Institution: The University of Manchester

Unit of Assessment: 4 (Psychology, Psychiatry and Neuroscience)

Title of case study: Metacognitive Therapy Improves Outcomes for Patients with Anxiety and Depression Worldwide

Period when the underpinning research was undertaken: July 2000 - December 2020

Details of staff conducting the underpinning research from the submitting unit:

Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Adrian Wells	Professor of Clinical and Experimental Psychopathology	2000 - present
David Reeves	Professor in Biostatistics Reader Senior Research Fellow Research Fellow	2019 - present 2012 - 2019 2008 - 2012 2000 - 2008
Sam Cartwright-Hatton	Clinical Senior Lecturer	2004 - 2011

Period when the claimed impact occurred: August 2013 - December 2020

Is this case study continued from a case study submitted in 2014? N

1. Summary of the impact

Treatments for psychological disorders have not kept pace with advances in cognitive theories. Aiming to improve outcomes, research at the University of Manchester (UoM) resulted in developing Metacognitive Therapy (MCT) that has had worldwide impact on clinical practice and improving lives. MCT is more effective than existing 'gold standard' psychological treatments. MCT has improved social anxiety (SA), generalised anxiety disorder (GAD) and depression treatment, is recommended in NICE guidelines, and is a 'core competency' (SA) for training UK clinical psychologists. MCT has led to the not-for-profit spin-out company, MCT-Institute (MCT-I), training over 200 healthcare professionals in 25 countries in MCT each year. The 2019-2020 Improving Access to Psychological Therapies (IAPT) annual report documents approximately 170,000 patients in 2019-2020 entering treatment in England for SA or GAD, the majority of whom benefitted from MCT.

2. Underpinning research

UoM-led studies by Professor Adrian Wells' team have been responsible for developing and evaluating metacognitive therapy, a treatment focused on modifying metacognitive beliefs that perpetuate states of worry, rumination and biased attention that impact on mental health. Pilot studies were conducted between 2006 - 2012 at UoM on trauma, GAD and depression. This was followed by larger scale international studies involving randomised controlled trials (RCTs) of SA [1], GAD [2] and depression [3].

The research process adhered to stage-by-stage gold standard scientific methods for the development and evaluation of complex interventions including: i) developing a detailed model grounded in cognitive psychology and devising novel measures of causal mechanisms; ii) testing underlying causes; and then iii) developing and evaluating a new psychotherapy (metacognitive therapy) in mental health and physical health settings based on a true causal-interventionist approach. Instrumental to this staged process were:

I. Discovering a central role of particular mechanisms in psychopathology and demonstrating that metacognition is a major contributor [4] and plays a role in treatment response.

II. Developing new measures to assess psychological mechanisms including the metacognitions questionnaire-30 (MCQ-30) [5] (developed by Wells and Cartwright-Hatton); meta-worry questionnaire, beliefs about rumination scales, beliefs about memory questionnaire, thought fusion instrument, beliefs about rituals inventory, and Cognitive-Attentional Syndrome scale [4]. These measures are widely used by researchers and clinicians globally and have been distributed by independent test companies such as Checkware and Better World Healthcare.

III. Establishing trials of MCT which have wide reach across treatments for SA, GAD, depression, traumatic stress, obsessive compulsive disorder (OCD) and also mental health problems in patients with cardiovascular disease. Studies comprised single-case replication series, phase I and II trials, and definitive RCTs. Definitive trials in MCT were especially notable in key aspects, all of which highlighted that MCT improves patient outcomes in comparison to gold standard treatment and routine clinical services, both in the UK and abroad (e.g. Norway, Denmark, Germany). A study of MCT in SA was the first to test a combination of psychological treatment and pharmacotherapy against psychological treatment, drugs and placebo alone [1]. Additionally, a study of GAD was the first to test MCT against gold standard CBT [2]. Group-MCT for OCD (evaluated by Papageorgiou and Wells [6]), has been compared to routine clinical service in the UK, where 86% of MCT patients responded to treatment in comparison to 64% treated with CBT [6]. Wells, Callesen and Reeves compared MCT to CBT for depression, delivered in a routine outpatient clinic in Denmark, where patients received individual treatment. At post-treatment, 74% of patients who had received MCT were classed as recovered in comparison to 52% in CBT [3]. The success of clinical trials has resulted in MCT treatments cited and recommended in NICE guidelines.

3. References to the research

1. Nordahl, H. M., Vogel, P., Morken, G., Stiles, T. C., Sandvik, P., **Wells, A.** Paroxetine, Cognitive Therapy or Their Combination in the Treatment of Social Anxiety Disorder with and without Avoidant Personality Disorder: A Randomized Clinical Trial. *Psychotherapy and Psychosomatics* 2016; 85, p. 346-356. http://dx.doi.org/10.1159/000447013
2. Nordahl, H., Borkovec, T., Hagen, R., Kennair, L., Hjemdal, O., Solem, S., Hansen, B., Haseth, S. and **Wells, A.** Metacognitive therapy versus cognitive-behavioural therapy in adults with generalised anxiety disorder. *British Journal of Psychiatry Open* 2018; 4, p. 393-400. http://dx.doi.org/10.1192/bjo.2018.54
3. Callesen, P., **Reeves**, D., Heal, C. & **Wells A.** Metacognitive Therapy versus Cognitive Behaviour Therapy in Adults with Major Depression: A Parallel Single-Blind Randomised Trial. *Sci Rep* 2020; 10, p.7878. http://dx.doi.org/10.1038/s41598-020-64577-1
4. **Wells, A**. *Metacognitive therapy for anxiety and depression.* 2009. Guilford Press.
5. **Wells A, Cartwright-Hatton S**. A short form of the metacognitions questionnaire: Properties of the MCQ-30. *Behaviour Research and Therapy* 2004; 42(4), p. 385-96. http://dx.doi.org/10.1016/S0005-7967(03)00147-5
6. Papageorgiou, C., Carlile, K., Thorgaard, S., Waring, H., Haslem, J., Horne, L. and **Wells, A.** Group cognitive-behaviour therapy or group metacognitive therapy for obsessive-compulsive disorder? Benchmarking and comparative effectiveness in a routine clinical service. *Frontiers in Psychology* 2018; 9, p.2551. http://dx.doi.org/10.3389/fpsyg.2018.02551

Research Funding

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4. Details of the impact

Context

Adult psychological disorders are highly prevalent, with 1 in 6 adults experiencing a common mental health problem (CMHP). CMHPs are often chronic and associated with high morbidity and mortality. As only 50% of patients recover from a CMHP with CBT, improvements in recovery were needed. Enhancement in mental health is a key aspect of the NHS Five Year Forward Plan (2014), which set out the vision of the future of the NHS. MCT was developed by applying cognitive science to theory building and testing of predicted causal mechanisms before moving to developing techniques to modify the mechanisms. This was followed by single-case series evaluations and then by RCTs of the treatment itself, a scientifically rigorous approach that is not typically followed in the psychotherapy treatment field. Such an approach resulted in a major improvement in psychological treatment and clinical outcomes that has had multiple beneficiaries.

Pathways to impact

The background research was presented at leading conferences (e.g. World Congress of Psychiatry 2017, European Association of Behavioural and Cognitive Therapies 2018) and published in leading journals (see above), and led to an invited special issue in *Frontiers in Psychology* which includes contributions from over 100 researchers, clinicians, and industry collaborators from 10 countries and has so far received 152,193 views (as at 31 December 2020) [A]. In the last 10 years, over 600 senior clinicians have undergone MCT masterclass training provided by the spin-out company, MCT-I. MCT-I is a not-for-profit company that serves to regulate MCT, providing training to clinically qualified professionals, maintaining a registry for the public for accessing therapy, and supporting mental health research internationally. MCT-I currently trains approximately 200 new MCT registered therapists per year in 25 countries (England, Faroe Islands, Denmark, Norway, Sweden, Finland, Russia, USA, Croatia, Lebanon, Israel, Germany, Italy, Poland, Austria, Belgium, Turkey, Iceland, Canada, Spain, France, Macedonia, Scotland, Ireland and Serbia) [B].

Reach and significance of the impact

The MCT research programme has had extensive national and international reach and significance (Table 1).

Improving Clinical Outcomes

MCT has resulted in significant improvements in clinical outcomes in the UK and internationally. Published independent meta-analyses have demonstrated that MCT is more effective than current 'gold standard' treatments [C] in treating anxiety and depression. MCT has been integrated into clinical services in both private institutions, the UK NHS, and health services abroad (see below), and has become the preferred form of treatment for over 600 therapists [B-F]. In Norway, MCT is the preferred treatment option for therapists treating anxiety disorders, trauma and depression at hospitals such as Modum Bad, an inpatient psychiatric clinic (Oslo), and Nidaros DPS at St. Olav's Hospital (Trondheim). At Modum Bad, it has now become mandatory that all new therapists hired attend MCT training to become registered MCT therapists. MCT has improved recovery rates, return to work, decreased waiting time for treatment, and requires fewer treatment sessions (see Table 1). In the UK, MCT has been applied in the private sector as well as in the NHS, leading to improved outcomes as evidenced by the treatment of OCD at the Priory Hospital Greater Manchester [F]. More specifically, 86% of patients who received group MCT have improved compared with 64% before this intervention was introduced [F]. Following these improved outcomes, group MCT is now the primary psychological intervention for patients referred with OCD at the Priory Hospital Altrincham [F].

Table 1. Summary of Impact

Category of Impact	Impact	Countries Involved	Evidence of Impact
Improving Clinical Outcomes	Improved Recovery	UK	86.3% of MCT patients with obsessive-compulsive disorder responded to treatment in comparison to 64% treated with CBT **[F]**
		Norway	Since the introduction of MCT at Modum bad in 2014 (Mental Health Hospital in Norway) approximately 400 patients with complex needs have been treated with MCT. 55.4% of patient's treatment with MCT are classified as recovered or reliably improved at post-treatment in comparison to 36.8% of patients treated with CBT**[G]**.
		Denmark	74% of depression patients were classed as recovered when treated with MCT in comparison to 52% recovered from CBT**[E]**
Improving Social Outcomes & Healthcare Delivery	Return to Work	Norway	30% of long-term sick patients returned to full time work and are no longer receiving benefits following MCT **[G]**
	Faster Treatment	Norway, Denmark, UK	MCT patients require on average 5-10 sessions compared with the usual 12-14 of previous treatments **[D, F, G]** In addition, MCT sessions are shorter in length (50 mins) in comparison to CBT (71 mins) **[G]**
Policy Impact	NHS treatment guidelines	UK	MCT treatments are recommended in NHS NICE guidelines **[Ii,Iii]**
	National training of Mental Health workforce		Annually approximately 600 clinical psychology trainees (Clearing house data) and 300 IAPT trainees learn the models and treatment methods since the treatment is a core competency in training **[J]**

Improving Healthcare Delivery

Therapists have reported a substantial improvement in their clinical practice as MCT has allowed them to treat a range of disorders with success. Therapist feedback includes:

"Learning MCT has given me a powerful tool to treating patients with all kinds of disorders. I feel that I finally know something that really works - and I have gone from talking to people to really treating them - often with success. I love this!" Clinical Psychologist (Norway) [B].

In addition to improving clinical outcomes internationally, in Norway and Denmark, MCT has been adopted to improve rates of return to work among patients on long-term sick leave (see Table 1). In Denmark, MCT is also a component of recommended treatments to aid patients in returning to work. Research and development of MCT has led to major changes in the way anxiety and depression are understood and treated. It has led to substantial improvement in recovery and mental health service provision in the UK NHS. The 2019-2020 IAPT annual report documents approximately 170,000 patients in 2019-2020 entering treatment in England for SA or GAD, with most of their treatments benefitting from MCT models [H], such as the NICE recommended treatment for SA [Ii], which forms part of IAPT core competencies in workforce training [J].

MCT has been incorporated in mandatory core training of Clinical Psychologists in the UK and forms part of the national IAPT programme, as stated in the IAPT manual created by the National Collaborating Centre for Mental Health [J]. Healthcare workers completing training in MCT report major positive impacts on their clients and their own working practices. For example: "*I am still fascinated to see how rapidly the patients get better. I think I have learned great skills from MCT training that will guide my therapy through my whole life and this feels priceless.*" Psychiatrist (Turkey) [B].

MCT has influenced clinical practice and research internationally where it has become a central model in treating the underlying psychological processes central in psychological disorders. The Director of the American Institute for Cognitive Therapy and Weill-Cornell University Medical College stated that "*Metacognitive Therapy has had a world-wide influence in clinical work and research...at our American Institute for Cognitive Therapy the model has been our central model in dealing with rumination and worry.*" [E].

Policy Impact

The treatment for SA by Clark and Wells is recommended by NICE as a first line treatment approach [Ii] and is a 'core competency' in clinical doctoral training programs. MCT is recognised

as a beneficial treatment for CMHPs and has been incorporated in NICE guidelines since 2011 as an effective treatment for GAD [Iii]. MCT is incorporated in national training programmes for clinical psychologists and training of IAPT workers (see Table 1), with approximately 600 clinical psychology trainees and 300 IAPT trainees currently trained in MCT models and methods per year, with over 5,000 trained over the impact period based on clearing house numbers for the yearly number of clinical psychology trainees (where the models are part of core training).

5. Sources to corroborate the impact

A. Frontiers in Psychology Special Issue in Metacognitive Therapy which presents viewing statistics, number of authors and articles, and international reach (different countries accessing articles). https://www.frontiersin.org/research-topics/7547/metacognitive-therapy-science-and-practice-of-a-paradigm

B. www.mct-institute.co.uk. MCT-I website which contains feedback from therapists on the benefit of MCT training on clinical practice and details of registered MCT therapists and countries MCT therapists are from.

C. Normann N and Morina N. The Efficacy of Metacognitive Therapy: A Systematic Review and Meta-Analysis. Front. Psychol. 2018;9:2211. doi: 10.3389/fpsyg.2018.02211. Peer reviewed publication highlighting the effectiveness of MCT in comparison to cognitive behavioural therapy.

D. E-mail from the CEKTOS Clinic Director from 2020, highlighting the improvement in clinical outcomes (recovery rates, number of sessions) of MCT patients in comparison to CBT.

E. E-mail from the Director of the American Institute for Cognitive Therapy (dated 2 October 2020), highlighting the impact of MCT and its models on treatment and research in the USA.

F. E-mail from a consultant clinical psychologist at the Priory Hospital, Greater Manchester, a leading UK private hospital (dated 5 November 2020), highlighting faster treatment and improved recovery rates of MCT in comparison to routine treatment.

G. E-mail from a clinical psychologist and Head of Research in Psychology at the Norwegian University of Science and Technology (dated 21 December 2020), highlighting improved return to work outcomes and faster treatment in Norway resulting from MCT.

H. National IAPT data highlighting the number of patients per year that stand to benefit from MCT. https://digital.nhs.uk/data-and-information/publications/statistical/psychological-therapies-annual-reports-on-the-use-of-iapt-services/annual-report-2019-20

I. NICE treatment guidelines

   i. NICE treatment guidelines for Social anxiety disorder, highlighting the policy impact of MCT, May 2013.

   ii. NICE treatment evidence for Generalised anxiety disorder in adults, highlighting the policy impact of MCT, evidence update of September 2012.

J. National Collaborating Centre for Mental Health Training Manual for Improving Access to Psychological Therapies, highlighting the core competencies for high intensity therapists and clinical psychologists. IAPT Manual (rcpsych.ac.uk)