brain development, particularly in brain regions responsible for decision-making, emotion regulation and social understanding. Alongside the trial in schools, we are trying to find out experimentally whether mindfulness improves cognitive and emotional resilience in young people aged 11 to 16. Using experimental tasks in the lab, we will study whether mindfulness affects how young people think and feel and make decisions under stressful or emotional conditions. We are trying to establish whether mindfulness training, compared with a control intervention, has different effects at different stages of development, and therefore if there is a 'best' time for teenagers to be trained in the technique."

Paula Kearney, a geography teacher at the UCL Academy in Swiss Cottage, London, who has given mindfulness training to her students, said: "I've had very positive feedback from students at the UCL Academy who have done mindfulness training. I find that mindfulness techniques are used by different students in different ways, for example some might prefer breathing techniques, whereas others find visualising thoughts more helpful. Mindfulness gives my students specific skills and tools which they can use if they want to, it's not about making them advanced practitioners or making time for mindfulness compulsory. A lot of my students use the techniques they like, for example the 'thought bus', more often than just during lessons or times of stress, but also at home."

Dr Raliza Stoyanova, Senior Portfolio Developer in the Neuroscience and Mental Health team at the Wellcome Trust, said: "Mindfulness as a technique has become very popular, with a large number of people downloading mindfulness apps and taking part in short courses. We want to take that enthusiasm for mindfulness, but delve deeper into the scientific basis for the technique. This study, which will recruit more than six thousand school students in the UK, should give us a reliable answer as to whether mindfulness has a positive effect on the mental health of teenagers. The lab-based studies will also provide critical insight into how mindfulness works. Given the great social and personal toll of mental illness, building up the evidence base for preventative interventions such as mindfulness is absolutely crucial. "

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