

<p>Institution: University of Reading</p>
<p>Unit of Assessment: 4 Psychology, Psychiatry and Neuroscience</p>
<p>Title of case study: Improving access to evidence-based treatments for children with anxiety disorders</p>
<p>1. Summary of the impact: Anxiety disorders are the most common emotional disorders in children, affecting up to 19% of all children and adolescents, and are associated with significant impairment and poor long term outcomes. Research at the University of Reading has highlighted particular parental factors associated with the development and persistence of childhood anxiety disorders. This research led to the development of a brief treatment which has proven effective for a significant sub-group (>70%) of patients. The treatment has been widely implemented in the U.K. and internationally. As a result, the research has increased access to evidence based treatment, which has benefitted affected children, their parents/caregivers and children’s mental health services.</p>
<p>2. Underpinning research: The team at the University of Reading conducted two phases of research that ultimately led to impacts on the treatment of childhood anxiety. The first phase focussed on clarifying parental factors associated with the development and maintenance of childhood anxiety disorders. From 1999 to 2004, Professors Murray and Cooper conducted a five-year prospective study on the intergenerational transmission of anxiety disorders. Four thousand mothers presenting to antenatal clinics were screened in order to recruit 99 mothers with Social Anxiety Disorder, along with 55 mothers with Generalised Anxiety Disorder and 94 mothers with no history of anxiety. Each participant completed observational assessments with their child on six occasions between the child’s birth and their second birthday. Further funding allowed the sample to be followed up by Murray, Cooper and Creswell on three occasions before and after the children started school. Key discoveries from the research include the following: (i) differences in social responsiveness of infants with socially anxious versus non-anxious mothers are apparent even at 10 weeks of age, and these differences are accounted for by the extent to which mothers encourage their infants to engage in social interactions (with greater encouragement associated with higher levels of infant social interaction) [1]; (ii) over time, infants of mothers with Social Anxiety Disorder show increasing avoidance of unfamiliar adults, and this effect is largely driven by maternal expressed anxiety and a lack of maternal encouragement [2]; (iii) parenting difficulties associated with maternal anxiety disorders are expressed specifically in contexts where the particular type of maternal anxiety is triggered [3]; (iv) children of mothers with Social Anxiety Disorder anticipate greater difficulties before starting school, and this is associated with teacher-reported difficulties in school [4]; (v) children of mothers with Social Anxiety Disorder have elevated levels of the stress hormone cortisol in the first week of starting school that persist at least through the first term [5]; (vi) children of mothers with Social Anxiety Disorder are at increased risk of developing an anxiety disorder by school age. In addition, in a series of interview and experimental studies conducted by Murray, Cooper and Creswell, the team found that (vii) mothers bringing their children for treatment for anxiety disorders also show high rates of anxiety disorders [6], and that (viii) parental intrusive behaviours and expressed anxiety lead to increased anxiety among temperamentally inhibited children [7, 8].</p> <p>The second phase of research involved evaluating a novel treatment programme with parents whose children were referred for anxiety disorders. The treatment aims to guide parents in applying cognitive-behavioural principles in their children’s day to day life to help their children to overcome difficulties with anxiety, with particular emphasis on addressing parental factors (e.g. anxiety, parenting behaviours) highlighted in the phase one research. The feasibility of the treatment approach was first established within two U.K. primary child and adolescent mental health services. This study demonstrated that primary mental health workers delivered the treatment well, parents and workers reported high satisfaction, and there were clear improvements in child anxiety [9]. The team then conducted a systematic evaluation of the treatment within a randomised controlled trial (n=194) [10]. Following treatment, 76% of those who had received the novel treatment were rated by blinded assessors as ‘much’ or ‘very much’ improved, compared with 25% in the waiting-list control condition. Furthermore, outcomes were unrelated to therapists’ qualifications, suggesting that this approach can be used effectively by non-specialist clinicians, thus making it well suited as a first-line intervention in primary care. The team are conducting</p>

ongoing evaluation of this approach, including a current trial comparing the treatment approach to an alternative psychological therapy (NIHR funded, 2012-15).

Key members of research team:

Peter Cooper, Professor (1993-)	Kerstin Thirlwall, Research Fellow (2009)
Lynne Murray, Professor (1996-)	Monika Parkinson, Research Assistant/ Clinical Psychologist (2003- 2005; 2008-)
Cathy Creswell, Research Fellow (2003-)	Francoise Hentges, Post Doctoral Research Assistant (2008-2009)
Elizabeth White, Research Assistant (2000-)	Laura Pass, PhD student (2007- 2010)
Lucy Willetts, PhD student (part-time;1998- 2005); Clinical Psychologist (2008-2011)	Stephanie Russ, PhD student (2008-2011)
Mark DeRosnay, Postdoctoral Research Fellow (2002-3)	

3. References to the research

All published in peer reviewed journals and are of at least 2* quality

Phase one

1. Murray, L. et al. (2007). The effects of maternal social phobia on mother-infant interactions and infant social responsiveness. *Journal of Child Psychology and Psychiatry*, 48(1), 45-52. DOI: 10.1111/j.1469-7610.2006.01657.x. *Funded by MRC Programme Grant to Murray/Cooper (£1,415,698, 1999-2005; 'The intergenerational transmission of affective disorder') and P.P.P. Grant to Murray/Cooper (£229,179, 2002-2005; 'The intergenerational transmission of Generalised Anxiety Disorder'). Web of Science citations (November 2013): 50*
2. Murray, L. et al. (2008). Intergenerational transmission of maternal social anxiety: the role of the social referencing process. *Child Development*, 79, 1049-1064. DOI: 10.1111/j.1467-8624.2008.01175.x. *Funded by MRC Programme Grant and P.P.P. Grant to Murray/Cooper (as above). Web of Science citations (November 2013): 36*
3. Murray, L. et al. (2012). Parenting by anxious mothers: effects of disorder subtype, context and child characteristics. *Journal of Child Psychology and Psychiatry*, 53(2), 188-196. DOI: 10.1111/j.1469-7610.2011.02473.x. *Funded by ESRC Grant to Murray/Cooper (£229,599, 2007-10; 'Role of parent-child narrative co-construction in the development of shy and socially anxious behaviour and adjustment to school')*.
4. Pass, L. et al. (2012). Doll Play Narratives About Starting School in Children of Socially Anxious Mothers, and Their Relation to Subsequent Child School-Based Anxiety. *Journal of Abnormal Child Psychology*, 40(8), 1375-1384. DOI: 10.1007/s10802-012-9645-4. *Funded by ESRC Grant to Murray/Cooper (as above) and ESRC PhD studentship to Pass.*
5. Russ, S. J. et al. (2012). Cortisol levels in response to starting school in children at increased risk for social phobia. *Psychoneuroendocrinology*, 37(4), 462-474. DOI: 10.1016/j.psyneuen.2011.07.014. *Funded by ESRC Grant to Murray/Cooper (as above) and MRC PhD studentship to Russ.*
6. Cooper, P.J. et al. (2006) Affective disorder in the parents of a clinic sample of children with anxiety disorders. *Journal of Affective Disorder*, 93, 205-212. DOI: 10.1016/j.jad.2006.03.017. *Web of Science citations (November 2013): 43*
7. Thirlwall, K. & Creswell, C. (2010). The impact of maternal control on children's anxious cognitions, behaviour and affect: An experimental study. *Behaviour Research and Therapy*, 48, 1041-1046. DOI: 10.1016/j.brat.2010.05.030.
8. de Rosnay, M., Cooper, P., Tsigaras, N., & Murray, L. (2006). Transmission of social anxiety from mother to infant: An experimental study using a social referencing paradigm. *Behaviour Research and Therapy*, 44(8), 1165-1175. DOI: 10.1016/j.brat.2005.09.003. *Funded by MRC Programme Grant to Murray/Cooper (£1,415,698, 1999-2005; 'The intergenerational transmission of affective disorder') Web of Science citations (November 2013): 46*

Phase two

9. Creswell, C. et al. (2010). Feasibility of guided cognitive behaviour therapy (CBT) self-help for childhood anxiety disorders in primary care. *Mental Health in Family Medicine*, 7, 49-57. *Funded by NIHR RfPB grant to Cooper/Creswell (£175,000, 2008-9; 'The Treatment of Child Anxiety Disorder in Primary Care via Guided CBT Self-help')*.
10. Thirlwall, K. et al. (2013). The Treatment of Child Anxiety Disorders via Guided Parent-Delivered CBT: A Randomised Controlled Trial. DOI: 10.1192/bjp.bp.113.126698. *Funded by MRC Clinical Training Fellowship to Thirlwall, supervised by Creswell/Cooper (£272,300, 2008-15; 'Guided CBT self-help for childhood anxiety: a randomised controlled trial')*.

4. Details of the impact

(1) Influence on clinical practice and capacity. Anxiety disorders affect up to 19% of children and young people (Costello, 2004), have a significant impact on children's home, social and academic lives, and are known to be a risk for serious mental health difficulties in later life, including ongoing anxiety, depression and substance abuse. For almost twenty years, the 'gold standard' treatment for childhood anxiety disorders has been 9-16 weekly sessions of individual cognitive-behavioural treatment (CBT) with children, but this requires specialists and involves more sessions than is often feasible in the NHS. On the basis of the team's phase one research and her clinical expertise in psychological interventions for children and families, Creswell co-wrote two books for parents with an NHS colleague (Willets) (*Overcoming your child's fears and worries* (January 2007) and *Overcoming your child's shyness and social anxiety* (August 2007; both published by Constable Robinson) [1]). An accompanying manual was produced to guide clinicians in providing a brief treatment with parents to help their children to overcome difficulties with anxiety. Thus, the research has led to the development and provision of an evidence-based, brief (<5.5 hours) treatment for childhood anxiety disorders that can be delivered effectively by non-specialists, providing a means to improve access to psychological treatments for children with anxiety disorders.

Since 2011, this novel parent-led treatment has been used routinely as the first-line treatment for childhood anxiety disorders across the whole of Berkshire (approx 300 children per year). This has meant that the number of anxious children that each clinician can treat is double what it was with the previously available treatment [2]. Furthermore, routine service evaluation has identified that 70% of children meet service criteria for a good outcome following this treatment [2]. The application of the team's work across Berkshire came about due to strong links with local NHS child and adolescent mental health services. Cooper worked directly with West Berkshire NHS to set up a specialist service for assessment and treatment of anxiety disorders in children in 1998 which is based in the University of Reading. This service was expanded in 2008 to cover the whole of Berkshire (population over 800,000), and further expanded to cover children and adolescents (0-18 years) in 2012 within what is now the Berkshire CAMHS Anxiety and Depression Pathway. This has provided the setting for ongoing clinical research and the delivery of evidence-based treatments to the local community.

To increase the impact of this work beyond the local area, the University of Reading team have presented the findings from their treatment evaluation to key stakeholders including national and international organisations of cognitive behaviour therapists, clinical psychologists, psychiatrists, paediatricians and social workers (throughout the REF period) [3]. In response to these presentations, members of the team have delivered skills-based workshops and supervision to over 200 clinicians in health services in the U.K. and overseas, including Northamptonshire Healthcare NHS Foundation Trusts (2010), the Danish Psychological Society (2011), and Charlie Waller Institute for Evidence based Psychological Treatment (2013), as well as in education services (e.g. Surrey Educational Psychologists, 2012), and annually on training courses for clinicians (e.g. Oxford, UCL, University of Massachusetts). Other examples of the uptake of this treatment approach and its impact on service delivery include the following: (i) The treatment is the standard first-line treatment for children with anxiety disorders referred to children's mental health services across Oxfordshire (over 200 children per year); (ii) in Dorset Healthcare NHS Foundation Trust, clinicians regularly use this treatment approach, report positive outcomes and have transferred the principles to work with other client groups [4]; (iii) in Guernsey, three new psychological wellbeing practitioners have been employed who deliver this treatment approach [5].

(2) Enabling public access to treatment through nonclinical routes.

(i) Increased public awareness of problems and treatments. The team regularly provide information directly to parents, for example, through school events, public meetings and the media. The team's research, and the resulting treatment programme, have featured widely in the media including television (e.g. BBC Breakfast) and radio (e.g. BBC Radio 4's Woman's Hour, BBC Radio Berkshire, Radio Verulam) interviews and national and international news articles (e.g. *Times*, *Daily Express*, *Sunday Express Magazine*, *Mirror*, *Prima Baby*, *NI4Kids*, *Junior*, *Good Health*), increasing public awareness of how to recognise and treat childhood anxiety problems [6].

(ii) Access to self-help methods. As the two books for parents of anxious children (above) are available through all major booksellers in the U.K. and internationally, parents are able to directly access information based on the team's research. In the U.K. the books have sold over 12,000

Impact case study (REF3b)

copies; elsewhere they have been translated in to Norwegian (2010), Polish (2012) and Hebrew (2012). 'Overcoming your child's fears and worries' is available 'on prescription' widely in the U.K. and Guernsey (i.e. is part of a scheme where it is recommended to patients by GPs in collaboration with local libraries), and is also included in reading lists provided for concerned parents by NHS Trusts, local councils, schools, mental health charities and experts in the field [7].

(3) Influence on the development of other assessments and treatments. The phase one research has also had an impact on the development of evidence-based assessment and treatments for childhood anxiety disorders beyond its influence on the team's own treatment programme. The underpinning research is widely cited in clinical texts, including (i) a document that outlines the decision-making process for changes in how childhood anxiety disorders are diagnosed in the widely used diagnostic manual, DSM-V, (ii) manuals for clinicians working with children with anxiety disorders in the U.K., U.S.A., Germany and Italy; (iii) international texts for people experiencing difficulties with anxiety, their caregivers and teachers, and (iv) treatment manuals for a wider range of difficulties in childhood, including managing childhood immunisations [8]. The team have also contributed eight chapters to clinical textbooks to guide mental health practitioners in how to work with children with anxiety disorders since 2008.

(4) Influence on policy and professional practice. Because of their research and its application, Cooper, Creswell and Murray are asked to advise various influential bodies. For example, Creswell chaired the children and young people's subgroup of the National Commissioning Centre for Mental Health NICE guideline for identification, assessment and treatment of Social Anxiety Disorder (2011-2013); contributed to the NHS core curriculum panel for the development of a scheme for improving children and young people's access to psychological treatments (CYP-IAPT); is currently on the advisory panel for the National Commissioning Centre for Mental Health review of e-therapies (computer based treatments) for children and young people with mental health difficulties; and is a specialist member of the NICE Quality Standards Advisory Committee for Anxiety Disorders. In recognition of her work with childhood anxiety disorders, in 2010 Creswell was awarded the British Psychological Society May Davidson Award for outstanding contribution to clinical psychology within 10 years of qualification.

5. Sources to corroborate the impact *Contact details provided

Examples given below, full lists available on request.

1. Books for parents, authored by the team. <http://bit.ly/19PR3xV>; <http://bit.ly/1g9JV4y>
2. The impact on access to treatment for children with anxiety disorders: Clinical Lead, Berkshire CAMHS Anxiety and Depression Pathway*
3. Presentation to practitioners, e.g. http://www.babcpconference.com/archive/leeds2012/programme/keynotes_2012.htm
4. Use of the treatment approach in Dorset: Team Leader, Dorset Healthcare NHS Foundation Trust Child and Adolescent Mental Health Services
5. Use of the approach in Guernsey: Consultant Clinical Psychologist, States of Guernsey Child and Adolescent Mental Health Services*
6. Media reports, e.g. <http://www.thetimes.co.uk/tto/life/families/article3708142.ece>
7. Recommendations of 'Overcoming your child's fears and worries', e.g. <http://bit.ly/1ac3ssl>
8. Influence of the research on treatments for other childhood difficulties, e.g. <http://bmo.sagepub.com/content/32/4/450.short>
9. Contribution to clinical texts, e.g. <http://bit.ly/1f1VebK>