What we are learning about co-occurring mental health problems in autism spectrum disorders?

Over the past decade there has been increasingly wide recognition that individuals on the autism spectrum commonly present with co-occurring mental health difficulties. Depending on the context these are variously described as psychiatric disorders, emotional and behavioural problems, and behaviour that challenges. This wider recognition came about for a combination of reasons, including evidence that in mid-childhood the population rates of children with autism spectrum disorder (ASD) meeting criteria for a psychiatric disorder were as high at 70%, with 40% of children meeting criteria for 2 disorders\(^1\). The most common co-occurring difficulties are anxiety, in particular social anxiety, attention deficit hyperactivity disorder (ADHD) and oppositionality. Other studies have also reported high rates of depression in some adult samples.

These figures have been broadly supported by subsequent research and in many ways provide empirical confirmation of what people with autism, their families and those who work with them have long held to be the case. This recognition led to one of the most broadly welcomed changes to the American Psychiatric Association DSM-5 classification system when it was published last year. DSM-5 removed the ‘hierarchy’ rule included in the previous iteration (DSM-IV) that did not allow the diagnosis of ADHD in individuals who met criteria for an autism spectrum disorder.

Identification and recognition of this high rate of mental health difficulties in ASD is the first step, but now the quest is on to understand why and how the rates of co-occurrence are so very high. This understanding is important for both clinical and scientific reasons. Clinically, for some individuals and their families, it is the co-occurring emotional and behavioural difficulties that have the most impact on their ability to manage in everyday life, whether at work, home or school.

Recognition of the high rate of co-occurrence was noted in the suite of NICE guidelines published over the past 3 years\(^2\). They recommend that mental health difficulties, or emotional and behavioural problems, should be routinely assessed when an autism diagnosis is made to ensure that they are not missed or overlooked.

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Another clinical reason behind the importance of this increased recognition that ‘comorbidity’ is the norm and not the exception, is that many of these mental health conditions have an evidence-base for psychological or pharmacological treatments. Whilst it cannot be assumed that psychiatric treatments with an evidence base developed in the general non-ASD population will necessarily work in the same way for individuals with autism, they do offer hope for a reduction in difficulties and an improvement in outcomes for the future. Two things need to happen:

First, clinical scientists need to test what adaptations might be required to make such treatments fit best to individuals with ASD. One good example of this is the increased use of visual and concrete materials in cognitive behavioural therapy (CBT) for anxiety in children, young people and adults with ASD\(^3\). The second thing that needs to change is the knowledge and understanding about autism and how to work with, support and treat people with autism within adult and child mental health services (CAMHS). The NAS ‘You Need to Know’ campaign a few years ago highlighted how individuals with ASD and their families who had received CAMHS services experienced a lack of awareness, training and confidence in working with children and young people with autism.

Scientifically, one of the areas of great current interest is to understand more about why disorders such as anxiety and ADHD so commonly co-occur with ASD. Part of the story is due to shared genetic anomalies that contribute to the liability and risk of ASD and these other psychiatric conditions. The evidence for this comes both from studies identifying known susceptibility genes in clinical samples and from twin studies examining the heritability of autistic, anxious and ADHD traits in the general population\(^4\). However, we also know from recent large genetic studies that genes for psychiatric disorders don’t ‘run true’\(^5\).

This means that whilst family members of individuals with common psychiatric disorders, including autism, are at increased risk themselves of also having a psychiatric condition this is not specific to the condition(s) that members of their families have (for example higher rates of ADHD are found family members of individuals with ASD and vice-versa). What seems to be inherited then is an increased risk to atypical neurodevelopment that may, depending on other genetic, epigenetic (gene activity) and environmental influences, manifest as one or more of several psychiatric conditions. However, we also know that environmental and interactions between genetic architecture and environmental factors also play a role in the causation of all psychiatric disorders and, for mood and behavioural disorders such as anxiety and ADHD, that experiential factors ranging from life events to parenting also affect their onset and course. To date, only limited work has been done on environmental and life experiential influences on the emergence and progress of co-occurring mental health difficulties in individuals with ASD. Led by my colleague Prof. Emily Simonoff, here at the Institute of Psychiatry we have recently been awarded an National Institute of Health Research (NIHR) programme grant to undertake such work, as well as other work on the measurement, predictors, costs, experience and treatments for mental health difficulties in ASD.

One final question of great interest to scientists is whether mental health difficulties, as experienced by individuals with ASD, are the same, or different, as those experienced by the rest of the population who do not have an ASD. People are adopting various experimental and
neurocognitive approaches to see, for example, whether atypical attention biases to fearful stimuli (e.g. faces showing fear or frightening animals), that are well-established to be involved in the onset and maintenance of anxiety in the typical (non-ASD) population, are similarly found in individuals with anxiety and ASD\textsuperscript{6}. Several groups have also been interested in whether the cognitive profile in domains such as executive function and theory of mind are similar or different (or indeed additive) in individuals who meet criteria for both ASD and ADHD compared to those who meet criteria for ASD or ADHD only\textsuperscript{7}. There is scientific interest in whether the commonly co-occurring conditions are the same when present in ASD as when they present in isolation, or whether they represent some kind of ‘phenocopy’ (that is, essentially similar clinical presentations but different underlying aetiological roots). The answer to these and to other studies will inform treatment options to establish whether already evidence-based treatments will work in a similar way or not in individuals with ASD. This area promises to be one of the most important and we hope impactful areas of autism research in the years ahead.

References


4 Posthuma D, & Polderman TJ. (2013). What have we learned from recent twin studies about the etiology of neurodevelopmental disorders? Current Opinion in Neurology, 26, 111-121.

