



The Association  
for Child and Adolescent  
Mental Health

# THE BRIDGE

December 2018

## Anxiety Issue

Specific Phobia - which is best?  
Individual CBT vs Group CBT &  
Guided Parent-led CBT

Meta-analysis of secondary anxiety  
prevention by Dr Pete Lawrence

### Also inside

Research  
highlights from our  
journals JCPP  
and CAMH

[www.acamh.org](http://www.acamh.org)  
[@TheJCPP](https://twitter.com/TheJCPP)  
[@acamh](https://twitter.com/acamh)  
[#JCPP60](https://twitter.com/#JCPP60)



## Editorial

*Guest Editor, Dr Mark Lovell*

This edition of *The Bridge* covers the topic of anxiety. Owing to anxiety being common, with all of us experiencing a state of anxiety at some time and many also having trait anxiety, it is no surprise that ACAMH's two main academic outputs the *Journal of Child Psychology and Psychiatry* and *Child and Adolescent Mental Health* contain some good quality research on anxiety advancing our knowledge of the science and evidence based practice.

In recent years there has been a particular focus on anxiety in Children and Young People with Children's Improving Access to Psychological Therapies having a CBT training scheme and the Government's (England) Green paper on Education and Mental Health concentrating on providing input into schools concentrating on lower level depression and anxiety. NICE also has guidance on certain anxiety types. Of course, there are many types of anxiety disorders from Generalised, OCD, PTSD, phobias and specific ones that appear to be linked to other conditions e.g. transition anxiety in ASD. It is important that we understand what works for whom and that one size will not fit all. The advancement of science in this area and then the putting of this evidence base into practice is paramount to meet the needs of children and young people with anxiety. Otherwise we just end up with adults with anxiety and the longer term effects of this on individuals and society.

ACAMH also has essentials training courses in anxiety and anxiety in its many types regularly features within the events calendar throughout ACAMH's footprint (UK, EIRE and Malta). Earlier this year an anxiety disorder topic guide was also added to the website [www.acamh.org/topic/anxiety-disorders/](http://www.acamh.org/topic/anxiety-disorders/)

In this edition there are journal article summaries with a new format highlighting ACAMH's new touchstones where relevant 1) policy, 2) clinical practice, 3) schools and education practice, 4) service development and 5) gaps and recommendations for further science. By focussing on these, ACAMH is striving to create information streams that are of relevance.

*The Bridge* has changed much over the years in style and content and under the steer of Juliette Kennedy (*The Bridge* editor), has moved into the modern digital age and with a new publication team behind *The Bridge* has become a monthly feature, having previously been published 3 to 4 times a year. I am honoured to return as a guest editor and hope that I can do it justice over the next few months. If you have any ideas for content or feedback on *The Bridge* whilst I am acting as guest editor, please contact me at [publications@acamh.org](mailto:publications@acamh.org)

I hope you enjoy reading this edition of *The Bridge* and more themed versions will be published each month in 2019.

**Dr Mark Lovell**

ACAMH Lead for CPD and Training



Research highlights in this edition are prepared by Dr Jessica K. Edwards. Jessica is a freelance editor and science writer, and started writing for *The Bridge* in December 2017.



# Negative interpretation bias in adolescents with subclinical social anxiety disorder

By Dr Jessica K. Edwards

Social Anxiety Disorder (SAD) is a marked fear or anxiety of social situations where an individual may be exposed to possible scrutiny by others. Now, Yura Loscalzo and colleagues have examined the contribution of different components of interpretation bias — a model proposed to explain SAD whereby affected individuals systematically assign a threatening meaning to an objectively ambiguous stimulus with several possible interpretations<sup>1</sup>. The study included three groups of adolescents aged 13-17 years: a SAD (n=30), a subclinical SAD (n=60) and a non-socially anxious (n=95) group. Adolescents in both the clinical and subclinical SAD groups produced negative interpretations of ambiguous social situations. This negative interpretation bias was, however, limited to social situations for those with subclinical SAD, but also applied to non-social situations in those with clinical SAD. In addition, only those with clinical SAD believed in these negative interpretations. Interestingly, there were no differences in positive interpretation

bias between the three groups, such that those with SAD did not report a lower likelihood of positive interpretations than the non-socially anxious group. The researchers propose that future studies should examine the characteristics of interpretation bias along the whole continuum of social anxiety, not just in those with clinical SAD.

Referring to:

Loscalzo, Y., Giannini, M. & Miers, A.C. (2018), Social anxiety and interpretation bias: examining clinical and subclinical components in adolescents. *Child Adolesc Ment Health*, 23: 169-176. doi:10.1111/camh.12221

Further reading:

<sup>1</sup>Castillo, M.D. & Leandro, P.G. (2010) Interpretation bias in anxiety a synthesis of studies with children and adolescents. *Procedia-Social and Behavioural Sciences*, 5:1105-1111. doi: 10.1016/j.sbspro.2010.07.243

**Glossary:**

**Social Anxiety Disorder (SAD):** A marked fear or anxiety about one or more social situations in which the individual is exposed to possible scrutiny by others.

## Study Implications

Lead author Yura Loscalzo indicates the key implications from the study data:

### Clinical Practice:

“Our study data tentatively suggest that clinical interventions should focus not only on reducing negative interpretations in ambiguous social situations, but also in non-social situations. Moreover, they should target also belief in negative interpretations, as this seems to be a clinical feature of SAD”.

### Schools-educational practice:

“In the classroom, there may be students with a clinical diagnosis of SAD, as well as students with subclinical social anxiety. Because both groups are characterised by negative interpretation bias, they might both have negative effects, such as low wellbeing or low school performance. Indeed, in school, there are many social situations to face. Hence, it is critical to foresee, as part of the schools-educational practice, a screening of the students based on instruments such as the Adolescents’ Interpretation and Belief Questionnaire, which detects students at-risk of developing SAD as being characterised by negative interpretation bias. These students may then be helped by means of preventive or clinical interventions”.

### Gaps and recommendations for further science:

“The research on the interpretation bias in pre-adolescents and adolescents with social anxiety is scant. It is critical that future studies analyse further the interpretation bias along the whole continuum of social anxiety in pre-adolescence and adolescence. Finally, the development of a screening instrument that assesses negative interpretations of social situations could be useful to detect Social Anxiety Disorder”.





# Adult ABMT protocols need adapting for effective use in children

*By Dr Jessica K. Edwards*

Attention bias modification treatment (ABMT) aims to target attention biases in threat processing in patients with anxiety<sup>1</sup>. While ABMT seems to be effective in adults with social anxiety disorder (SAD),<sup>2,3</sup> its effect in youths with SAD and the potential treatment moderators are unclear. In 2016, Lee Pergamin-Hight and colleagues conducted a randomised controlled trial to explore the efficacy of ABMT in youths and the influence of possible moderators of treatment outcomes. They enrolled 67 youths (mean age 12.67 years) with SAD to the trial, and asked them to complete a dot-probe task that assessed selective attention. The participants were then randomly assigned to receive either ABMT or attention control training (ACT), delivered as two sessions per week for 8 weeks. The researchers measured the severity of anxiety at baseline, post-treatment

and at 3-months follow-up. Unexpectedly, both ABMT and ACT significantly reduced symptoms of clinician-rated and self-rated social anxiety from baseline to post-treatment. A further reduction in clinician-rated social anxiety symptoms only occurred at the 3-months follow-up. Age moderated social anxiety outcomes, with older youths showing a significant reduction in anxiety following ABMT (but not ACT) on self-report only. Attention control moderated self-reported treatment outcomes: those with low levels of attention control reported a greater reduction in social anxiety from pre-treatment to post-treatment with ABMT. The researchers conclude that both age and attention control can moderate ABMT effects on self-reported SAD symptoms. Consequently, developmental influences should be considered when implementing ABMT protocols in children.



## Study Implications

Lead author Yura Loscalzo indicates the key implications from the study data:

### Clinical Practice:

The researchers propose that ABMT protocols suitable for adults may not be readily applicable to young children. ABMT protocols should be adapted to better match the needs of anxious youths by considering developmental influences and basic cognitive abilities.

### Recommendations for further science:

Future studies should assess the impact of using different face stimuli in ABMT (e.g. happy-neutral) for SAD, and examine ABMT in other specific anxiety disorders among youths.

New methods to assess threat-related attention bias and its plasticity as a function of ABMT are required due to reliability issues in the dot-probe index of attention bias.

### Referring to:

Pergamin-Hight, L., Pine, D.S., Fox, N.A. & Bar-Haim, Y. (2016), Attention bias modification for youth with social anxiety disorder. *J Child Psychol Psychiatr.* 57: 1317-1325. doi:10.1111/jcpp.12599

### Further reading:

<sup>1</sup>Bar-Haim. (2010). Research review: Attention bias modification (ABM): A novel treatment for anxiety disorders. *J Child Psychol Psychiatr.* 51: 859-870. doi: 10.1111/j.1469-7610.2010.02251.x

<sup>2</sup>Amir, N. et al. (2009). Attention training in individuals with generalized social phobia: a randomized controlled trial. *J Consulting and Clinical Psychology* 77: 961-973. doi: 10.1037/a0016685.

<sup>3</sup>Heeren, A. et al. (2011). How does attention training work in social phobia: disengagement from threat or re-engagement to non-threat? *J Anxiety Disord* 25:1108-1115. doi: 10.1016/j.janxdis.2011.08.001

### Glossary:

**Social Anxiety Disorder (SAD):** a marked fear or anxiety about one or more social situations in which the individual is exposed to possible scrutiny by others (DSM-5).

**Attention control training (ACT):** according to Robert N. Nideffer (1992), ACT is a process that involves 1) assessment of attentional strengths and weaknesses, 2) assessment of the attentional demands of a given sort, 3) assessment of situational and/or personal characteristics that are likely to affect arousal for an individual, and/or to dictate his/her behaviour under pressure, 4) identification of situation specific problem areas and error patterns, and 5) development of an intervention program. ACT is typically used as a placebo to ABMT in randomized controlled trials.

**Attention bias modification treatment (ABMT):** a computer based treatment that uses a dot-probe task to (i) assess the threat bias and then (ii) treat the bias by systematically redirecting attention away from threat stimuli. Briefly, threatening and neutral stimuli are presented simultaneously and then withdrawn. A probe is then presented in the location of where either the neutral or threat stimulus was presented on the screen. The probe is presented equally often in the location of the neutral and threat stimuli. Bias is indicated by a faster reaction time to probes in the location of the threat stimulus compared to the neutral stimulus. During treatment, the probe is presented more often at the location of the neutral stimulus. This pairing creates a contingency between the neutral stimulus and the target location, thus directing attentional processes away from the threat.<sup>1</sup>

**Dot-probe task:** the dot-probe paradigm assesses selective attention to threatening stimuli in individuals with anxiety disorders. The participant, positioned in front of a computer screen with their chin placed on a chin rest, must stare at a fixation cross on the centre of the screen. A neutral or threatening stimulus then appears at random on either side of the screen before it is replaced by a dot. The participant must then indicate the location of this dot as quickly as possible. After successive repeats, the reaction times to the neutral and threatening stimuli are interpreted in terms of vigilance to threat.



# Meta-analysis of secondary anxiety prevention

By Pete Lawrence

**Bio:** Pete Lawrence is an NIHR Research Training Fellow and clinical psychologist in the Anxiety and Depression in Young People (AnDY) clinical research group at the University of Reading. He is completing a PhD with Profs Cathy Creswell and Lynne Murray, examining risk factors for, and prevention of, anxiety disorders. From September, 2018, he will return to the University of Southampton as a Lecturer in Clinical Psychology.

This is a summary of the paper published in CAMH - Lawrence, P. J., Rooke, S. M., & Creswell, C. (2017). Review: Prevention of anxiety among at-risk children and adolescents - a systematic review and meta-analysis. *Child and Adolescent Mental Health*, 22(3), 118-130. doi:10.1111/camh.12226.)

Anxiety disorders are amongst the most common mental health problems, with long-term negative associations such as prediction of school drop-out and later mental health problems. We made the case for anxiety prevention programmes on four bases: while effective interventions for anxiety disorders in children have been developed,

- i. there are significant barriers to access to interventions such that only a minority receive them;
- ii. they are ineffective for a large minority;
- iii. during the development of anxiety disorders, because patterns of behaviour and responding associated with anxiety are yet to crystallize in the child's system, these might be relatively easier to modify and;
- iv. the burdens on families and services associated with anxiety disorders could be reduced.

Our review focused exclusively on secondary prevention programmes, in particular, those targeted anxiety prevention programmes (TAPPS) for children and

adolescents who were individually identified as being at risk of developing anxiety disorders. This was distinct to previous reviews which had addressed programmes at all 'levels' of anxiety prevention programmes, including primary anxiety prevention programmes, i.e., programmes offered to all children, irrespective of whether children were at risk of experiencing anxiety disorders.

## Our research questions were:

" 1. Is targeted prevention associated with a reduction in a) the onset of anxiety disorders in at-risk youth; (b) anxiety symptom severity in at-risk youth; and 2. are the effects of targeted prevention moderated by child age, gender, type and format of intervention, who delivered and participated in the intervention, and the type of risk?"

We registered our review protocol on the International prospective register of systematic reviews (PROSPERO), and found 16 trials of prevention for 2545 children and young people who were individually identified as at risk of developing anxiety disorders.



A striking feature of our results was that only two trials had assessed whether the children in their studies met criteria for an anxiety disorder. Both of these identified children as at-risk in light of parent anxiety disorder and compared prevention (six sessions of family based cognitive behaviour therapy targeting parenting behaviours and children's exposure to anxiety provoking situations to an inactive, wait-list control condition. We found that these programmes did effectively lower the rates of onset of anxiety disorders, with a reduction in risk of 91% at the end of the programme, 83% at 6 months follow-up, and 69% at 12 months follow-up (no further follow ups were reported).

We were able to compare trials that had evaluated the effect of targeted anxiety prevention programmes (TAPPs) on children's anxiety symptoms, to active control conditions (e.g. attention bias modification) and to inactive control conditions (typically wait-lists).

Five trials compared TAPPs to active control conditions; with a small and non-significant pooled effect on children's self-reported anxiety symptoms (a standardized mean difference, or SMD, of  $-.09$ , with a 95% Confidence Interval, or CI, of  $-.28$  to  $.10$ ; meaning that the true effect would rest between these values on 95% of occasions if the studies were re-run).

When TAPPs were compared to inactive control conditions; 10 TAPPs had a pooled small to moderate effect at the end of the programmes by child report (SMD =  $-0.43$ , 95% CI =  $-0.73$  to  $-0.12$ ); four studies reported 6 month follow-up data, with a similar effect size (SMD =  $-.46$ , 95% CI =  $-.62$  to  $-.30$ ); while only three studies reported follow-up data from 12 to 24 months, with a smaller effect, and large CI, nearly crossing the boundary to statistical non-significance (SMD =  $-.32$ , 95% CI =  $-.63$  to  $-.01$ ).

We were able to analyse parents' reports of children's anxiety symptoms only from five trials that used an inactive control. At the end of these TAPPs, there was a small effect on anxiety symptoms (SMD =  $-.40$ , 95% CI =  $-.63$  to  $-.17$ ); no significant effect at six months (SMD =  $-.45$ , 95% CI =  $-1.05$  to  $0.15$ ), and at 12-month follow-up, a small and significant effect (SMD =  $-.45$ , 95% CI =  $-.75$  to  $-.15$ ).

We found no evidence that the effects of TAPPs, on child anxiety outcomes, were moderated by any of the factors we examined.

### Conceptual highlights:

First, **regarding identification of children at risk**; while some trials used child factors (such as anxiety sensitivity) or family factors (such as parent anxiety disorders), no trial identified children on the basis of their socio-economic status. Also, only a single study identified individual children on the basis of more than a single risk factor.



This is important to highlight because there is evidence to suggest that facing more than a single risk factor, has a multiplicative effect on risk of adverse internalizing outcomes.

Second, **regarding modifying risk factors**; most TAPPs did not focus on established risk factors (such as parent child interactions), but focused on modifying factors implicated in maintaining anxiety disorders (such as children's thinking styles) or promoting general resilience (such as relaxation skills). While Ginsburg's 'Coping and Promoting Strength' programme did explicitly address risk factors for anxiety, this was an exception.

Third, **regarding the methods of studies we reviewed**; it is possible that many of the TAPPs we examined included children who, at baseline, would have met criteria for anxiety disorders, had these been assessed. Also, only five studies included an active control group. So, we do not know whether children benefited from participating in a TAPP (rather than being on a waiting list) or participating in a particular TAPP (rather than a programme not focused on anxiety).

Finally, **looking forward**, we urge that TAPPs identify children on the basis of at least two risk factors, that they assess for anxiety disorders pre- and post-TAPP, and that the programmes address the modifiable factors that place children at risk. Further, the optimal timing and features of TAPPs need to be informed by both research evidence and by what families themselves would engage with and want.

Twitter handle: [@notthefirstpete](https://twitter.com/notthefirstpete)

# MEG confirms hyper-vigilance followed by threat avoidance in children with anxiety disorder

By Dr Jessica K. Edwards

A key etiological factor of anxiety disorders is an altered pattern of threat processing, but its neurobiological basis is relatively unclear.<sup>1</sup> Now, a study conducted by researchers at the University of Münster has used whole-head magnetoencephalography (MEG) at a resolution of 1 millisecond to determine whether children with anxiety disorder show hyper-vigilance to threat cues during early or late stages of neurological processing.

The researchers analysed neural responses in 23 children with anxiety disorders and 23 healthy controls whilst the participants viewed images of faces with angry or neutral expressions. The researchers found that early threat processing (50-150 ms upon viewing the visual stimulus) was relatively enhanced in the visual cortical regions of children with anxiety disorders compared to controls; this effect was reversed at a later time interval (300-700 ms).

Affected children also exhibited relatively reduced inhibition of early threat processing in the right dorsolateral prefrontal cortex but enhanced inhibition at a later time interval. Overall, children with anxiety rated angry faces as more threatening, and this was accompanied by enhanced visual cortical processing of angry versus neutral faces in an early time window. Comparable emotional state ratings between the affected children and controls suggested that these effects were not due to different states of anxiety, but instead correlated with trait anxiety: the more trait anxious the children were, the higher priority the threat cues gained in the visual stream in the early perceptive stage.

The researchers conclude that their findings support the hypothesis of early sensory hyper-vigilance followed by later threat avoidance<sup>2</sup> in children with anxiety disorder.

## Study Implications

### Gaps and recommendations for further science:

Future research may consider use of MEG scans to demonstrate whether treatment for anxiety has an effect on hypervigilance to threat cues.

### Referring to:

Wessing, I., Romer, G. & Junghöfer, M. (2017), Hypervigilance-avoidance in children with anxiety disorders: magnetoencephalographic evidence. *J Child Psychol Psychiatr.* 58: 103-112. doi:10.1111/jcpp.12617

### Further reading:

<sup>1</sup>Cisler, J.M. et al. (2010) Mechanisms of attentional biases towards threat in anxiety disorders: An integrative review. *Clin Psychol Rev.* 30: 203-216. doi: 10.1016/j.cpr.2009.11.003.

<sup>2</sup>Mogg, K. et al. (2004) Time course of attentional bias for threat scenes: Testing the vigilance-avoidance hypothesis. *Cogn Emot* 18: 689-700. doi: 10.1080/02699930341000158

### Glossary:

**State anxiety:** a temporary emotional state in response to a potentially threatening environmental event.

**Trait anxiety:** a relatively stable personality disposition to judge a wide range of environmental events as potentially threatening.

**Magnetoencephalography (MEG):** a non-invasive, functional neuroimaging technique to map brain activity at the millisecond level by recording the magnetic fields produced by the naturally occurring electrical currents in the brain.



# Friends programme reduced anxiety, but has no effect on school academic performance

By Dr Jessica K. Edwards

Anxiety programmes delivered in schools, such as FRIENDS for life,<sup>1</sup> have demonstrated efficacy in reducing anxiety symptoms. Whether such programmes have a positive impact on school performance and academic outcomes, however, is unclear. Now, Professor Paul Stallard and colleagues have analysed data from the randomised controlled trial “Preventing Anxiety in Children through Education in Schools” that involved >1,300 children aged 9-10 years from 40 primary schools across England.

Here, they assessed whether the universal school-based cognitive behaviour therapy prevention programme, FRIENDS, was more effective when delivered by health-care staff or school staff compared to usual personal, social, health and education (PSHE) classes. At 12-months post-intervention, the researchers found that health-care-led FRIENDS was significantly more effective at reducing anxiety than both school-led FRIENDS or usual PSHE classes. Interestingly, there was no effect of reduced anxiety on educational outcomes, based on performance in the national standardised attainment tests in reading, writing and maths, regardless of who led the intervention.

The researchers conclude that future work should assess psychological and educational outcomes to fully understand the multiple effects of school-based mental health interventions. Furthermore, they consider these findings particularly timely given the green paper and mental health in schools initiative.<sup>2,3</sup>

## Study Implications

We asked Professor Paul Stallard to explain the key implications from these study data:

### Schools and educational practice

“The first issue we highlighted was how the same programme/materials achieved different outcomes depending on who led the intervention (trained member of school versus health professional). This continues to be an important question and has implications in terms of who we should be training to undertake mental health work in schools, and what level of support and supervision is needed”.

### Recommendations for further science:

“The second issue was our failure to identify any positive effects of the anxiety programme on educational outcomes. The data we obtained (based on standardised attainment tests) might not be sensitive to change over such a short time frame and we urge researchers to look at other more immediate educational outcomes such as exclusion rates, school attendance, attitude towards learning and school connectedness”.

Referring to:

Skryabina, E., Taylor, G. & Stallard, P. (2016), Effect of a universal anxiety prevention programme (FRIENDS) on children's academic performance: results from a randomised controlled trial. *J Child Psychol Psychiatr.* 57: 1297-1307. doi:10.1111/jcpp.12593

Further reading:

<sup>1</sup>Barrett, P. (2004), FRIENDS for life: Group leaders manual for children. Bowen Hill, Qld: Australian Academic Press.

<sup>2</sup><https://www.mentallyhealthyschools.org.uk/>

<sup>3</sup><https://www.gov.uk/government/consultations/transforming-children-and-young-peoples-mental-health-provision-a-green-paper>





# Children with a Specific Phobia do better in Individual CBT than Group CBT and guided parent-led CBT

By Dr Anna McKinnon

**Bio:** Anna McKinnon is a registered clinical psychologist based at the Centre for Emotional Health Clinic, Macquarie University. My research is broadly focussed on investigating the cognitive, behavioural, emotional and biological factors maintaining psychological disorders in the aftermath of trauma.

Children often present to health care settings with highly impairing and disabling anxiety disorders, including Specific Phobia, Social Anxiety Disorder, Generalised Anxiety Disorder and Separation Anxiety Disorder.

Cognitive Behaviour Therapy (CBT) is a psychological treatment focussed on assisting children and families develop healthy ways of coping with the thoughts, feelings, and behaviours maintaining anxiety disorders. It is an active, structured, and time limited therapy, suggested as the first-choice treatment for children with anxiety disorders due to its widespread support in clinical trials. Around 60% of children that take part in trials of CBT will improve substantially, no longer having a diagnosis at the end of treatment.

In attempting to access services, parents of children with anxiety and/or other health professionals involved, are typically eager to select a treatment which will give their child the best chance possible of making improvements. CBT programs are now available in a variety of formats (e.g., length, number of sessions etc.), giving parents and children more choice than ever. Importantly, some families can now decide whether their child will participate in a CBT program delivered in a group setting at a clinic, guided parent-led format at home, or individual face to face

treatment at a clinic. Some parents may have little option but to enrol their child in a guided parent-led program for many reasons, including living a long distance from a clinic, demanding work schedules, or the fact that many children simply refuse to attend a clinic for sessions.

But, which CBT treatment format – individual, group or guided parent-led CBT - offers the child the best chance of improving their symptoms? And does the nature of the child's anxiety diagnosis make a difference to their chances of improving in the different treatment formats? For families trying to decide between different programs for their child, there is currently no clear guidance on this issue.

Individual, group and guided parent-led CBT each have their pros and cons. Individual treatment is expensive, but the therapist can personalise the therapy to directly meet the child's needs. Group programs can be prescriptive and lack flexibility. Despite this potential limitation, they are less expensive to run and it can be less stigmatising and more supportive for the child to learn the skills alongside his/her peers. There are also logical reasons why certain categories of anxiety problems might be suited to different treatment formats. For example, socially anxious children might find participating in group CBT to be too overwhelming. On the flipside, this format could be more beneficial as



the child might have invaluable opportunities to practice social exposure skills (e.g., starting conversations) in the group. Whilst there have been some randomised controlled trials evaluating whether group or individual CBT is more beneficial for child anxiety, these studies have not had large enough samples to definitely test whether the child's anxiety diagnosis makes a difference to outcomes. Furthermore, these studies have typically used brief self-report questionnaires (i.e. pen-and-paper format) to measure the child's psychiatric problems, leading to inconclusive findings.

In our study (published in the Journal of Child Psychology and Psychiatry), we pooled data from multiple previously published RCTs carried out in Australia, United Kingdom, Norway, Denmark Germany, Switzerland, USA, and the Netherlands. We compared outcomes of individual, group and guided-parent led CBT for children with a primary anxiety disorder (i.e., the child's most impairing anxiety disorder) of Specific Phobia, Social Anxiety Disorder, Generalised Anxiety Disorder or Separation Anxiety Disorder. The sample included 1253 anxious children (5 to 18 years) that had received a course of CBT for child anxiety. This unique sample was the largest available to date to explore this important research question.

At each site, a trained diagnostician interviewed children and their parents using a structured clinical interview to determine the nature of any anxiety disorders experienced by the child. For children with more than one diagnosis, the clinician also determined the disorder having the biggest negative impact on the child. Interviews also occurred immediately after treatment and at longer term follow-up.

We utilised a statistical approach involving multi-level data modelling, using a within-subjects level regression modelling approach accounting for differences observed across sites. We found that anxious children with Generalised Anxiety Disorder, Social Anxiety Disorder and Separation Anxiety Disorder benefitted substantially from taking part in CBT, doing equivalently well in individual, guided parent-led and group CBT. Similarly, children with Specific Phobias also benefitted from all three CBT treatment formats, but they differed from other children in that they did better in individual CBT than either group or guided parent-led CBT.

Our findings offer several important implications for guidance and policy. When parents are accessing treatment, it may be appropriate to explain to them that their child will have equivalent chances of responding across all three formats, meaning parents can place more weight on pragmatic considerations when selecting between treatment formats (e.g., ability of parents to bring child to appointments, demand for service, waiting lists etc.). From a public policy perspective, this finding supports the idea that cheaper lower intensity group and guided parent led CBT formats could be offered to families before more expensive approaches are offered.

Correspondingly, when parents of children with Specific Phobia's are trying to decide on a treatment it may be appropriate to tell them that enrolment in an individual

program will give the child the best chance of improving. We speculate that this may be because face to face formats are critical for treating the substantial avoidance behaviours associated with phobias. The individual format allows the psychologist to tailor protocols by providing specific psychoeducation surrounding the fear (e.g., education about dog safety) as well as utilising in-session guided exposure to feared situations, and training parents to be efficacious in guiding their child through the exposure process.

Our findings add to a growing body of literature investigating why it is that some children with anxiety disorders respond better to CBT programs than others. However, our approach of pooling data from RCTs and utilising multi-level modelling offers a less controlled examination of these questions than is found in an RCT. Therefore, future RCTs looking at these questions and including health economics are needed before definitively answering this question.

Studies such as this, which explore factors influencing how well a child responds to treatment, are imperative as they add to our understanding of the optimal conditions for delivering treatment to anxious children.

#### Key point

- Children presenting for treatment of a primary Social Phobia in clinical settings should routinely be offered individual CBT before group and guided parent-led CBT.
- The allocation of children with Generalised Anxiety Disorder, Social Anxiety Disorder and Separation Anxiety Disorder to individual, group and guided parent-led CBT could incorporate other considerations (e.g., pragmatic considerations).
- For children with a primary Generalised Anxiety Disorder, Separation Anxiety Disorder, and Social Anxiety Disorder, lower intensity group and guided parent led CBT formats could be offered to families before more expensive approaches are offered.
- Future RCTs assessing the effect of individual, group and guided parent-led CBT on levels of anxiety as well as the cost-effectiveness of these approaches.



# Effects of development must be considered when examining interpretation bias in children with anxiety

By Dr Jessica K. Edwards

*Anxiety is often treated using interventions that target interpretation bias, but the link between interpretation bias and anxiety in children is unclear. Now, in a Research Review published in the Journal of Child Psychology and Psychiatry, Suzannah Stuijzand and colleagues have performed a meta-analysis of the literature to establish whether this association in children really does exist.*

Anxiety disorders affect ~6.5% children worldwide, and can have negative consequences on a child's family, school and social life. Furthermore, associations have been reported between childhood anxiety and suicidal ideation and depression later in life. Cognitive models of anxiety centre on threat-related schemas that underlie an individual's emotional, behavioural and cognitive state. These schemas are activated and guide cognitive processing in response to real or potential threats. A maladaptive threat schema results in negative cognitive bias, whereby affected individuals selectively process, attend and interpret threat-relevant information<sup>1</sup>.

Negative interpretation bias specifically describes the scenario whereby individuals interpret ambiguous situations as being threatening. A robust, positive association between negative interpretation bias and anxiety has been reported in adults. This association has been only tentatively suggested in children and adolescents<sup>1-3</sup>, as the findings across studies are inconsistent. In addition, no reviews to date have studied moderators of negative interpretation bias in children. To address these issues, Stuijzand et al. conducted a systematic review and meta-analysis of the association between anxiety and negative interpretation bias in children and adolescents. They then studied how a wide range of potential moderators may influence the relationship. "We expected that the association would likely be moderated by methodological differences across studies", explains Stuijzand. "We particularly suspected that age would be a significant moderator because the literature covered a wide age range, with huge variation in cognitive ability".

The researchers assessed the moderators of interpretation bias in terms of population-based and procedural-based variables. The population variables included (i) the population focus, (ii) anxiety subtypes, (iii) patient demographics, and (iv)



co-morbidities. The procedural variables included (i) the type of task to assess interpretation bias, (ii) task response formats, (iii) dependent variables (e.g. threat frequency, threat threshold, threat interpretation), (iv) task ambiguity scenarios (e.g. social, non-social, physical), (v) content specificity and (vi) the informant (e.g. parent, teacher, child). In total, their meta-analysis included 77 eligible studies, representing 75 (18 clinical and 57 community) samples. These studies reported data on >11,000 children with a mean age of 11.19 years.

Through their analyses, the researchers found a robust, moderate association between interpretation bias and anxiety in children and adolescents. When considering the population variables, they found that this association was only moderated by age, whereby older children and adolescents showed a stronger association between negative interpretation and anxiety than younger children. "I think we were surprised by how robust the overall effect size was", describes Stuijzand. "The literature appeared very inconsistent so we had suspected the effect size would be small, but it was actually quite convincing". For the procedural variables, content specificity was the only significant moderator of the association: when the scenario content matched the anxiety subtype, the association between negative interpretation and anxiety was larger than when they did not match.

The researchers hypothesised that developmental factors (such as the ability to inhibit attention to threat) and regulatory control may underlie the age effects on the negative interpretation bias-anxiety axis in children and adolescents. In their analyses, the researchers used age as a proxy for development as only a few studies have directly investigated the influence of specific developmental factors on this association. According to the researchers, future work should, therefore, ensure that developmental factors are assessed alongside interpretation bias and anxiety. They also considered that their findings may actually reflect differences



in task performance rather than information processing. Because younger children may have difficulties in understanding and completing the task as intended, Stuijzand and colleagues propose that future interpretation bias tasks be designed in a developmentally sensitive way.

The researchers outlined two further questions that remain unanswered following their review. First, as the moderation effect by content specificity was mainly driven by social versus non social scenarios, it remains unclear whether this effect extends across anxiety subtypes. Second, it is unknown whether the relationship between interpretation bias and anxiety exists amongst young children, as very few studies have been conducted in those younger than 8 years-of-age.

To address this second question, the researchers have been developing child-friendly tasks that measure both attention and interpretation bias in young children but are minimally dependent on motor and linguistic development. “These tasks have shown promise in being developmentally appropriate and have enabled us to look at the nuances of the association between the biases and anxiety in young children”, says Stuijzand. “While we work on submitting the papers outlining these tasks, Professor Helen Dodd is also working on a longitudinal study that is examining whether cognitive biases predict anxiety when children start school”.

Going forward, Stuijzand and colleagues hope that the field will move from examining associations between cognitive processes and child anxiety toward gaining a clear idea as to which cognitive components need to be targeted to produce an effective treatment strategy. “What are the ‘active ingredients’ of the treatments that we use for child anxiety? Does interpretation bias, for example, need to be modified to see benefits in anxiety?”, queries Stuijzand. “By identifying the active ingredients we may be able to provide more targeted interventions”.

In summary, Stuijzand and colleagues found a medium-sized overall association between negative interpretation bias and anxiety in children and adolescents. This effect was robust across the clinical and community samples analyzed. Although they detected marked heterogeneity across studies, this heterogeneity could be accounted for, in part, by age and whether the content of the interpretation task matched the specific anxiety subtype being assessed. Their findings are in line with a previous review by Dudeney et al., who reported age effects on attention bias and anxiety in children<sup>4</sup>. “Significant advances in our understanding of the role of cognitive biases in developmental pathways to child anxiety are now required”, says Stuijzand. “We need to see an active drive towards designing prevention and early intervention programs that really work”.

Referring to:

Stuijzand, S., Creswell, C., Field, A. P., Pearcey, S. & Dodd, H. (2017), Research Review: Is anxiety associated with negative interpretations of ambiguity in children and adolescents: A systematic review and meta-analysis. *J Child Psychol Psychiatr.* doi:10.1111/jcpp.12822

Further reading:

<sup>1</sup>Muris, P. & Field, A.P. (2008) Distorted cognition and pathological anxiety in children and adolescents. *Cogn Emot* 22: 37-41. doi: 10.1080/02699930701843450

<sup>2</sup>Blanchette, I. & Richards, A. (2009) The influence of affect on higher level cognition: A review of research on interpretation judgement, decision making and reasoning. *Cogn Emot* 24: 292-561. doi: 10.1080/02699930903132496

<sup>3</sup>Castillo, M.D. & Leandro, P.G. (2010) Interpretation bias in anxiety a synthesis of studies with children and adolescents. *Procedia Soc Behav Sci* 5:1105-1111. doi: 10.1016/j.sbspro.2010.07.243.

<sup>4</sup>Dudeney, J., Sharpe, L. & Hunt, C. (2015) Attentional bias towards threatening stimuli in children with anxiety: A meta-analysis. *Clin Psychol Rev* 40:66-75. doi: 10.1016/j.cpr.2015.05.007.

#### Glossary:

**Negative interpretation bias:** the tendency to inappropriately analyse ambiguous stimuli, scenarios and events as negative or threatening.

**Content Specificity:** a phenomenon whereby performance on various types of problems differs because of the associated content. According to the content specificity hypothesis, defined by Beck in 1976, the relationship between interpretation bias and anxiety is expected to be stronger when the interpretation content matches the anxiety subtype.

**Regulatory control:** the ability to self-manage or regulate attitudes and emotions in the face of temptations and impulses.

**Schema:** a cognitive framework or concept that helps organize and interpret information. Schemas are developed through experience and can affect cognitive processing.

#### Learning Outcomes:

1. Interpretation bias has a robust association with anxiety in children and adolescents.
2. Children and adolescents may be particularly likely to interpret ambiguity in a negative way when it matches the domain of their anxiety.
3. The association between anxiety and interpretation bias seems to be stronger in older children.
4. It is unclear whether interpretation bias is linked to anxiety in children younger than 8 years-of-age.

#### Policy Impact:

The research data are consistent with NICE guidelines that recommend CBT to treat anxiety disorders in children and adolescents. CBT targets negative interpretations, which the study data show are clearly linked to anxiety. The fact that the findings were stronger in older rather than younger children may indicate that treatments need to have a different emphasis across childhood development. Bettering our understanding of the key mechanisms that maintain anxiety disorders at different points in development will help inform more targeted, developmentally-appropriate treatments to increase their effectiveness and efficiency in children.



# Clinician-led group CBT training can reduce anxiety in children

By Dr Jessica K Edwards

A brief psychological intervention in which parents and carers are supported in applying cognitive behavioural therapy (CBT) principles in their child's day-to-day life can lead to good outcomes for child anxiety disorders, according to new research. Cathy Creswell and colleagues retrospectively evaluated the outcomes of CBT delivered by parents who are guided, in groups, by clinicians (Group GPD-CBT), typically in a series of seven, 90 min sessions. The treatment consisted of psychoeducation, identification and testing of anxious cognitions through graded exposure and problem solving. The parents then completed various between-session tasks, both independently and with their child. The researchers found that 70% children were discharged 3-8 months post-treatment without any further intervention required for anxiety. When interviewed, most clinicians reported that they found Group

GPD-CBT to be a helpful, practical and empowering treatment for child anxiety. They reported, however, that anxious parents may be reluctant to attend group training. The researchers propose that this Group GPD-CBT is a feasible first-line treatment for anxiety as part of stepped-care service delivery for common mental health problems in children.

Referring to:

Evans, R., Hill, C., O'Brien, D. & Creswell, C. (2018), Evaluation of a group format of clinician-guided, parent-delivered cognitive behavioural therapy for child anxiety in routine clinical practice: a pilot-implementation study. *Child Adolesc Ment Health*. doi:10.1111/camh.12274

## Glossary:

**Cognitive Behavioural Therapy (CBT):** a form of talking therapy that encourages patients to manage their psycho-social problems by changing the way they think, feel and behave; CBT focuses on current problems and finds practical ways to improve state-of-mind on a day-by-day basis

## Study Implications

*Professor Cathy Creswell outlines some of the key implications from the study data:*

### Policy:

"Our findings provide an evidence-based and acceptable first line treatment to increase access to psychological therapies for children; this is in line with the NHS England adult IAPT programme that delivers psychological therapies at scale within a stepped-care model".

### Clinical Practice:

"Clinicians highlighted the potential benefits of a group approach to treatment delivery – both for themselves and participating parents/carers. They also highlighted the importance of how the intervention is introduced and presented to families to maximise engagement and overcome potential concerns about taking part (especially for parents/carers who may find groups particularly difficult)".

### Schools-educational practice:

"Although not directly addressed in this paper, our approach could certainly be adopted by school mental health teams, to work in partnership with parents to support children in overcoming problems with anxiety".

### Gaps and recommendations for further science

"We do not know how individual delivery of this brief psychological intervention compares to the group approach, in terms of both clinical and economic outcomes. We also do not know which children do/do not benefit or benefit from the different treatment formats. Future research is needed to establish to what extent the approach needs to be adapted (or not) for particular groups of children who are at heightened risk of anxiety disorders (e.g. children with ASD, children with chronic health conditions)".







The Association  
for Child and Adolescent  
Mental Health

# Anxiety Disorder Essentials Training

Thursday 22 November 2018, 16.30 – 18.30  
LIVE STREAM

From  
just  
£9

Call  
020  
7403  
7458

## About the session

Anxiety Disorders are the most common mental health problem across the lifespan. They have a particularly early age of onset - **half of all people who experience an anxiety disorder at some point in their life will first experience those difficulties by the age of 11 years.** Yet we have found that an extremely small proportion of children who experience significant and sustained problems with anxiety receive any sort of professional support, let alone support that is known to be effective.

This session will provide an overview of the barriers to accessing support that families experience and introduce a brief parent-led cognitive-behavioural treatment (CBT) that has been developed to overcome many of these barriers.

Delegates will learn about research on the efficacy of this treatment approach and will get an overview of the treatment content and practice, with reference to case examples that illustrate core components and common challenges. Also included will be recent developments to further increase access to parent-led CBT for child anxiety problems, including the codesign of an online platform and accompanying app for parents and children.

## Learning Outcomes

- Understanding of the barriers faced by families of children experiencing problems with anxiety
- Knowledge of research on child outcomes following brief parent-led CBT for child anxiety problems
- Awareness of core treatment components in brief parent-led CBT for anxiety disorders.

## Speaker

**Professor Cathy Creswell**, is Professor of Developmental Clinical Psychology at the University of Reading, an Honorary Consultant Clinical Psychologist and Joint Director of the University of Reading Anxiety and Depression in Young people (AnDY) research unit. She was awarded the *British Psychological Society May Davidson Award* for outstanding contribution to Clinical Psychology within 10 years of qualifying and the first clinical psychologist to be awarded an NIHR Research Professorship (2014-2019). Cathy has particular research and clinical interests in the development and treatment of anxiety disorders in children and young people, and applies experimental, longitudinal, and clinical trial methodologies with children, in both community (including school) and clinical settings, with the ultimate aim of improving access and outcomes for children with these common conditions.



2hrs  
CPD  
Official ACAMH  
certification

## BOOK NOW

£9 - Student & trainees

£19 - ACAMH Members, £29 - Non Member

[www.acamh.org/event/anxiety](http://www.acamh.org/event/anxiety)  
[events@acamh.org](mailto:events@acamh.org) or 020 7403 7458