Institution:
UNIVERSITY OF LIVERPOOL

Unit of Assessment:
UOA4 - Psychology, Psychiatry and Neuroscience

Title of case study:
Extending Psychological Interventions to Difficult to Treat and Difficult to Reach Patients

1. Summary of the impact

The benefits of office-based psychotherapies such as cognitive-behaviour therapy (CBT) are well-established in the treatment of common psychiatric disorders but their effectiveness with more severe conditions and when administered in circumstances beyond the reach of conventional services have not been known. Researchers at the University of Liverpool (UoL) have developed, adapted and evaluated CBT as a treatment for patients with schizophrenia, bipolar disorder and eating disorders and are now pioneering the delivery of CBT in rural areas in the developing world. This work has led to changes in treatment guidelines and improved treatment in the UK and in other countries.

2. Underpinning research

Research into psychological therapies for psychotic disorders (schizophrenia and related conditions) and eating disorders began in Liverpool under the leadership of Professor Peter Slade (retired 1996) at a time at which there was widespread scepticism about the value of psychological approaches for severe psychiatric disorders. UoL research has done much to challenge this scepticism. Members of the research group have changed over time, with some leaving and then returning (e.g. Bentall was at Liverpool 1986-99 and rejoined in 2011; Corcoran, 1986-99 and rejoined in 2012; Kinderman 1992-1996 and rejoined in 2000) and others joining (e.g. Gowers, 1986; Rahman, 2008; Read, 2013). The group has worked not only to show the effectiveness of psychological therapies but also to explore new ways of providing treatment, for example in the very earliest stages of psychosis, outside hospital settings in the case of eating disorders, and in the rural developing world. Its unique research strategy throughout the period from 1993 to the present has had the following elements.

1. In parallel with the UoL's research on developing cognitive-behaviour therapy (CBT) for specific conditions, the group has studied the cognitive and affective mechanisms underlying psychiatric disorders, thereby identifying processes that need to be targeted in treatment. This research has usually focused on symptoms rather than broad diagnoses, for example, the investigation of body image in relation to eating disorders, specific affect-related cognitive biases and information processing deficits in relation to paranoid delusions [1] and the role of source monitoring deficits and dissociation in auditory hallucinations.
2. Lifetime (e.g. early experience) and contextual (e.g. immediate social environment) influences on the symptoms of the disorders were studied. For example, UoL researchers have studied family functioning in relation to eating disorders, attachment processes in relation to paranoid beliefs and, more recently, meta-recently analysed case control, epidemiological and prospective studies to show a strong association between childhood trauma (e.g. sexual abuse, bullying at school) and risk of psychosis in later life.
3. From initial small-scale case series and small pilot trials, the UoL progressed to conduct, with collaborators elsewhere, large-scale pragmatic RCTs with patients diagnosed as suffering from anorexia nervosa, early psychosis (prodromal and first episode schizophrenia spectrum disorders) and bipolar disorder [2-5] as well as continuing to study the effectiveness of psychological therapies for common mental disorders such as anxiety and depression.
4. In research conducted from the arrival of Rahman from Manchester, the UoL has sought to establish the effectiveness of psychological interventions in the developing world. Rahman first demonstrated through longitudinal studies, the high prevalence, associated disability and chronic course of perinatal depression in Pakistan, and was amongst the first to demonstrate the independent association of perinatal depression and infant malnutrition. He has conducted the largest randomised trial of a psychological intervention for perinatal depression delivered by non-specialist health workers in the developing world, demonstrating that it is possible to train community health workers in techniques of

cognitive behaviour therapy, leading to highly significant reduction in depression rates in treated women [6].

3. References to the research

1. **Bentall RP**, **Corcoran R**, Howard R, Blackwood N, **Kinderman P**. (2001). Persecutory delusions: A review and theoretical integration. Clinical Psychology Review 21: 1143-92, doi.org/10.1016/S0272-7358(01)00106-4. Citations: 321 Impact factor: 6.696
2. **Gowers SG**, Weetman J, Shore A, Hossain F, Elvins R. (2000) The impact of hospitalisation on the outcome of adolescent anorexia nervosa. British Journal of Psychiatry. 176, 138-141, doi: 10.1192/bjp.176.2.138. Citations: 94 Impact factor: 6.619
3. Tarrier N, Lewis S, Haddock G, **Bentall RP**, Drake R, Dunn PK, **Kinderman P**, Kingdon D, Siddle R, Everitt J, Leadley K, Benn A, Glazebrook K, Haley C, Akhtar S, Davies L, and Palmer S. 18 month follow-up of a randomised, controlled trial of cognitive-behaviour therapy in first episode and early schizophrenia. British Journal of Psychiatry, 184:231-239, 2004, doi:10.1192/bjp.184.3.231. Citations: 134 Impact factor: 6.619
4. Scott J, Paykell E, **Morriss R**, **Bentall RP**, **Kinderman P**, Johnson T, Abbott R, and Hayhurst H. Cognitive-behavioural therapy for severe and recurrent bipolar disorders: Randomised controlled trial. British Journal of Psychiatry, 188, 313-320, 2006, doi:10.1192/bjp.188.4.313. Citations: 216 Impact factor: 6.619
5. **Gowers SG**, Clark A, Roberts C, Griffiths A, Edwards V, Bryan C, Smethurst N, Byford S and Barrett B. Clinical effectiveness of treatments for anorexia nervosa in adolescents: Randomised controlled trial. British Journal of Psychiatry, 191, 427-435, 2007, doi: 10.1192/bjp.bp.107.036764. Citations: 61 Impact factor: 6.619
6. **Rahman A**, Malik A, Sikander S, Roberts C, Creed F. (2008) Cognitive behaviour therapy-based intervention by community health-workers for depressed mothers and their infants in rural Pakistan: cluster-randomized controlled trial. Lancet, 372:902-909, doi:10.1016/S0140-6736(08)61918-2. (Funded by a Wellcome Career Fellowship to Rahman.) Citations: 124 Impact factor: 39.060

Key Grants

1996-1999. **MRC**. A multicentre randomized controlled trial of cognitive-behavioural therapy in early schizophrenia, £800k across three centres, Lewis S, Tarrier N, Haddock G, **Bentall RP**, **Kinderman P**, and Kingdon, D. (Liverpool was one of the three trial sites; Bentall was site PI) (reported in [3]).

1998-2002. **MRC**. A multicentre trial of cognitive behaviour therapy for bipolar affective disorder, £981k across five centres, Scott J, **Morriss R**, **Kinderman P**, **Bentall RP** and Paykel E. (Liverpool was a centre with Morriss as the site PI.) (reported in [4]).

2000-2009. HTA. A randomised controlled multi-centre treatment trial of adolescent anorexia nervosa including assessment of cost and patient acceptability (The TOuCAN trial). **Gowers**, £760k

2002-2005. **Wellcome Trust**. Psychological studies of paranoia, £188k across three centres. **Corcoran R, Bentall RP**, Howard R, Blackwood N and **Kinderman P**. (Note: Bentall and Corcoran were at the University of Manchester at the time of this award, Kinderman was in UoL).

2004 – 2006. **MRC**. Feasibility study of Enhanced Relapse Prevention (ERP) by key workers for people with bipolar disorder, Lobban F, **Morriss R**, **Kinderman P** and Gamble C. £180k (subsequently extended by local NHS Trust R&D funding.)

205-2007. MRC. An internet based self help programme for adolescent bulimia nervosa (the BYTE project). Schmidt U, **Gowers SG**. £198k.

2006-2009. HTA. A five year follow up of a multi-centre treatment trial of adolescent anorexia nervosa. **Gowers SG**. £140k.

2009-2011. USAID. Integration and evaluation of a community-based maternal-focussed approach to promote exclusive breastfeeding in rural Pakistan. United States Agency for International Development. **Rahman**, £290k.

4. Details of the impact

Improving services for people with mental illness

Estimates of the prevalence of mental illness are affected by definition and measurement, but certainly the lifetime risk of a diagnosis of schizophrenia is >0.5% and the risk of any type of psychosis is about 3%. The lifetime risk of childhood eating disorders is estimated between 0.3% and 3%. These conditions are associated with enduring disability, a high risk of suicide and massive societal costs (>£11b pa for schizophrenia alone; Andrew et al. 2012). Globally, depression is the second leading cause of disability, with major depression accounting for 8.2% of years lost to disability (Ferrari, et al. 2013).

UoL researchers have played a leading role addressing these burdens through the UK's pioneering research into and implementation of psychological treatment for severe psychiatric conditions, showing that, for example, cognitive-behaviour therapy (CBT) delivered early in illness can result in reduced positive symptoms at 18 month follow-up. Recent UK NICE guidelines for the treatment of schizophrenia published in 2009 recommending CBT, included a meta-analysis including trials carried out by Liverpool researchers [7]. UoL work also influenced the current NICE guidelines on bipolar disorder, published in 2006, which guides current practice and recommends CBT for bipolar patients but not those who have recently experienced a manic episode [8]. UoL researchers have since shown that training nursing staff in relapse prevention delays relapse in bipolar patients [9], thus expanding the role of the psychiatric nurse. Gowers chaired the panel responsible for the most recent NICE guideline on the treatment of eating disorders, published in 2004, which also guides current practice in the NHS, and has been asked to chair the impending revision. Current NHS advice on the commissioning of eating disorder services [10] are based on these guidelines emphasizing the importance of providing treatment on an outpatient basis, consistent with Gowers' findings.

Psychological therapies for psychosis pioneered by UoL researchers and collaborators elsewhere, unavailable to patients before the mid-1990s, are now being implemented within NHS services throughout the UK via, for example, clinical psychology services and early intervention teams. However, Rethink's 2012 Schizophrenia Commission estimated that, despite recommendations, only 10% of psychotic patients currently receive CBT, although other estimates are higher. The next phase of the Department of Health's Increased Access to Psychological Therapies Programme, outlined in the 2011 £400m four-year plan [11] is extending CBT services to people with eating disorders and psychosis.

Kinderman was twice chair of the BPS Division of Clinical Psychology and was a member of the Department of Health ministerial advisory group during the development of the last two strategies for mental health (New Horizons, 2009; No Health Without Mental Health [12]). In these capacities he was involved with drafting the 2008 Mental Health Act, as well as with the adoption of practitioner psychologists under the aegis of the Health Professions Council. He also served as a member of the Fundamental Rights Platform Advisory Panel for the European Union's Fundamental Rights Agency.

International Impact

CBT has been recommended in guidance issued in other countries, e.g. the 2010 updated Schizophrenia Patient Outcomes Research Team Treatment Recommendations published by the US Department of Health and Human Services [13] (the original 1998 guidelines made no such recommendation) based on an expert review of the trial evidence, mostly published in the UK including by the UoL. UoL research has also led to a new interest in the role of social cognition in psychosis abroad. Bentall advised the US National Institute of Mental Health development of

guidelines on measuring social cognition in schizophrenia [14].

In the developing world, Rahman's work on the delivery of psychological interventions through non-specialists has impacted on global strategies to reduce the treatment gap for psychiatric disorders. He is a member of the Guidelines Development Group for the WHO's Mental Health Gap Action Programme (http://www.who.int/mental_health/mhGAP/en), which has produced guidelines for addressing mental health inequalities in the developing world [15-16]. He is working with the WHO to develop training materials for the management of perinatal depression in low and middle-income settings. In 2008 and 2011, he was invited to the WHO Eastern Mediterranean Regional Office to assist with the formulation of the maternal and child mental health policy for the region, now ratified by all 22 member states. Rahman is also an advisor to the Ministry of Health, Government of Pakistan, on maternal health policy and programmes and was invited to author three Lancet commissioned 'global health' series updates: a) Global Mental Health series, b) Early Child Development series, and c) special series on Pakistan.

5. Sources to corroborate the impact

Each source listed below provides evidence for the corresponding numbered claim made in section 4 (details of the impact).

7. National Institute for Health and Clinical Excellence (2009). Schizophrenia update, http://guidance.nice.org.uk/CG82

8. National Institute for Health and Clinical Excellence (2006). The management of bipolar disorder in adults, children and adolescents, in primary and secondary care. http://guidance.nice.org.uk/CG38

9. Lobban et al. (2010). Enhanced relapse prevention for bipolar disorder by community mental health teams: cluster feasibility randomised trial. British Journal of Psychiatry, 196, 59-63.

10. NHS Standard Contract for Specialist Eating Disorders (Adult) (2013) NHS England. http://www.england.nhs.uk/wp-content/uploads/2013/06/c01-spec-eat-dis.pdf

11. Talking therapies: A four year plan of action. Department of Health, 2011. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/213765/dh_123985.pdf

12. Department of Health. No health without mental health: Delivering better mental health outcomes for people of all ages. Department of Health, London, 2011. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/215811/dh_124057.pdf

13. The Schizophrenia Patient Outcomes Research Team (PORT) (2009): Updated Treatment Recommendations 2009, Schizophrenia Bulletin, 36, 94-103.

14. Green MF, *et al*. (2008) Social cognition in schizophrenia: An NIMH workshop on definitions, Assessment and research opportunities. Schizophrenia Bulletin, 34, 1211-1220, 2008.

15. Kieling C,*et al*. (2011) Global child and adolescence mental health: Evidence for action. *Lancet*, 378(9801):1515-1525.

16. Dua T, Barbui C, Clark N, et al. (2011). Evidence-based guidelines for mental, neurological, and substance use disorders in low- and middle-income countries: summary of WHO recommendations. *PLoS.Med*, 8, (11) e1001122 available from: PM:22110406