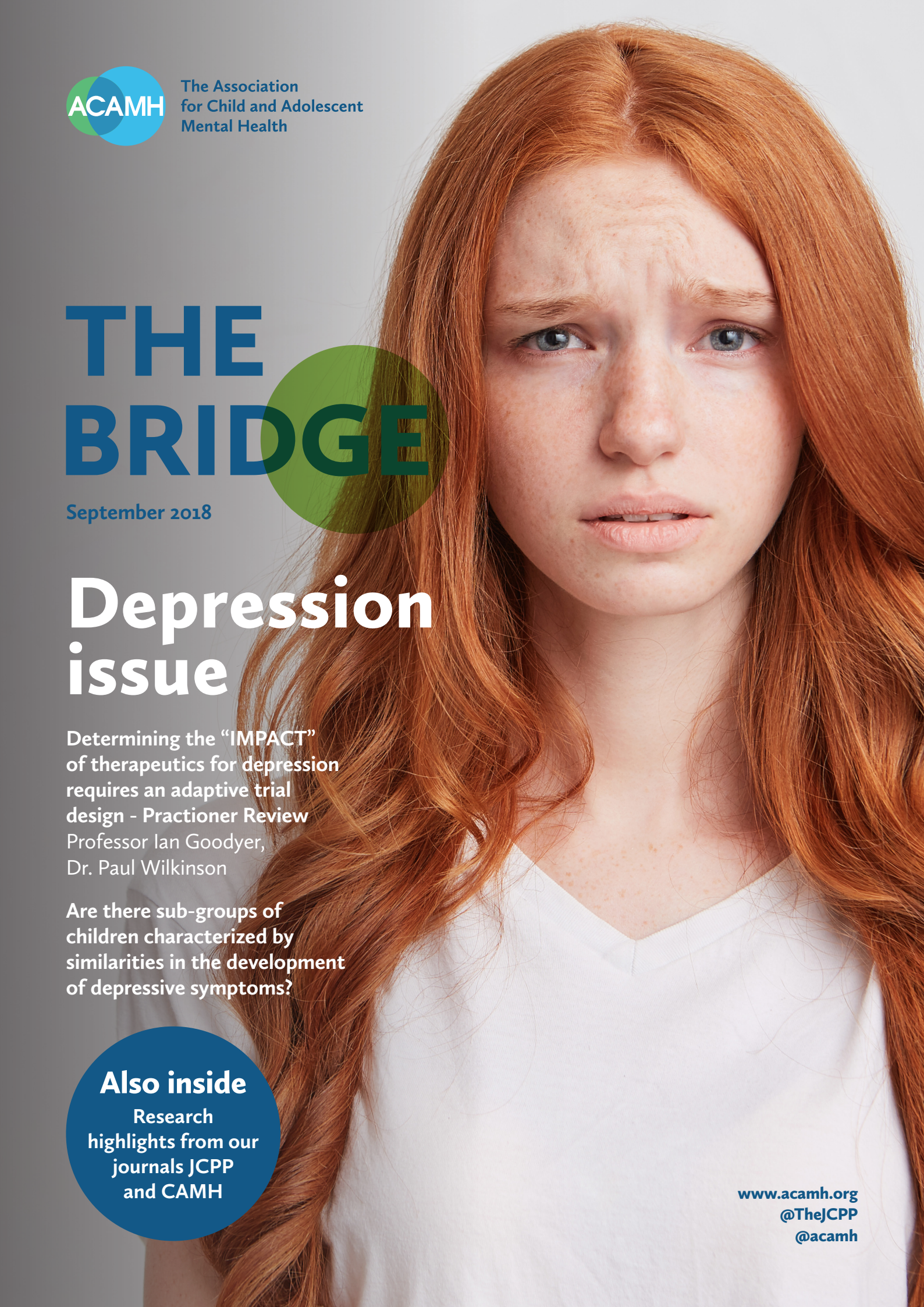

ACAMH
The Association for Child and Adolescent Mental Health

THE BRIDGE

September 2018

Depression issue

Determining the "IMPACT" of therapeutics for depression requires an adaptive trial design - Practioner Review
Professor Ian Goodyer,
Dr. Paul Wilkinson

Are there sub-groups of children characterized by similarities in the development of depressive symptoms?

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Research highlights from our journals JCPP and CAMH

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Foreword from the Editor

Welcome to the Depression in Children and Adolescents themed edition of The Bridge. You can see from the broad range of articles that there is much research activity on the topic of adolescent depression, which reflects how common this disorder is in young people. For an overview of depression in children and young people, I suggest, look for 'topic guide' on ACAMH website **https://www.acamh.org/topic/depression/** The research highlights in The Bridge provide useful update to the 'topic guide' on depression.

The summary of Goodyer et al's Practitioner's Review in this edition states that evidence suggests that depressive disorder in adolescents does respond to treatment with active therapies. The challenge for researchers and clinicians is in working out how different treatments work and which one will work best for which young person. I know from my own clinical practice that depressive disorder can be highly debilitating and interfere greatly with development of affected young people. It also affects their ability to access education. Goodyer and colleagues highlight the need to identify and target new ways of treating young people with treatment resistant depression to prevent significant long term morbidity. Depression can also be a recurrent condition and there is little evidence yet to help us to prevent relapse or recurrence. Much research needs to be done to relieve this common condition.

I hope you find this edition helpful.

Dr Juliette Kennedy
Consultant Child and Adolescent Psychiatrist

Contents

Research digests are written by Dr Jessica Edwards. She received her MA in Biological Sciences and her DPhil in Neurobehavioural Genetics from the University of Oxford (Magdalen College). After completing her post-doctoral research, she moved into scientific editing and publishing. Jessica is now a freelance editor and science writer for 'The Bridge'.

Accelerated cortical thinning correlates with early signs of depression

By Dr Jessica K Edwards

The brain undergoes structural changes as it develops over childhood, but whether abnormal structural changes are associated with emerging depressive symptoms in adolescence is unknown. Now, a longitudinal study that enrolled 205 participants aged 8-25 years without signs of depression has used magnetic resonance imaging (MRI) to monitor these brain changes over adolescence. The participants underwent MRI every 2 years over a 5-year period to monitor changes in cortical thickness, surface area and sub-cortical volume. At the third MRI, depressive symptoms were assessed by self-report (Beck Depression Inventory II). Those who had developed depressive symptoms by this time point, showed accelerated frontal lobe cortical thinning compared to those without depressive symptoms. Interestingly, changes in hippocampal and amygdala volume were not associated with depressive symptoms, despite previous studies suggesting a potential link between volumetric differences in these brain regions and depression[1]. The researchers also noted that accelerated cortical thinning in adolescence has previously been associated with positive behavioural outcomes, such as improved cognitive performance[2], yet here it was associated with an adverse outcome. The researchers propose that accelerated frontal lobe cortical thinning may be associated with emerging depressive symptoms in adolescence.

Bos, M.G.N., Peters, S., van de Kamp, F.C., Crone, E.A. & Tamnes, C.K. (2018), Emerging depression in adolescence coincides with accelerated frontal cortical thinning. J Child Psychol Psychiatr. doi:10.1111/jcpp.12895

Further reading:

[1]Schmaal, L. et al. (2016). Subcortical brain alterations in major depressive disorder: Findings from the ENIGMA Major Depressive Disorder working group. Molecular Psychiatry, 21, 806–812. doi:10.1038/mp.2015.69

[2]Shaw, P. et al. (2006). Intellectual ability and cortical development in children and adolescents. Nature 440:676-679. doi: 10.1038/nature04513

Glossary:

***Magnetic resonance imaging:** a non-invasive technique that uses a strong, static magnetic field and radio waves to measure brain activity*

***Beck Depression Inventory II (BDI-II):** The BDI-II (1996) is a revision of the original BDI (1961) in response to changes in the DSM-IV criteria for major depressive disorder. BDI-II measures depression symptoms and severity in adolescents aged ≥13 years over a 2-week time-frame, through answers to 21 multiple choice questions*

Depression is highly prevalent but under-reported in children with ADHD

By Dr Jessica K Edwards

Researchers at Cardiff University have investigated whether the symptoms of depression observed in patients with attention-deficit/hyperactivity disorder (ADHD) differ from those reported in the general population. The study recruited 249 children with ADHD (mean age 14.6 years) and a large general population sample of 1460 individuals (mean age 12.8 years) to compare (i) the prevalence of depression symptoms, (ii) the depression symptoms most commonly reported and (iii) the child-reports and parent-reports of depression symptoms. Parents and children completed the Mood and Feelings Questionnaire (MFQ), which consists of descriptive phrases regarding how a subject has been feeling recently, and must be scored as either "true", "sometimes true" or "not true" [1]. The total parent-reported MFQ and child-reported MFQ scores were then calculated and compared. The average parent-reported and child-reported MFQ scores were significantly higher in the ADHD sample compared to the general population, indicating that depression symptoms were more common in those with ADHD. The overall profile of depression symptoms in ADHD, however, was similar to the general population with feelings of irritability, restlessness, difficulties with concentration and being unhappy reported most often by both groups. Interestingly, parents of children with ADHD were more likely to report symptoms of depression than their child, whereas the reverse was true in the general population. This finding suggests that children with ADHD tend to under-report depression symptoms compared to the general population. The researchers conclude that depression symptoms are highly prevalent in ADHD, and exhibit a similar profile to the depression symptoms observed in the general population.

Fraser, A., Cooper, M., Agha, S. S., Collishaw, S., Rice, F., Thapar, A. & Eyre, O. (2017), The presentation of depression symptoms in attention-deficit/hyperactivity disorder: comparing child and parent reports. Child Adolesc Ment Health. doi:10.1111/camh.12253

Further reading:

[1]Angold, A. et al. (1995) The development of a short questionnaire for use in epidemiological studies of depression in children and adolescents. International Journal of Methods in Psychiatric Research, 5: 237 - 249.

Glossary:

***Mood and Feelings Questionnaire (MFQ):** A questionnaire containing 33 questions to capture the symptoms included in the DSM-IV criteria for major depressive disorders. It is considered an appropriate assessment tool for depression symptoms in children aged range 8–18 years, but not a method to diagnose depression. The questions assess mood and anhedonia, tiredness, restlessness, concentration difficulties, and several aspects of negative self-evaluation. A high MFQ suggests more severe depressive symptoms.*

The overlap between low self-esteem and anxiety/depression in CAMHS

By Loades, M.E.[1,2]

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This article is a summary of the paper published in CAMH - *Keane, L. & Loades, M.E. (2017). Low self-esteem and internalizing disorders in young people: A systematic review. Child and Adolescent Mental Health, 22, 4-15. doi: 10.1111/camh.12204*

Young people presenting to CAMHS often report problems with 'low self-esteem'. Self-esteem can be thought of as the overall opinion or evaluation we have of ourselves, including the judgements we make about ourselves and the value we attach to ourselves. Questionnaires like the Rosenberg Self-Esteem Scale can be used to assess self-esteem. There is a complex relationship between self-esteem and mental health problems. It is possible that low self-esteem can be a vulnerability factor, predisposing a person to developing a mental health problem. It is also possible that low self-esteem can result from mental health difficulties and their sequelae (e.g. the negative thinking about the self in depression). This complexity is further complicated by the conceptual overlap between the main constructs of low self-esteem and depression, and their associated measures.

Cognitive Behavior Therapy (CBT) for low self-esteem has shown promise as a broadly applicable intervention in adults, tackling difficulties with anxiety and low mood at the same time. It is based on the CBT model of low self-esteem, developed by Melanie Fennell and colleagues. Treatment is driven by an individualised formulation, and involves identifying and challenging negative beliefs about the self, referred to as the 'bottom line' (e.g. 'I am worthless/unlovable'), and also noticing and logging positive evidence about the self and one's positive qualities and strengths. So far, this approach has not been tested in young people. To make the case to test it, clarity is needed about the extent to which low self-esteem is associated with 'clinically significant' anxiety and depressive disorders in young people (that is, anxiety or depression which meets full diagnostic criteria). Furthermore, it is also important to know the extent to which low self-esteem in young people poses a vulnerability for subsequent mental health difficulties, which would strengthen the argument for treating it as a preventative measure.

Our systematic review aimed to establish what is known about low self-esteem and anxiety/depression in young people (<18s). We wanted to find out whether young people with clinically significant anxiety disorders and/or depression also have low self-esteem as measured on validated questionnaires.

We also wanted to know whether young people with low self-esteem as measured on a validated questionnaire develop depression and anxiety symptomology later in adolescence and young adulthood.

To address these questions, we systematically searched electronic databases to identify relevant studies.

We found 10 studies which looked at the co-occurrence of low self-esteem and clinically significant anxiety/depression. These studies included young people recruited from the community and inpatient and outpatient mental health services. Young people with depression tended to report lower self-esteem than those with anxiety disorders, while those with both anxiety and depression were found to have the lowest self-esteem. Young people with any mental health problems tended to have lower self-esteem than those who do not have mental health problems.

We found 8 studies which reported on the association between low self-esteem in young people and anxiety/depression symptoms in the subsequent 1 to 6 years. From these studies, low self-esteem in young people appeared to be a relatively weak predictor of the development of anxiety and depression in later adolescence and early adulthood. Several studies reported a significant association, although with a relatively small effect, between low self-esteem and subsequent depressive symptoms. For example, Trzesniewski and colleagues (2006) reported that adolescents with low self-esteem were 1.26 times more likely to develop Major Depressive Disorder by the age of 26 than healthy adolescents. This pattern remained even when other vulnerability factors for developing depression (e.g. baseline depression, socio-economic status and IQ) were taken into account. However, other studies did not find the same association, most likely because the link between self-esteem and later depression is complex and multi-faceted, and likely to be influenced by the accumulation of multiple risk factors. Fewer studies reported on later anxiety. Interestingly, Trzesniewski et al. (2006) found that adolescents with low self-esteem were 1.6 times more likely to develop an anxiety disorder.

The studies we reviewed suggest that young people with clinically significant anxiety or depression, and particularly those with co-morbid anxiety and depression are also likely to have low self-esteem. Further research into the utility of the CBT model of low self-esteem and treatment based on this transdiagnostic model in young people is indicated. A number of smaller scale case series may be helpful to first establish whether a larger trail of CBT is indicated.

Author statement:
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Determining the “IMPACT” of therapeutics for depression requires an adaptive trial design

By Dr Jessica K Edwards

A large proportion of adolescents suffering from moderate-to-severe major depression respond to psychological and pharmacological therapy, and the range of effective treatment modalities is increasing. Now, Ian Goodyer and Paul Wilkinson have compiled a Practitioner Review that compares the various treatment options available and assesses their effectiveness for adolescents affected by major depressive episodes.

In 2010, Professor Ian Goodyer and Dr. Paul Wilkinson together with their colleagues around the UK launched the Improving Mood with Psychoanalytic and Cognitive Therapies (IMPACT) study[1] to determine the cost-effectiveness, safety and relapse rates of three treatment regimens known to reduce depressive symptoms. Specifically, they compared cognitive behavioural therapy (CBT) and short-term psychoanalytic psychotherapy (STPP) delivered over 5-7 months by specialists trained in these modalities, with a novel reference treatment of brief psychosocial intervention (BPI) delivered at low intensity within 3 months by psychiatrists and mental-health nurses. In 2017, the first published results from the IMPACT study indicated that neither CBT nor STPP were superior to each other, and that BPI was equivalent to both in maintaining reduced self-reported depression symptoms 1 year after treatment completion[2].

In their 2018 Practitioner Review for the Journal of Child Psychology and Psychiatry, Goodyer and Wilkinson assessed the current state of knowledge on treatment modalities for major depressive episodes in adolescents and how the published data compared with the key findings of the IMPACT study — that BPI may be as good as accepted specialist CBT therapy or STPP. Their findings predominantly derive from four key randomized controlled trials (RCTs) that report on psychological and pharmacological treatments for depressed adolescents, and a set of studies that looked at prevention of the onset of major depressive disorder.

First focusing on psychological therapies, Goodyer and Wilkinson found that although promising results from RCTs have favoured CBT and interpersonal psychotherapy (IPT), a recent meta-analysis found their effect size to be relatively small (0.29) compared to active control groups[3]. The reasons behind this low effect size may be because of improvements in methodology and better active control treatments since the first RCTs of CBT and IPT were established. By contrast, another meta-analysis did find CBT and IPT to be efficacious and clinically effective in adolescents with depression. The researchers of both these meta-analyses noted that the number of IPT studies and sample sizes are too low to draw firm conclusions.

The IMPACT study, however, was sufficiently powered to examine whether specialist therapies exert therapeutic gains over those expected from a relatively simple active approach (BPI) delivered via a manual. “The results of IMPACT were thus surprising and in stark contrast to previous opinion in showing that all three psychological treatments (CBT, STPP and BPI) had potentially equal clinical effectiveness at the end of treatment and at 12-months follow-up”, explains Goodyer. Early evidence indeed suggested that BPI may be effective for mild-to-moderate depression and anxiety disorders in adolescents. Now, further work must assess the effectiveness of the BPI method used in the IMPACT study in a community, rather than a clinical setting.

Goodyer and Wilkinson then turned their attention to the therapeutic effects elicited by antidepressants. Here, they found that the most robustly designed studies showed that antidepressants can achieve an efficacy up to 20-25% higher than placebo[4]. Some selective serotonin reuptake inhibitors (SSRIs), most notably fluoxetine, elicit strong effects over placebo, but other antidepressants (e.g. mirtazapine and venlafaxine) have no proven effects. Furthermore, data suggest that SSRIs may increase suicidal thinking in some adolescents with depression: in rare cases, fluoxetine can induce disinhibition and switching to mania. More trials that recruit patients with severe depression are needed to deeply evaluate SSRI efficacy and determine any potential adverse effects.

Goodyer and Wilkinson next assessed treatment response, treatment non-response and relapse for the aforementioned therapeutic approaches. Response rates in treatment-naïve adolescents with depression are usually fairly rapid, with up to 30% reduction in symptoms achievable in the first 12 weeks of starting some form of treatment. Remission rates are also high, with reportedly 80% of trial patients remaining in clinical remission (no diagnosis or persistent 50% reduction in baseline symptoms) for up to 1 year after treatment end.

“up to 30% reduction in symptoms achievable in the first 12 weeks of starting some form of treatment”

Unfortunately, relapse rates are high (50-75%) in successfully treated patients. As such, Goodyer and Wilkinson recommend that clinical monitoring should be continued for an additional 6 months after treatment, or until at least a 50% drop in symptoms is reached. They also suggest that “booster” psychological treatment sessions could be offered to those showing early signs of relapse.

In those who do not show any initial response to treatment (up to 40% adolescents), a combination treatment strategy should be recommended that employs both psychological and pharmacological treatment modalities. “Treatment is effective, be it psychological or pharmacological, for about two thirds of patients”, reinforces Goodyer. “Clinicians should make good assessments and choose collaboratively with the patient what treatment to use. There is no reason to not treat all patients”.

Although no demographic factors have been identified that can reliably predict these described differences in treatment outcome, clinical severity at baseline may be associated with a poor treatment response. Parameters at first assessment associated with clinical severity of depression include poor global functioning, high levels of suicidality, co-morbid anxiety, cognitive distortions, hopelessness and family conflict.

Moderators of therapeutic change have been identified in many of the large RCTs. For example, combining fluoxetine treatment with CBT in the TADS trial resulted in improved outcomes in patients with mild-to-moderate depression but not in those with severe depression compared to either single treatment alone. In the TORDIA study of adolescents with treatment-resistant depression, adding CBT to SSRI treatment was effective in those with more co-morbid disorders.

The researchers consider that a strong step forward in the field will be achieved through the development of adaptive clinical trials for depression therapeutics. Such trials can make prospectively planned changes to the course of the trial based on the accumulating data from the trial itself [5]. In the context of confirming effectiveness of therapeutics in depression, Goodyer and Wilkinson propose that one such adaptive trial could start with treatment in phase one (e.g. BPI), and progress to phase two (e.g. CBT) only if symptoms fail to reduce from baseline by >50%. The second phase can then progress to phase three (e.g. combined fluoxetine and CBT) if symptoms still fail to reduce by >50% from baseline. If at any phase, symptoms are <50% of baseline, the trial can stop as remission would be achieved.

Although more complex than classical RCTs that deliver a single treatment modality — especially with regards to the statistical techniques and procedures needed to ensure the data are free from bias — adaptive trials can help overcome common limitations such as the need for a large sample size and a long study duration, as well as lack of power and high costs[6].

In summary, Goodyer and Wilkinson note that while acknowledging prevention is better than a cure, there are currently no clear strategies that have been identified to reduce the incident onset of depression in this population. However the data so far does indicate that major depressive episodes are highly treatable, with active therapies being more effective than active placebos alone. The authors explain that knowledge is still lacking as to how any treatment works and what treatment works for whom. Studies that aim to identify new medications and/or psychological therapies for severely treatment-resistant cases are also urgently needed. Ultimately, they consider that a precision medicine approach needs to be adopted for adolescents with depression that is tailored to the needs of the individual patient. "Going forward scientifically, we recommend that adaptive trials be established that will disaggregate what treatment works for which subtype of depression", says Goodyer. "It is a complex design, but will help answer that key question better than any trial has done to date".

Referring to:

Goodyer, I. M. & Wilkinson, P. O. (2018), Practitioner Review: Therapeutics of unipolar major depressions in adolescents. J Child Psychol Psychiatr. doi:10.1111/jcpp.12940

Further reading:

[1] Goodyer, I. M. et al. (2011) Improving mood with psychoanalytic and cognitive therapies (IMPACT): a pragmatic effectiveness superiority trial to investigate whether specialised psychological treatment reduces the risk for relapse in adolescents with moderate to severe unipolar depression: study protocol for a randomised controlled trial. Trials (12) 125. doi: 10.1186/1745-6215-12-175.

[2] Goodyer, I. M. et al. Cognitive behavioural therapy and short-term psychoanalytical psychotherapy versus a brief psychosocial intervention in adolescents with unipolar major depressive disorder (IMPACT): a multicentre, pragmatic, observer-blind, randomised controlled superiority trial. Lancet Psychiatry. 2017; 4: 109–11. doi: 10.1016/ S2215-0366(16)30378-9.

[3] Weisz, J. R. et al. (2017). What five decades of research tells us about the effects of youth psychological therapy. A multilevel meta-analysis and implications for science and practice. American Psychologist, 72: 79-117. doi: 10.1037/a0040360.

[4] Walkup, J. T. (2017). Antidepressant efficacy for depression in children and adolescents: industry- and NIMH-funded studies. American Journal of Psychology, 174: 430-437. doi: 10.1176/appi.ajp.2017.16091059.

[5] Bhatt, D. L. et al. (2016). Adaptive designs for clinical trials. New England Journal of Medicine, 375: 65-74. doi: 10.1056/NEJMra1510061.

[6] Thorlung, K. et al. (2018). Key design considerations for adaptive clinical trials: a primer for clinicians. The British Medical Journal, doi: 10.1136/bmj.k698.

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 and behave; CBT focuses on current problems and finds practical ways to improve state-of-mind on a day-by-day basis*

***Short term psychodynamic psychotherapy (STPP):** a manualized psychoanalytic treatment for depression in adolescents aged 13-19, which involves 28 sessions for the patient and up to 7 sessions for his/her parents or carers*

***Brief psychosocial intervention:** interpersonal or informational activities or strategies that aim to improve health functioning and well-being. BPI is built on three core principles: (1) a collaborative approach plus psychoeducation; (2) selected use of behavioural activation techniques; and (3) instigation of recovery support methods*

***Randomised controlled trial:** an experimental setup whereby participants are randomly allocated to an intervention/treatment group or a control/placebo group; randomization of participants occurs after assessments for eligibility, and is used to minimize selection bias*

***Interpersonal psychotherapy:** brief, attachment-focused therapy for those with mood disorders that aims to resolve interpersonal problems and promote symptomatic recovery*

***Selective serotonin reuptake inhibitor (SSRI):** a commonly prescribed antidepressant that works by increasing the levels of serotonin in the brain by selectively blocking serotonin reabsorption*

***Adaptive clinical trial:** a trial that permits continued modification to the trial design based on accumulating, interim data*

The trajectories of depressive symptoms expressed in early childhood differ between boys and girls

By Dr Jessica K Edwards

A study by Diana Whalen and colleagues at Washington University has used latent class analysis (LCA) to identify and define the trajectories of latent classes of depressive symptoms in early childhood. The study included 348 children from the Preschool Depression Study, who across a 10-year period completed at least three behavioural assessments. The researchers assessed symptoms of depression and oppositional defiant disorder/conduct disorder (ODD/CD) diagnoses using the Preschool Age Psychiatric Assessment (PAPA), as well as social risk factors, family history of affective disorders and functional impairment. The researchers identified three trajectories of depressive symptoms based on high, medium and low symptom severity in boys and girls. Interestingly, the high depression severity latent class in boys was characterized by an increase in symptom severity from preschool through to school age, and then a decline during later school age. For girls, however, the high depression severity latent class was characterized by stable symptom severity over time. Early childhood social adversity, family history of affective disorder, preschool onset of ODD/CD and school age functional impairment differentiated the high-risk trajectory classes among boys and girls. Finally, the researchers reported that early childhood social adversity prior to age 5 could predict greater depressive symptom severity across preschool and into school age in girls and boys.

Whalen, D.J., Luby, J.L., Tilman, R., Mike, A., Barch, D. & Belden, A.C. (2016), Latent class profiles of depressive symptoms from early to middle childhood: predictors, outcomes, and gender effects. J Child Psychol Psychiatr. 57: 794-804. doi:10.1111/jcpp.12518

Glossary:

***Preschool Age Psychiatric Assessment** (PAPA): A parent report-only assessment for children aged 2 to 5 years. PAPA is derived from the Child and Adolescent Psychiatric Assessment (aimed at children aged 9 to 18 years) but has been substantially revised in interview content and structure to be relevant to children of a very young age. PAPA includes all DSM-IV criteria relevant to young children.*

***Latent class analysis** (LCA): A modelling technique to identify unobservable, or latent, subgroups within a population*

Longitudinal trajectories of child and adolescent depressive symptoms and their predictors

- A systematic review and meta-analysis

By Lori Shore B.A, Grad Dip. Couns. Psych., M. Comm, M. Psych (Clin), PhD Clinical, Counselling and Organisational Psychologist

This article is a summary of the paper published in CAMH - *Shore, L., Toumbourou, J.W., Lewis, A., Kremer, P. (2017) Review: Longitudinal trajectories of child and adolescent depressive symptoms and their predictors - A systematic review and meta-analysis. Child and Adolescent Mental Health. http://dx.doi.org/10.1111/camh.12220*

Are there sub-groups of children characterized by similarities in the development of depressive symptoms? And, if there are, could this be a basis for early intervention and prevention of depressive disorder? Through a systematic review the researchers (Shore et al., 2017) identified five subgroups of children and adolescents that can be reliably identified in longitudinal studies based on commonalities in their depressive symptom development. After adjusting the studies to characterize child depressive symptoms into a similar metric, the researchers identified: 56% of children followed a 'No or low' depressive symptom trajectory, 26% a 'Moderate' trajectory, while 'High', 'Increasing', and 'Decreasing' depressive symptom subgroups were evident for 12% of the sampled population. Those in the moderate symptom subgroups were associated with poorer adjustment and outcomes relative to those in low symptom subgroups. This held true even for children as young as four years of age.

This review also confirmed findings from previous longitudinal studies that identified female gender, low socio economic status, stressful life events, conduct issues, and substance use as early risk factors for the increasing child depressive symptom trajectories. In addition, supportive parents and peers were found to be strong protective factors against the development of depressive symptoms in middle to late childhood. These findings imply that interventions carried out in early childhood, aimed at reducing risk factors and ensuring sensitive and supportive family environments, may be one effective approach to increase the population of children in no or low depression trajectories. Equally, providing parental and peer psycho-education may increase the protective factors available to an adolescent.

Through a systematic review the researchers identified studies that adopted trajectory modeling to examine depressive symptoms in children and adolescents, and the predictors. Unlike other types of longitudinal or cross-sectional analysis, trajectory modeling is a unique statistical methodology that groups individuals based on common symptom patterns over time. Individual and group differences are then explained by theory, sociodemographics, genotype, other biomarkers, and psychosocial predictors. Twenty English language longitudinal studies in nonclinical populations conducted between 2002 and 2015 were included. The combined study population was 41,236 with a baseline age of <19 years. The potential influence of puberty on the development of depression in the studies was examined. The studies were divided into those with a baseline assessment either prior to secondary school (ages 6–11 years) or post primary school (ages 12–16 years).

The initial analysis revealed between three and 11 depressive symptom trajectories in the published studies we included. However, these were not comparable because of the inconsistency in measures of depressive systems. At least 10 measures of depressive symptoms, with varying cutoff scores, were evident across studies. Therefore, depressive symptom scores were recalibrated across studies to equate to the most commonly used measure – the Centre for Epidemiological Studies Depression scale (CES-D). A random-effects meta-analysis then identified five common depressive symptom trajectories across the studies. Across the studies moderate symptoms were associated with poorer adjustment and outcomes relative to low symptom groups, even though the studies varied in sample, methods, and measures. This suggested that differences in child and adolescent depressive symptom patterns over time are robust. This has implications for the diagnosis of depression in children and adolescents, particularly in relation to the classification of adult clinical mental health disorders.

Identifying depressive symptom trajectories may provide early indicators to pathways of different subtypes of depression. The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) distinguishes several categories of depressive disorder in terms of treatment approach and outcome. A key differentiating feature diagnostically is the course of the disorder. These diagnostic distinctions are largely based on adults, rather than children and adolescents. Formally classifying child depressive symptom trajectories will be an important initial step in addressing the increased disease burden of depression that is expected in the coming decades. It will encourage further exploration of the origins of depression and promote the reliable assessment of depressive symptoms across the whole lifespan. It would also stimulate investment in prevention strategies aimed at reducing the number of children in high-risk trajectories.

A major limitation of current research in this area is the age range studied. Our team found few studies starting in childhood. To more clearly resolve the origins of the depressive symptom pathways, further trajectory studies commencing in the pre-pubertal ages is recommended. Again, the issue of non-standardization of measures and their interpretation, and methodologies across studies posed challenges for this research. A consistent approach to measures and methodologies will enhance future studies in this area and will assist to understand differences in the sizes of trajectories.

In summary, differing developmental trajectories of depressive symptoms may be underpinned by several distinct psychosocial and neurodevelopmental factors. This means that the interaction of social, psychological, and biological factors over time sets some children on divergent developmental trajectories. Understanding those predictors and providing early intervention strategies to children may support increased membership of the low or no depressive childhood symptom trajectories. In doing so this will go some way to reduce the risk of chronic depression and other adverse outcomes.

Author statement:
Dr. Lori Shore is a Clinical, Counselling and Organisational Psychologist who has worked extensively in private and public settings as well as within the higher education sector. She holds a PhD, a Master of Clinical Psychology and a Master of Commerce and has published and presented research both locally and internationally. Dr Shore has a close affiliation with the School of Psychology at Deakin University, Victoria Australia.

Offspring of mothers with depression show asymmetric frontal brain activity

Frontal asymmetry (FA) describes differences in engagement between the left and right frontal brain, and is measured in terms of alpha wave-band frequencies. Numerous studies have linked depression with FA, specifically reduced left frontal alpha-band activity[1], and suggested that FA may be a vulnerability marker for depression[2]. Thus, researchers have proposed that FA should be evident in the offspring of depressed parents, but the supporting data thus far are unclear. Researchers have now assessed this hypothesis longitudinally, by measuring FA (by electroencephalography, EEG) in a sample of 253 children with no prior diagnosis of depression at ages 3 and 6 years. Maternal history of depressive disorders was determined using the Structured Clinical Interview for DSM-IV non-patient (SCID-NP) edition at the first EEG, and child depressive disorder diagnoses were evaluated using the Preschool Age Psychiatric Assessment (PAPA). The researchers found a significant interaction between maternal depression and child age, whereby offspring of mothers with depression developed significantly reduced left frontal alpha-band activity compared to right frontal activity over time. By contrast, offspring of mothers without a history of depression showed symmetrical frontal brain activity at both time points. These findings highlight the importance of a longitudinal study design in delineating the role of FA in depression. Work remains to investigate whether the association between FA and familial risk for depression increases even further at later time points, and to determine the clinical utility of these findings.

Goldstein, B.L., Shankman, S.A., Kujawa, A., Torpey-Newman, D.C., Olino, T.M. & Klein, D.N. (2016), Developmental changes in electroencephalographic frontal asymmetry in young children at risk for depression. J Child Psychol Psychiatr. 57: 1075-1082. doi:10.1111/jcpp.12567

Glossary:

Electroencephalography: *A non-invasive technique to record and interpret electrical brain activity*

Structured Clinical Interview for DSM-IV Non-patient (SCID-NP): *A semi-structured interview for making the major DSM-IV Axis I diagnoses. The non-patient edition is for use in studies where the subjects are not identified as psychiatric patients (e.g., community surveys, family studies, research in primary care). Here, no assumption of a chief complaint is made, and other questions are used to inquire about a history of psychopathology.*

Preschool Age Psychiatric Assessment (PAPA): *A parent report-only assessment for children aged 2 to 5 years. PAPA is derived from the Child and Adolescent Psychiatric Assessment (aimed at children aged 9 to 18 years) but has been substantially revised in interview content and structure to be relevant to children of a very young age. PAPA includes all DSM-IV criteria relevant to young children.*

Further reading:

[1] Thibodeau, R. et al. (2006) Depression, anxiety, and resting frontal EEG asymmetry: A meta-analytic review. Journal of Abnormal Psychology, 115: 715 - 729.

[2] Allen, J.J.B. et al. (2015) Frontal EEG asymmetry as a promising marker of depression vulnerability: Summary and methodological considerations. Current Opinion in Psychology, 4: 93 - 97.

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ACAMH is pleased to announce the launch of the Judy Dunn National Conference. In light of recent attention on the importance of a holistic approach to good mental health, the inaugural event will be focusing on psychological interventions for both children and their families.

Topics

- Interventions for adopted and fostered children and their families/carers
- Working with goals across therapies with children and young people
- Results and implications of an experimental trial focusing on the therapeutic alliance
- Whole school approaches to mental health
- Psychological interventions to improve child outcomes for mentally ill mothers

Speakers

Keynote
Professor Kathryn Abel
Professor of Psychological Medicine and Reproductive Psychiatry, University of Manchester

Dr. Carol Taylor
Research Associate Division of Neuroscience & Experimental Psychology, University of Manchester

Dr Rachel Elvins
Consultant Child and Adolescent Psychiatrist

Dr Sophie Browning
Consultant Clinical Psychologist

Dr Duncan Law
Consultant Clinical Psychologist, Anna Freud Centre

Dr Matt Woolgar
Consultant Clinical Psychologist, SLaM

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LIVE STREAM
£29 per person Member
£69 per person Non-Member
Group live stream call 020 7403 7458 (Mon-Fri 8.30am – 5.30pm) for details.

Early Bird tickets available until 31/08/18
MEMBERS
PLATINUM: Early bird £152, standard £179
GOLD: Early bird £175, standard £205
SILVER: Early bird £199, standard £231
BRONZE: Early bird £199, standard £231

Non-Members
Early bird £245, standard £257

events@acamh.org ***020 7403 7458*** ***https://bit.ly/2M2mahG***

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