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Mental Health

THE BRIDGE

December 2020

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Dr Stephanie Lewis


The Bridge Editor

Welcome to the December 2020 issue of *The Bridge*.

This year has been extremely challenging for our field, as we've needed to understand and address the impact of the coronavirus pandemic on young people's mental health.

Emerging evidence suggests that youth mental health may have worsened overall during the pandemic, exacerbating trends observed over recent decades of increasing prevalence and poorer outcomes.¹ The Mental Health of Children and Young People in England Surveys found that probable mental disorder rates increased between 2017 and July 2020, and are highest for older adolescent girls, one in four of whom had a probable disorder in July 2020.² These findings are perhaps unsurprising, given COVID-19's health and economic threat, as well as the academic and social disruption experienced by young people, at an age when their emotional and cognitive skills are developing. Since the summer and as schools have re-opened, the Co-SPACE study has found some evidence that their participants' mental health difficulties may have reduced.³ We'll learn more about the ongoing impact of the pandemic, and about which individuals are at greatest risk, as research continues.


> **CONTINUED OVERLEAF**



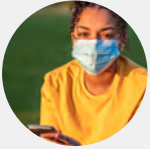
For young people with persistent and impairing mental health disorders, access to evidence-based interventions is crucial. At the start of the pandemic, CAMHS services faced major disruption,⁴ referrals and emergency presentations declined,^{5,6} and some people felt abandoned by services.⁷ But we have worked extremely hard to adapt to challenges, and there have been many swiftly implemented innovations to address mental health needs.^{7,8} In this issue of The Bridge Dr Christopher Abbott and Dr Bruce Clark, who lead CAMHS teams in South London (one of the first areas severely affected by COVID-19 in the UK), provide an expert reflection on lessons learnt and future considerations for providing effective care in our physically-distanced world.

In addition to adapting to new ways of working, the chronic underfunding of young people's mental health services needs to be urgently addressed to meet rising demand. If not treated, youth mental health problems often persist into adulthood,⁹ and for both children and adults mental health disorders are a leading cause of disability worldwide.¹⁰ In light of the evidence for cost-effectiveness of interventions, regions that invest in mental health care will reap rewards.⁴ Let's hope this becomes a priority with meaningful action in 2021.

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 - ⁴ World Health Organization (2020). COVID-19 disrupting mental health services in most countries, WHO survey: <https://www.who.int/news/item/05-10-2020-covid-19-disrupting-mental-health-services-in-most-countries-who-survey>.
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 - ⁶ Ougrin D (2020). Debate: Emergency mental health presentations of young people during the COVID-19 lockdown. *Child Adolesc Ment Health*; 25: 171–2.
 - ⁷ Sheridan Rains L, et al. (2020). Early impacts of the COVID-19 pandemic on mental health care and on people with mental health conditions: framework synthesis of international experiences and responses. *Soc Psychiatry Psychiatr Epidemiol*; published online doi:10.1007/s00127-020-01924-7.
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 - ⁹ Kessler RC, et al. (2005) Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry*; 62: 593.
 - ¹⁰ World Health Organization (2016). Global health estimates 2016: disease burden by cause, age, sex, by country and by region, 2000–2016. World Health Organization: <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates>.
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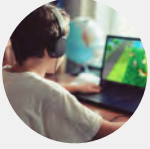
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Dr Jessica K. Edwards

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.





CAMHS services in our physically distanced world

By Dr Christopher Abbott & Dr Bruce Clark

On March 23rd 2020, the way healthcare was provided in England had to change overnight. With the COVID-19 pandemic sweeping across the country, CAMHS staff had to adapt to the news that they must provide routine services from home where possible and all non-urgent face-to-face contact must cease to prevent the spread of the virus. Six months on, after a relatively calm summer, we are seeing a steady increase in cases once again and it is clear that we will be living with COVID-19 for quite some time to come. We now need to take stock of what we have been providing to young people over the last six months and plan a way forward for our services in this physically distanced world.

One of the most striking changes to general CAMHS was the move of all routine work to online platforms, including new assessments and therapeutic interventions. Working with children and young people does put CAMHS at an advantage, as from the start of the pandemic young people embraced the digital platform and found the technology needed easy to set up and use. For many teenagers, video calling was a normal part of everyday life before the pandemic, and with it came a flexibility that is simply not possible in the traditional out-patients model.

Certain patient populations, as a result of their mental health issues, have found initial engagement through online work helpful. Whilst an anxious or depressed patient may welcome the ease of initial online contact, we have to think about what is lost from the therapeutic interaction. Many factors are impacted, including both the nature of the therapeutic relationship, as well as the range of exposures and other clinical opportunities. We must revisit more astutely how we review mental states to get the fullest picture of the clinical presentation. The delicate rapport that is

built is also easy to lose when it is formed over a screen. A challenging, yet vital, conversation can be ended by the young person with the press of a button and the therapist may find it impossible to quickly re-engage in a way we previously took for granted when sitting in a room together.

Perhaps we should place ever more emphasis on the collection of feedback data as we come to realise that our mental state assessments, and the cues we use to complete those, are very dramatically limited in online interactions. Given current restrictions of using personal protective equipment, the same will apply in more urgent face-to-face work. We perhaps never thought we would find ourselves trying to develop rapport and monitoring subtle socio-emotional cues in the context of wearing protective face coverings.

That said, a significant amount of therapeutic work of various modalities has taken place over the last six months and clinicians have worked hard to innovate and use technology to provide therapy to those in need. Art therapists have used drawing apps on iPads donated by charities, family therapy and parenting classes have taken place over Zoom and CBT sessions have continued over Microsoft Teams. While this has allowed CAMHS to provide care throughout the lockdown period, we are left with the question; how effective has our online intervention been? Few, if any, studies have been carried out into the effectiveness of these therapies carried out remotely.¹ We are yet to see the long-term outcomes for our patients who have received an entirely virtual therapeutic offer during the pandemic. If this practice is to continue, and there is definitely an argument for some form of virtual working after the pandemic has ended, studies into its effectiveness will be of great importance to ensure we continue to provide evidence-based interventions.

When considering the impact of a physically distanced world, one must also think about the impact this has on CAMHS staff members. Trainees progress through training with an increasing percentage of their time without direct face-to-face contact and day-to-day interaction with peers. What will our training institutions need to do to ensure we are meeting the highest standards of training?

Working in isolation can lead to feelings of anxiety and frustration and also may result in therapeutic interventions drifting from the evidence base. Face-to-face contact with colleagues has always fostered the development of skills and ensured that the therapy being provided remains within evidenced-based norms, through formal and informal supervision.²

Now more than ever, regular supervision is of the upmost importance, as well as good use of reflective spaces and team meetings. Informal 'team time' can also be put into place in this virtual world with many teams implementing 'coffee time' online before their meetings. Team debrief time and huddles have become routine parts of the day, allowing junior team members the opportunity to talk to senior colleagues about complex cases they may be struggling with. We cannot deny the benefits that have been created through engaging colleagues over online platforms; most notable is the flexibility it gives us to attend large group meetings, lectures and supervision with an array of colleagues, possibly spread out over a large geographical area. The elimination of travel time releases hours back into clinicians' day, which in turn can be used for patient facing activities.

The pace and degree of change we have seen across the NHS has been unparalleled in its history. As we reflect on lessons learned, there are clearly things we need to continue to improve and there will still be a great number of changes to come. Perhaps one of the most positive lessons is that we have shown that we can adapt quickly with a fleet of foot that we might have previously thought unimaginable. Our focus should always remain on our patients and what they tell us, whilst using our professional standards and networks to drive forward the highest quality service for young people.

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¹ Hollis C, Falconer CJ, Martin JL, et al. *Annual Research Review: Digital health interventions for children and young people with mental health problems - a systematic and meta-review.* *J Child Psychol Psychiatry* 2017; 58: 474–503.

² Snowdon DA, Leggat SG, Taylor NF. *Does clinical supervision of healthcare professionals improve effectiveness of care and patient experience? A systematic review.* *BMC Health Serv Res* 2017; 17: 786.



Dr Christopher Abbott

Dr Christopher Abbott is Associate Medical Director for CAMHS at South London and Maudsley NHS Foundation Trust. He is also Consultant Child and Adolescent Psychiatrist in a CAMHS crisis team, and has special interests in urgent care, psychosis and the impact of ADHD on adolescent behaviour.



Dr Bruce Clark

Dr Bruce Clark is Clinical Director for CAMHS at South London and Maudsley NHS Foundation Trust. He is also Consultant Child and Adolescent Psychiatrist leading the National and Specialist CAMHS OCD, BDD and Related Disorders Service at The Maudsley Hospital, the only such specialist team in the UK.

In their roles as Associate Medical Director and Clinical Director for CAMHS, Dr Abbott and Dr Clark provide leadership to CAMHS teams in South London and Maudsley NHS Foundation Trust, one of Europe's largest mental healthcare organisations. This work includes leading the CAMHS response to COVID-19 in South London, one of the first areas severely affected by COVID-19 in the UK.



Are children of any age susceptible to suicidal behaviour?

By Dr. Jessica Edwards

Mei-Sing Ong and colleagues in the USA and Canada have investigated the risk factors for suicide attempt in a large cohort of children, adolescents, and young adults with mental health disorders. Ong et al. performed their cross-sectional analysis on >18,000 individuals hospitalized for a mental health disorder in a private hospital system across the USA. They found that 12.1% children (aged ≤ 12 years) had attempted suicide 6-months before hospitalization. This percentage rose to 22% in adolescents (aged 13-17 years) and 17.9% in young adults (aged 18-25 years).


“From these striking findings, it seems that suicidal behaviour among elementary school age children might be more pervasive than we perhaps realized”, says Ong. “Historically, suicide prevention programs for youth have focused on adolescents and young adults but the data from our study show that even children as young as five can be vulnerable”. Based on these data, Ong et al. urge clinicians to assume that every child with mental health concerns, regardless of age, could be at risk of suicidal behaviour.

Among other factors, including female sex and depressive disorder, the researchers found that being a victim of bullying was a major contributing factor to suicidal behaviour across all age groups. Risk factors specific to pre-adolescent children included having an unsafe home or school environment.

“These findings highlight the need to develop comprehensive school-based programs for preventing and addressing suicidal behaviour and bullying, and providing an environment that is sensitive to individual and societal factors that place children and youth at risk of suicidal behaviour”, explains Ong. “In particular, developmentally appropriate education materials should be integrated into the curriculum of health classes to help equip children and youth with coping and help-seeking strategies.”

Referring to:

Ong, M-S., Lakoma, M., Bhosrekar, S.G., Hickok, J., McLean, L., Murphey, M., Poland, R.E., Purtell, N. & Ross-Degnan, D. (2020), *Risk factors for suicide attempt in children, adolescents, and young adults hospitalized for mental health disorders. Child Adolesc. Ment. Health.* doi: 10.1111/camh.12400



Do CAMHS collect less PROM data from certain sociodemographic groups?

By Dr. Jessica Edwards

Patient-reported outcome measures (PROMs) are routinely used to inform clinicians and policymakers on clinical need and treatment efficacy. Yet despite their great value and utility, it seems that there is a low rate of outcome monitoring in Child and Adolescent Mental Health Services (CAMHS). Now, Anna Morris and colleagues have conducted the first study to examine PROM collection equality, using electronic healthcare data for a clinical cohort of >28,000 children aged 4-17 years accessing CAMHS across South London.

“As a team, we were interested in finding ways to improve routine outcome monitoring in CAMHS”, explains Morris. “Though our clinical experience alluded to a shortfall between government recommendations for the use of outcome measures in CAMHS and their actual delivery, we recognised the need to conduct a large-scale observational study to assess the magnitude of these difficulties. This approach would afford us the statistical power to explore the equitability of this practice, which is paramount given that these data are increasingly used to inform both national and service-level decisions around provisioning care.”

The researchers examined the completion rate of the caregiver Strengths and Difficulties Questionnaire (SDQ)¹ — a ubiquitous PROM for CAMHS — at baseline and at 6-months follow-up. They found that the caregiver SDQ was only completed by ~40% of the sample at baseline and just 8% at follow-up. Strikingly, the pattern of SDQ completion was unequal, with biases in terms of patient gender, age, ethnicity and socioeconomic background. Males were more likely to have a baseline SDQ completed than females, whereas those of an older age, Black or Asian ethnicity, and those residing in a deprived neighbourhood were less likely to have a baseline SDQ. Similar patterns were found for the follow-up caregiver SDQ.

The study authors concede that the chosen study design was limited by several unmeasured factors that might have led to an underrepresentation of true outcome monitoring by CAMHS. Namely, the findings only reflect collection patterns for one of several outcome measures routinely used in CAMHS and

specifically, only the caregiver-reported version of this measure. However, with the caregiver SDQ being a policy-recommended measure, the data reported here serve as a worrying indicator as to the potential overall uptake.

“Identifying such stark collection figures and groups of children at risk of not receiving or completing outcome measures might prompt policy-makers to revisit data collection recommendations, specifically in relation to the suitability and inclusivity of mandated questionnaires”, proposes Morris. “We hope that these risk predictors will provoke greater scrutiny around the design and accessibility of new service development initiatives to enhance data collection, such as digital health monitoring systems, to ensure that they are inclusive.”

Referring to:

Morris, A.C., Macdonald, A., Moghraby, O., Stringaris, A., Hayes, R.D., Simonoff, E., Ford, T. & Downs, J.M. (2020), *Sociodemographic factors associated with routine outcome monitoring: a historical cohort study of 28,382 young people accessing child and adolescent mental health services*. *Child Adolesc. Ment. Health*. doi: 10.1111/camh.12396

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Glossary:

Strengths and Difficulties Questionnaire (SDQ):

The SDQ is a structured 25-item questionnaire screening for symptoms of childhood emotional and behavioural psychopathology. Caregiver SDQs are a NICE-recommended PROM that is ubiquitous to all CAMHS services. The current clinical practice is to collect caregiver-rated SDQ for young people, either before or during the first clinical appointment.




The DSM-5 criteria for DMDD overlook children with context-specific impairing irritability

By Dr. Jessica Edwards

Impairing irritability is common in children with attention deficit/hyperactivity disorder (ADHD), but little is known about its prevalence across contexts. Now, data from a study recently published in *Child and Adolescent Mental Health* have shed light on the prevalence of context-specific irritability in ADHD and how it varies depending on parenting practices and sleep problems.

“This study found its origins in our clinical experience with children with ADHD, where we have encountered extremely severe cases of irritability that only manifests in one specific context — typically in the family setting but sometimes in the classroom”, explains study author Thomas Villemonteix. “Yet there is an important gap in the DSM-5 when it comes to identifying and studying this group of patients. Indeed, the diagnosis available for severe irritability, disruptive mood dysregulation disorder (DMDD), requires symptom manifestations to be present in at least two of three settings (at home, at school, with peers). As such, cases of severe irritability only present in one specific setting are excluded.”



To determine the prevalence of context-dependent irritability in ADHD, the researchers asked parents of a group of 170 children with ADHD aged 6-11 years, to complete a semi-structured interview and questionnaire assessing irritability – once at baseline and again after 1 year. They were also asked to complete a parent-report questionnaire that evaluated parenting practices and sleep problems.

Interestingly, the researchers found that the prevalence of severe irritability restricted to the family setting (what they referred to as ‘family-restricted DMDD’) was as high as the prevalence of severe irritability present in multiple contexts (DMDD). These findings suggest that a relatively large severely impaired population might be overlooked by the DSM-5. Additionally, although parenting practices were more dysfunctional for children with irritability, they did not differ for children with family-restricted compared to cross-situational irritability, indicating that this important correlate does not distinguish between groups.

Villemonteix explains that one reason for excluding family-restricted manifestations of irritability from DMDD could be an assumption that these manifestations represent temporary phenomena. However, the data from this study reveal that these family-restricted manifestations of irritability seem to be as stable over time as cross-situational manifestations of irritability.

“An important implication of our findings is that the DMDD criteria might need to be revised to include cases of severe irritability that is restricted to specific contexts”, proposes Villemonteix. “Of course, such a change can’t be based solely on our study that has only analysed on single informant (parent) reports: our findings must now be replicated using a multi-informant approach.”

Referring to:

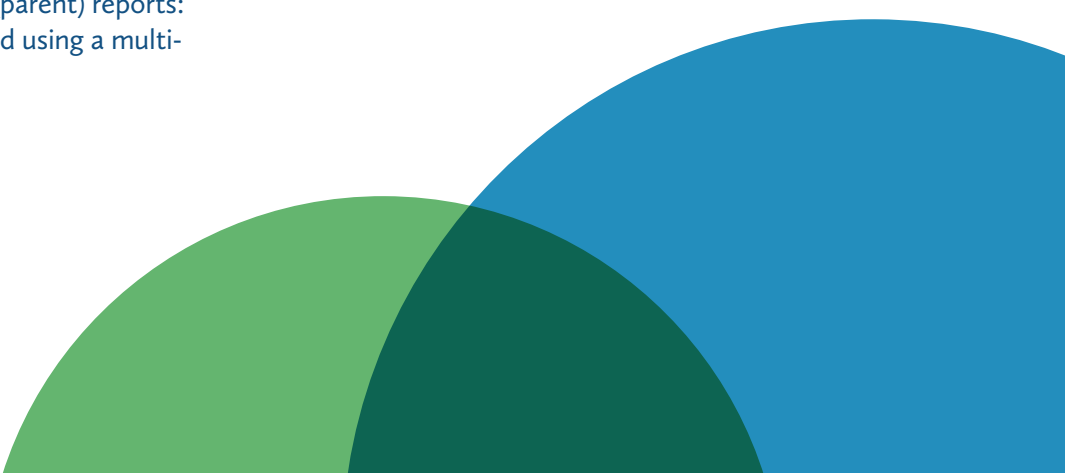
Courbet, O., Slama, H., Purper-Ouakil, D., Massat, I. & Villemonteix, T. (2020), *Context-dependent irritability in Attention Deficit/Hyperactivity Disorder: correlates and stability of family-restricted versus cross-situational temper outbursts*. *Child Adolesc. Ment. Health*. doi: 10.1111/camh.12399

Glossary:

Impairing irritability: characterized by a chronic proneness to anger that is inconsistent with the child’s developmental level and has a negative impact on their daily lives.

Disruptive mood dysregulation disorder: chronic, persistent irritable/angry mood accompanied by regular temper outbursts. Symptoms must have a negative impact in at least two of three settings (at home, at school, or with peers).

“This study found its origins in our clinical experience with children with ADHD, where we have encountered extremely severe cases of irritability that only manifests in one specific context — typically in the family setting but sometimes in the classroom.”






Insufficient sleep might affect children's emotional health

By Dr. Jessica Edwards

Data from a new study published in the *Journal of Child Psychology and Psychiatry* suggest that insufficient sleep can affect emotional health in children. The study, conducted by Candice Alfano and colleagues, assessed the impact of sleep duration on different aspects of emotion in a cohort of 53 children aged 7-11 years old. Sleep was assessed via polysomnography and actigraphy, while emotional responses were monitored during two in-lab assessments, one after a night of sufficient sleep (10 h in bed) and one after two consecutive nights of sleep restriction (7 h and 6 h in bed, respectively).

During the in-lab assessments, the children completed questionnaires to assess their current feelings. They then watched short videos and viewed images meant to elicit various positive and negative emotions. Children were asked to subjectively rate their own emotions/feelings during the tasks. Objective measures of emotional responding during the tasks were also collected including respiratory sinus arrhythmia (a measure of emotional regulation) and computer-analysis of facial expressions.



From these analyses, the researchers made some important findings. First, after just two consecutive nights of moderate sleep loss, the children exhibited significant changes in the way they experienced, regulated and expressed emotion. The most robust changes included reduced positive affect and decreased emotional responding in relation to positive rather than negative images and videos. Second, children with the highest levels of anxiety symptoms exhibited the most significant changes in their emotional responses when they did not get enough sleep.

“While positive emotions were impacted most significantly by sleep loss in all children, we were not surprised to find that those with the greatest levels of anxiety showed the most significant reductions in positive affect when tired”, says Alfano. “We know that positive emotions are essential for effective coping and problem-solving, two areas where anxious youth struggle.”

Alfano *et al.* explain that during the school-aged years, children learn to accurately identify their own emotional reactions, alter their emotional expressions in appropriate ways, and empathize with other’s emotional experiences — skills that are critical for socio-emotional health. “The pubertal transition heralds biological and social changes that increase risk for sleep and affective problems, but sleep habits and emotional skills start to become ingrained much earlier”, says Alfano. “The pre-pubertal years might, therefore, offer a critical window for reducing the likelihood of later sleep and affective problems - particularly in emotionally vulnerable children”.

“While positive emotions were impacted most significantly by sleep loss in all children, we were not surprised to find that those with the greatest levels of anxiety showed the most significant reductions in positive affect when tired.”

Referring to:

Alfano, C.A., Bower, J.L., Harvey, A.G., Beidel, D.C., Sharp, C. & Palmer, C.A. (2020), *Sleep restriction alters children’s positive emotional responses, but effects are moderated by anxiety. J. Child Psychol. Psychiatr.* doi: 10.1111/jcpp.13287.

Glossary:

Polysomnography: a sleep study during which several body functions are monitored to provide a comprehensive profile of sleep quality. The body functions measured can include brain wave patterns, eye movements, muscle activity, heart rhythm, airflow through the nose and mouth, and oxygen saturations.

Actigraphy: the continuous measurement of movement to identify periods of sleep, using a non-invasive, wearable device known as an actigraph.

Respiratory sinus arrhythmias: a naturally occurring variation in the length of time between heart beats that is coordinated with breathing.





Does an internet gaming disorder prospectively predict psychiatric symptoms?

By Dr. Jessica Edwards

A minority of children and adolescents develop addiction-like engagement in gaming that is associated with impaired function.¹ Preliminary data suggest that affected children with these symptoms, indicating an Internet Gaming Disorder (IGD), might present with more symptoms of common psychiatric disorders than those without an IGD.² However, the reasons underlying this co-occurrence are unclear. Now, researchers in Norway have examined the links between the symptoms of an IGD and of common psychiatric disorders to determine whether the observed comorbidity is due to a reciprocal relationship or a common underlying cause.

Beate Wold Hygen and colleagues studied a community sample of 702 Norwegian children who were interviewed to assess for DSM-5-defined IGD symptoms at ages 10, 12 and 14 years. They also completed an interview to evaluate symptoms of common psychiatric disorders at the same time points. To assess concurrent and prospective links between symptoms of IGD and other psychopathology, the researchers implemented a random intercept cross-lagged panel model, which adjusts for unmeasured individual factors. Interestingly, they found no associations between IGD symptoms and psychopathology, with the exception that high IGD symptoms at age 10 and 12 years predicted decreased anxiety symptoms 2 years later.

These findings do not support a concurrent or prospective relationship between an IGD and psychiatric symptoms, except for decreased anxiety. Therefore, it seems that the observed co-occurrence between IGD symptoms and psychiatric disorders is attributable to a common aetiology. The researchers hypothesize that genetics may be an important factor, but further work is needed to confirm this hypothesis and to delineate the consistently observed association between extensive gaming and mental health. For now, the researchers propose that heavy gaming during childhood to the extent of developing an IGD might not confer a risk of developing other mental health problems later in life.

Referring to:

Wold Hygen, B., Skalická, V., Stenseng, F., Belsky, J., Steinsbekk, S. & Wichstrøm, L. (2020), *The co-occurrence between symptoms of internet gaming disorder and psychiatric disorders in childhood and adolescence: prospective relations or common causes?* *J. Child Psychol. Psychiatr.* doi: 10.1111/jcpp.13289.

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¹ Kuss, D.J. et al. (2012), *Internet gaming addiction: A systematic review of empirical research.* *Int. J. Ment. Health Addiction.* 10, 278–296. doi: 10.1007/s11469-011-9318-5.

² Percy, B.T. et al. (2017), *Internet gaming disorder explains unique variance in psychological distress and disability after controlling for comorbid depression, OCD, ADHD, and anxiety.* *Cyberpsychol. Behav. Soc. Netw.* 20, 126–132. doi: 10.1089/cyber.2016.0304.



Consistency is needed when measuring and reporting outcomes in child and adolescent anxiety disorders trials

By Dr. Jessica Edwards

This year, Cathy Creswell, Maaïke Nauta and colleagues from around the world convened a series of international activities based around measuring and reporting in treatment trials for child and adolescent anxiety disorders. The resulting international consensus statement was recently published in the *Journal of Child Psychology and Psychiatry*. Various researchers, mental health professionals, young people, parents and caregivers were all invited to give their views to help develop these new recommendations.

“Anxiety disorders are extremely common and often start in childhood or adolescence so it is really critical that we can offer effective interventions driven by an understanding of what works for whom”, explains lead author Cathy Creswell. “The large and growing pool of randomised controlled trials could provide a great opportunity to develop this understanding; however, we are limited by the wide array of measures that are used and the different ways in which those measures are reported. As an example, outcomes extracted from diagnostic measures have included whether the child has recovered from the primary disorder, whether the child has recovered from all disorders, whether the child has recovered from a specific disorder or a subset of disorders, and whether the primary disorder is no longer the primary disorder. These different outcomes are often combined in meta-analyses but are clearly measuring quite different things.”

To help resolve this issue, the consensus statement sets out clear recommendations on measuring and reporting: (1) diagnostic outcomes; (2) continuous measures of symptoms and functional interference; and (3) sample and treatment characteristics. The group hope that this set of recommendations promotes clear and consistent reporting in trials going forward. Then, the community will be able to maximise the opportunities that come from international research in this important area.

Referring to:

Creswell, C. Nauta, M.H., Hudson, J.L. et al. (2020), *Research Review: Recommendations for reporting on treatment trials for child and adolescent anxiety disorders – an international consensus statement*. *J. Child Psychol. Psychiatr.* doi: 10.1111/jcpp.13283.



A developmental language disorder might increase the risk of reoffending

By Dr. Jessica Edwards

Researchers in the UK are the first to identify the potential impact of a developmental language disorder (DLD) on reoffending risk in young people. Maxine Winstanley and colleagues recruited 145 young offenders to their study. They collected data on expressive and receptive language, nonverbal IQ and callous-unemotional traits. They then examined differences in the risk of reoffending between young offenders with and without a DLD.

The researchers found that young offenders with a DLD were more than 2.5 times as likely to reoffend within a year of receiving a court order compared to those without a DLD. This increased risk was not explained by differences in nonverbal IQ, age at first offence, the number of previous offences, a composite adversity score, deprivation score, the presence of a neurodevelopmental disorder or callous-unemotional traits.

Winstanley *et al.* consider that language could be a “key factor in the continuation of reoffending behaviour”. As such, they propose that young people with an unidentified DLD represent a group who are “challenged in their ability to access verbally mediated strategies in the youth justice service”. Going forward, it seems important to identify youths with a DLD upon their entry into the youth justice system.

Referring to:

Winstanley, M., Webb, R.T. & Conti-Ramsden, G. (2020), *Developmental language disorders and risk of recidivism among young offenders*. *J. Child Psychol. Psychiatr.* doi: 10.1111/jcpp.13299.

See also:

Other research digests on Developmental Language Disorders can be found via the following link: <https://www.acamh.org/research-collection/developmental-language-disorder/>

Glossary:

Developmental language disorder (DLD): a DLD is diagnosed when a child’s language skills are persistently below the level expected for the child’s age and this impacts on their everyday life.

Is infant empathy linked with later externalizing problems?

By Dr. Jessica Edwards

Until recently, it has been assumed that young infants cannot feel empathy for others.¹ However, emerging data suggest that this might not actually be the case.² Now, Yael Paz and colleagues have examined empathy development during the first years of life, analysing data from 165 infants involved in a longitudinal, prospective study. They specifically studied whether early empathy (age 3-36 months) has a protective or predictive role for externalizing problems that emerge in early childhood (age 18-36 months).

The researchers found that higher empathy was a protective factor against subsequent externalizing problems at 36 months old for boys, and against increases in externalizing problems from 18 to 36 months for both sexes. In contrast, for girls higher empathy at 12 and 18 months old predicted greater externalizing problems at 18 months old. This link might shed new light on the meaning of early externalizing behaviours.

“The fact that these behaviours are tied to greater empathy in girls suggests that they might actually reflect an interest in others and attempts to communicate and interact with others (even if in unskilled or unregulated ways), rather than attempts to hurt others”, says Paz. “Understanding the benign/positive intentions behind these behaviours might help the environment react in a more suitable way (e.g., to teach how to approach others, rather than to reprimand the child for being aggressive). It is quite possible that angry and harsh reactions to a toddlers’ externalizing behaviours might actually imbue these behaviours with a negative meaning, and thus set off a negative cascade.”

Overall, the researchers propose that experiences that promote empathy in young infants might have positive implications for childhood behaviour. “These findings have potential clinical implications, as they point to the utility of incorporating very early empathy-based interventions and prevention programs for at-risk groups”, proposes Paz. “Given the early ages of the infants, such programs might focus on psycho-education regarding the importance of socio-emotional development during the first year of life.”

Referring to:

Paz, Y., Orlitsky, T., Roth-Hanania, R., Zahn-Waxler, C. & Davidov, M. (2020), *Predicting externalizing behavior in toddlerhood from early individual differences in empathy*. *J. Child Psychol. Psychiatr.* doi: 10.1111/jcpp.13247.

References:

¹ Hoffman, M.L. (2001). *Empathy and moral development: Implications for caring and justice*. Cambridge, MA: Cambridge University Press.

² Davidov, M., Paz, Y., Roth-Hanania, R., Uzefovsky F., Orlitsky, T., Mankuta, D. & Zahn-Waxler, C. (in press). *Caring babies: Concern for others in distress during infancy*. *Developmental Science*. <https://doi.org/10.1111/desc.13016>.

Glossary:

Empathy: Concern for others in distress, and cognitive awareness and exploration of that distress. In this study, empathy was assessed using behavioural observations while the children witnessed distress, including their mother pretending to be hurt and in pain. The researchers coded both empathic concern (reflected in facial expressions, vocalisations and gestures) and inquiry behaviour (such as intense looking, exploring gestures and verbal inquisitiveness).

Externalizing problems: maladaptive behaviours which are directed externally towards the environment. Examples include impulsivity, and antisocial or aggressive behaviours. Adult manifestations of externalizing problems can also include alcohol or substance misuse.






Do ADHD and ASD symptoms have similar characteristics in childhood and young adulthood?

By Dr. Jessica Edwards

Attention-deficit/hyperactivity disorder (ADHD) and autism spectrum disorder (ASD) are generally considered early-onset disorders. As a result, most research has focused on children, although it is now widely recognised that adults are also affected.¹ Previous studies comparing ADHD and ASD symptoms in adulthood to childhood have observed some differences, such as less of a male excess². However, this finding could reflect methodological issues including changing the informant from parent to self, different 'child' and 'adult' measures, delayed detection in females, or referral bias in adult clinic-based studies.

Now, Lucy Riglin and colleagues in the UK have investigated whether ADHD and ASD traits in young adulthood show similar characteristics to those reported in childhood. To do so, they harnessed data from a longitudinal study (ALSPAC) that followed the same individuals during childhood into young adulthood and used many of the same measures across this timeframe. They examined associations with other neurodevelopmental problems (IQ, reading and spelling ability, pragmatic language and communication) and examined the pattern of associations with neuropsychiatric polygenic risk scores (focussing on disorders where previous research suggests genetic overlap in childhood: ADHD, ASD, schizophrenia, depression and anxiety). The researchers also explored whether the patterns of association differed when using self-reports compared to parent-reports.




“We found that ADHD/ASD symptoms at age 25 years had similar characteristics to earlier in development”, describes Riglin. “Specifically, they showed similar associations with cognitive, learning and communication problems and with genetic risk for neuropsychiatric disorders, although somewhat less so when the symptoms were rated by the individuals themselves compared to when rated by parents”.

The researchers propose that these findings support the validity of ADHD and ASD symptoms in adulthood. “These similarities across childhood and adulthood highlight that mental health problems do not fit neatly into ‘child/adolescent’ or ‘adult’ in the way that services are often organised”, explains Riglin. “Therefore, services and research that bridge different developmental periods could potentially improve our understanding of patients’ symptoms across the lifespan”.

Riglin *et al.* also suggest that even at age 25, available parent-reports could be clinically useful. “Further investigation into the possible advantages of including additional raters of young-adult ADHD and ASD symptoms, as well as how and why other people might rate these symptoms differently from the individuals themselves, is now warranted”, says Riglin. “In addition, we should also be asking how neurodevelopmental services could be configured to bridge across development”.

“We found that ADHD/ASD symptoms at age 25 years had similar characteristics to earlier in development.”



Referring to:

Riglin, L., Leppert, B., Langley, K., Thapar, A.K., O'Donovan, M.C., Davey Smith, G., Stergiakouli, E., Tilling, K. & Thapar, A. (2020), *Investigating attention-deficit hyperactivity disorder and autism spectrum disorder traits in the general population: What happens in adult life?*. *J. Child Psychol. Psychiatr.* doi: 10.1111/jcpp.13297.

References:

- ¹ Thapar, A., & Cooper, M. (2016). Attention deficit hyperactivity disorder. *Lancet*. 387, 1240–1250. doi: 10.1016/S0140-6736(15)00238-X.
- ² Biederman, J. et al. (1994). Gender differences in a sample of adults with attention deficit hyperactivity disorder. *Psychiatry Res.* 53, 13–29. doi: 10.1016/0165-1781(94)90092-2.

Glossary:

Polygenic risk score: An index of genetic liability to a trait or condition, calculated according to an individual's genetic profile and relevant genome-wide association study (GWAS) data.



Does late-onset ADHD share the same neurocognitive markers as childhood-onset ADHD?

By Dr. Jessica Edwards

Researchers in the Netherlands have published their findings from a 6-year prospective, longitudinal study that aimed to identify neurocognitive markers of late-onset attention-deficit/hyperactivity disorder (ADHD). Shahrzad Ilbegi and colleagues extracted data from the Dutch section of the International Multicenter ADHD Genetics (IMAGE) study that included individuals with childhood-onset (persistent) ADHD ($n=193$), as well as siblings with late-onset (after age 12 years) ADHD ($n=34$), stable unaffected siblings ($n=111$) and healthy controls ($n=186$). After assessing for ADHD, the researchers collected data on neurocognitive function, such as time reproduction, reaction time, motor control and working memory.

Ilbegi *et al.* found that, for these neurocognitive measures, siblings with late-onset ADHD were similar to individuals with childhood-onset ADHD. Both groups had longer reaction times and higher error rates on all neurocognitive measures at baseline and follow-up compared to healthy controls. They also showed greater variability in reaction time and timing production at baseline compared to stable unaffected siblings. Additionally, the researchers found no evidence of a change in neurocognitive function over the 6-year study period.

These findings suggest that late-onset ADHD might be linked with the same underlying neurocognitive impairments as childhood-onset ADHD. Simply, the phenotypical manifestations of ADHD are delayed. To confirm this hypothesis, further studies are needed that include a larger number of young people with late-onset ADHD, additional measures of neurocognitive function, and ADHD assessments made later in development. The researchers consider that, in future, assessing reaction time and timing production variability might help identify children at risk of late-onset, familial ADHD.

Referring to:

Ilbegi, S., Buitelaar, J.K., Hoekstra, P.J., Hartman, C.A., Franke, B., Faraone, S.V., Osterlaan, J., Luman, M., van Lieshout, M. & Rommelse, N.N.J. (2020), Neurocognitive markers of late-onset ADHD: a 6-year longitudinal study. *J. Child Psychol. Psychiatr.* doi: 10.1111/jcpp.13272.