

Institution: University of Oxford
Unit of Assessment: 4
Title of case study: <p style="text-align: center;">Developing and Disseminating Effective Psychological Treatments for Panic Disorder and Social Anxiety Disorder</p>
<p>1. Summary of the impact</p> <p>While in Oxford, David M. Clark and colleagues developed psychological models of panic disorder and social anxiety disorder, tested the models in experiments, and devised novel psychological treatments (forms of cognitive therapy [CT]) that target the processes in the models. Randomised controlled trials (RCTs) showed that CT was more effective than existing psychological and drug treatments, with 70-80% of people recovering. The therapies are recommended first-line interventions in current NICE guidelines, and are widely available in the NHS through the Improving Access to Psychological Therapies (IAPT) programme, which Clark helped establish and is now evaluating. The treatments are also being used and recommended in many other countries.</p>
<p>2. Underpinning research</p> <p>Anxiety disorders are common (12 month prevalence exceeds 10%) and are as costly to society as depression. Drug treatments can be effective in the short-term but many patients fail to respond, and relapse following medication discontinuation is a significant problem. The first psychological treatment to receive empirical support was behaviour therapy, which focused on repeated exposure to fear-provoking stimuli. However, less than half of patients recovered with this treatment, so there was a need for further advances.</p> <p>Clark and his Wellcome Trust-funded research team have adopted a distinctive research strategy to further understanding and treatment of two of the most common and disabling anxiety disorders: panic disorder and social anxiety disorder. The strategy has resulted in novel and highly effective, cognitive therapies for both disorders. The strategy involves: (i) using clinical interviews and cognitive psychology paradigms to identify the core cognitive abnormality and linked behaviours in an anxiety disorder; (ii) constructing a theoretical account that explains why the cognitive abnormality does not self-correct; (iii) testing the hypothesised maintaining factors in experimental studies; (iv) developing specialised treatment procedures that target the maintaining factors; (v) testing the efficacy of the resulting cognitive therapies in RCTs.</p> <p>In panic disorder, Clark presented his initial cognitive model in 1986, but advanced and supported the model with research conducted during the REF2014 period. In particular, he showed that a tendency to interpret benign body sensations (e.g. racing heart, racing thoughts) as indicative of an imminent physical or mental catastrophe (e.g. heart attack, going mad) was a core cognitive abnormality, with safety behaviours and enhanced awareness of body sensations the key maintaining factors (see Clark, 2004 for a review). Arising from the model, Clark developed a novel cognitive therapy (CT) programme to target these beliefs, and conducted two trials in Oxford (the first being Clark et al, 1994). In both trials, the CT was found to be highly effective, and superior to treatment with an established behavioural treatment (applied relaxation) or with medication (imipramine). Independent trials in the Netherlands and Sweden confirmed these findings.</p> <p>In social anxiety disorder (social phobia), Clark & Wells (1995) proposed the key maintaining factors are: 1) self-focused attention, 2) use of interoceptive information (images and feelings) to draw excessively negative conclusions about how one appears to others, and 3) safety behaviours. Each maintaining factor received empirical support (see Clark, 2004) in a series of studies. Clark and colleagues then developed a novel CT from the model. The first RCT was conducted in Oxford (Clark et al, 2003) and showed that the treatment was superior to the leading medication (SSRIs). At the same time, Clark and colleagues trained an independent German team in the treatment. A RCT from that team showed that CT was superior to group cognitive-behaviour therapy, hitherto</p>

Impact case study (REF3b)

considered the gold standard psychological treatment. Subsequent trials of the treatment conducted in the UK, and with colleagues in Sweden and Germany, have confirmed the effectiveness of the treatment and have shown that it is superior to other psychological treatments - exposure therapy, group CBT, psychodynamic psychotherapy, and interpersonal psychotherapy. Such wide and strong evidence for differential effectiveness is extremely unusual in psychotherapy.

CT for these disorders is now being disseminated widely in the NHS via the [Improving Access to Psychological Therapy \(IAPT\)](#) programme. As well as contributing directly to the concept and design of IAPT (Section 4), Clark's research since his return to Oxford in 2011 has contributed to the scientific underpinnings of IAPT and its evaluation. For example, with colleagues at Reading University, Clark has recently conducted analyses that identify service characteristics that are linked to high and low recovery rates (Gyani et al, 2013).

Note: The key research studies that led to the development of each treatment, and the first RCTs that demonstrated their efficacy (cited in Section 3), were all conducted when Clark's team was wholly based in Oxford (1993 to 2000). One confirmatory RCT of the social anxiety treatment (Clark et al, 2006, *J Cons Clin Psychol* 74;568-578) was conducted when the team was based partly in Oxford and partly at the Institute of Psychiatry in London.

3. References to the research

Clark DM, Salkovskis PM, Hackman A, Middleton H, Anastasiades P, Gelder MG (1994) A comparison of cognitive therapy, applied relaxation and imipramine in the treatment of panic disorder. *British Journal of Psychiatry*, 164, 759-769. DOI: 10.1192/bjp.164.6.759.

[The first RCT of CT for panic disorder, showing that the new treatment was superior to both comparison treatments, at both 3 and 15 months after treatment.](#) 358 citations.

Clark DM, Wells A (1995) A cognitive model of social phobia. In RG Heimberg, M Liebowitz, D Hope & F Scheier (Eds) *Social Phobia: Diagnosis, Assessment, and Treatment*. pp 69-93. Guilford: New York.

[Presentation of the cognitive model upon which Clark and Wells developed their CT for social anxiety disorder.](#) 1735 citations.

Clark DM, Ehlers A, McManus F, Hackmann A, Fennell MJ, Campbell H, Flower T, Davenport C, Louis B (2003). Cognitive therapy vs fluoxetine plus self-exposure in the treatment of generalized social phobia (social anxiety disorder): a randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 71, 1058-1067. DOI: 10.1037/0022-006X.71.6.1058.

[The first RCT of CT for social anxiety disorder, showing that it was more effective than fluoxetine and self-exposure, both at the end of treatment and at 12 month follow-up.](#) 193 citations.

Clark, D.M. (2004). Developing new treatments: on the interplay between theories, experimental science and clinical innovation. *Behaviour Research and Therapy*, 42, 1089-1104. DOI: 10.1016/j.brat.2004.05.002.

[A review describing the team's research strategy and most of their studies on panic disorder and social anxiety disorder conducted from 1993-2000.](#) 30 citations.

Stangier U, Schramm E, Heidenreich T, Berger M, Clark DM (2011). Cognitive therapy versus interpersonal psychotherapy for social anxiety disorder: a multi-centre randomized controlled trial. *Archives of General Psychiatry*, 68, 692-700. 10.1001/archgenpsychiatry.2011.67.

[Example of a trial that shows CT outperforms other psychological treatments for social anxiety disorder. After treatment, the response rate for CT was 66%, versus 42% for interpersonal therapy \(and 7% for wait-list controls\). The benefits and superiority of CT persisted at 12 month follow up.](#) 17 citations.

Gyani A, Shafran R, Layard R, Clark DM (2013). Enhancing recovery rates: Lessons from year one of IAPT. *Behaviour Research and Therapy* 51, 597-606. DOI: 10.1016/j.brat.2013.06.004.

[Demonstration that psychological treatments, including those developed by Clark, are effective in](#)

the 'real world' NHS setting of IAPT and an analysis of outcome variability that identifies service characteristics that are associated with better outcomes.

Grant support

The Oxford underpinning research described here was funded by a Wellcome Principal Research Fellowship to Clark, and two successive Wellcome Programme Grants to Clark and Ehlers, 'Cognitive processes in the maintenance and treatment of anxiety disorders' (1993-8 and 1998-2003). Total grant support for 1993-2000 period estimated at £3.1 million (excluding Clark's salary, paid by Wellcome as part of his Fellowship).

Key colleagues for the underpinning research included Michael Gelder, Adrian Wells, Anke Ehlers and Paul Salkovskis.

4. Details of the impact

The novel CT programmes for panic disorder and social anxiety disorder that the Clark team developed in Oxford between 1993 and 2000 have had a large – and increasing - impact on the treatment of these conditions in the NHS and overseas. The team's research has also contributed to the development of the English clinical services through which the treatments are delivered – the Improving Access to Psychological Therapies programme, IAPT.

CT recommended by NICE for panic disorder and social anxiety disorder

The National Institute for Health and Care Excellence (NICE) has issued guidelines on the optimal treatment of panic disorder (NICE 2011) and social anxiety disorder (NICE 2013). The Oxford group's CTs are a first choice treatment option for both conditions. In the more detailed social anxiety disorder guidelines, Clark and Wells' CT is specifically noted as having **the best evidence for efficacy and cost-effectiveness**.

CT disseminated within the NHS

The Government's IAPT programme, which started in 2008, aims to vastly increase the availability of NICE-recommended psychological treatments for anxiety disorders and depression by training large numbers of new psychological therapists and employing them in specialised treatments services, one per primary care trust (PCT). The Oxford group's CTs for panic disorder and social anxiety disorder treatments are included in the national training curriculum for IAPT (high intensity) therapists and have been taught on 21 IAPT high intensity therapy courses. To date around 2,200 IAPT therapists have learned the treatments and are delivering them in over 130 local services. A further 900 IAPT therapists will be trained in the treatments in next two years. In addition, the treatments are often taught on other post-graduate diploma courses in psychological therapies (at least 1,500 therapists trained in the treatments on these courses since 2008) and on clinical psychology courses.

Clinical service design and monitoring

The English IAPT programme is the world's largest programme for disseminating evidence based psychological treatments. Clark has contributed in two major ways beyond the inclusion of the treatments which his research produced. First, together with Lord Layard, London School of Economics and Political Science, Clark is responsible for the initial idea, design and implementation of the IAPT programme itself. Second, as noted in Section 2, his recent research is monitoring the success of IAPT treatments. The research is contributing to the national quality assurance criteria for IAPT services (see www.iapt.nhs.uk) and has been fed back to IAPT services by the Department of Health to help them optimise their performance.

International impacts

The outstanding results obtained with the two CTs in clinical trials have led clinicians and health service commissioners from many countries to request training in the treatments. In the period from 2008, Clark and his team have provided major workshops on the treatments in Australia, Canada, China, Croatia, Denmark, Eire, France, Germany, Iceland, Italy, Japan, Netherlands, Norway, Spain, Sweden and the USA. The treatments for panic disorder and social anxiety disorder have become the cornerstone of a new stepped care system for the treatment of these

conditions that is being rolled out on an experimental basis throughout the west coast of Norway. Germany has also funded a major dissemination programme for the social anxiety treatment. To support this, Hogrefe has published a manual for German therapists that has sold over 5,500 copies. Colleagues in Japan have also produced a version in Japanese.

5. Sources to corroborate the impact

Clinical guidelines for anxiety disorders

1. NICE (2011). *Generalised anxiety disorder and panic disorder (with or without agoraphobia) in adults* (Clinical Guidance 113). London, UK: National Institute for Health and Care Excellence. www.nice.org.uk/CG113
 Recommends CT as developed by Clark and colleagues as a first-line treatment for panic disorder. It states: '*Cognitive behavioural therapy (CBT) should be used. CBT should...adhere closely to empirically grounded treatment protocols.*' (p26).
2. NICE (2013). *Social anxiety disorder* (Clinical Guidance 159). London, UK: National Institute for Health and Care Excellence. www.nice.org.uk/CG159.
 The summary guideline states (as first line treatment): '*Offer adults...individual cognitive behavioural therapy (CBT) that has been specifically developed for social anxiety disorder (based on the Clark and Wells model or the Heimberg model)*' (p9). The detailed version of the guidance states: '*The clinical and cost-effectiveness analyses established that individual CBT (Clark and Wells model) was the most efficacious intervention...*' (p190).

Dissemination within the NHS: the IAPT programme

3. Letter on file from Professor Lord Layard (London School of Economics and Political Science) to corroborate role of Clark's research in design and evaluation of IAPT programme.
4. Clark, D.M. (2011). Implementing NICE Guidelines for the psychological treatment of depression and anxiety disorders: the IAPT experience. *International Journal of Psychiatry*, 23, 375-384. An overview of the IAPT programme and how it was developed.
5. Department of Health (2013). *IAPT three year report: the first million patients*. Available at www.iapt.nhs.uk
6. Department of Health (2008). *IAPT Implementation Plan: Curriculum for High Intensity Workers*. Available at www.iapt.nhs.uk
 Includes the Oxford group treatments for panic disorder & social anxiety disorder, with their specific competencies listed on pages 8-15 of the linked Roth & Pilling (2007) problem-specific competencies document.
7. Training number returns from the Directors of the IAPT high intensity therapist training courses and PG Diplomas in CBT: letters on file from 13 courses.

International impacts

8. Letter on file from Professor Odd Havik (Bergen University, Norway) to confirm large-scale dissemination of CT for panic disorder and social anxiety disorder in Western Norway. Includes '*Clark's models for the treatment of panic disorder and social anxiety disorder have a central position in the introduction of evidence-based psychological treatments...*'
9. Clark received the American Psychological Association's Distinguished Scientific Applications of Psychology Award in 2010 with the citation describing the treatment development work as '*pure genius with a real world application*' (*American Psychologist*, November 2010, p. 711).
10. Clark received a CBE in the 2013 New Year's Honours List for "services to mental health".