Mental Health Problems in ASD
Where we were

- Anxiety/emotional disturbance conceptualised as ‘part of ASD’
- Mental health problems underlying challenging behaviour often unrecognised or untreated/mistreated
- Few if any treatment options other than medication
- A few case studies and anecdotal reports
Where we are now

- Robust data on the prevalence of mental health problems in ASD (eg Simonoff et al 2008)
- Several trials demonstrating efficacy of CBT for anxiety (eg Sukhodolsky, 2013)
- An understanding of the atypical and typical presentations of anxiety in ASD
- Understanding of the pathways and moderating/mediating factors to anxiety in ASD
- Development of ASD-specific assessment tools/techniques
Anxiety

Very common presenting clinical problem

Prevalence rates of about 50%

Typical and atypical presentations quite specific to ASD

ASD-specific pathways to anxiety?
Associated factors

• Anxiety and IQ seem to be related (Waite et al 2020)
• Possibly verbally more able individuals have higher awareness of difference and hence higher anxiety
• But equally questionnaire measures may be better at picking up anxiety in high functioning individuals – we need better measures
• Social and communicative features, and repetitive and restrictive features may have a differential impact on anxiety
• Some disorders may vary differentially according to age
Presentation of anxiety in autism


- A qualitative, bottom-up approach
- An attempt to try and capture the atypical presentation of anxiety in ASD, qualitative differences between anxiety in ASD and the general population

Quantitative studies eg Kerns et al 2014
Triggers

<table>
<thead>
<tr>
<th>Typical:</th>
<th>ASD-specific:</th>
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<tbody>
<tr>
<td>• Worries about social expectations/judgments</td>
<td>• Worries about changes to routine and new situations</td>
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<tr>
<td>• Worries about not meeting demands</td>
<td>• Social fears but not driven by fear of social negative evaluation</td>
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<tr>
<td>• Typical fears</td>
<td>• Sensory over-stimulation, unusual fears</td>
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<td></td>
<td>• Being prevented from engaging in repetitive behaviours or circumscribed interests</td>
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<td></td>
<td>• School as a theme throughout</td>
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### Signs and symptoms of anxiety

**Typical:**
- Somatic: changes in eating and sleep
- Increase in arousal
- Escape, avoidance, reassurance, safety behaviours

**ASD-specific:**
- Challenging behaviour or withdrawal
- Increase in sensory, repetitive behaviours
- Increase in socially inappropriate behaviours
- Behavioural rather than verbal communication of anxiety
Impact of anxiety often greater than the ASD itself

Impact on child, parents, sibling
Cognitive pathways to anxiety in ASD

- Relationships identified between:
  - Intolerance of uncertainty (IU) and anxiety
  - Attentional bias and anxiety
  - Executive function and anxiety
  - Sensory sensitivity and anxiety
Theory of mind and anxiety

- Misunderstanding of other people’s intentions can lead to a perception of threat.

- Difficult to distinguish between deliberate and accidental acts.

- Ambiguity perceived as threatening
  - e.g. Busy school corridor, get bumped into. Interpret this as being deliberately pushed or hit.

- An awareness of the difficulty understanding other people can also lead to anticipatory anxiety about being around people, and hence avoidance
Weak central coherence

- Tendency to process information locally rather than globally
- Pay less attention to context
- Pay preferential attention to parts rather than wholes
- Eg Happe and Frith, 1996, 2006
Central coherence and anxiety

- Poor global processing can lead to a piecemeal understanding of social situations/ task instructions
- Possible processing bias towards threatening stimuli. Eg only processing negative comments, not whole context
Attentional bias in anxiety and ASD (Hollocks et al 2016)

- Negative interpretation bias
  - ASD/ANX=ASD/no anx > no ASD
- Attentional bias to threat faces
  - ASD/ANX> ASD no anx> no ASD
- Some studies have shown no attention bias in ASD
- Negative biases may be related to ASD more generally, not just anxiety
IU in ASD

- IU may actually mediate the relationship between ASD and anxiety -after the effect of IU was taken into account, there was no longer any difference in anxiety between ASD and non-ASD groups (Boulter et al, 2013).

- A meta analysis of 10 studies found 9 had a robust link between IU and Anxiety

- Greater insistence on sameness associated with higher anxiety (Rodgers et al, 2012; Gotham et al, 2013)

- RRBs may help reduce IU/anxiety by creating sameness/reducing unpredictability (leads to positive beliefs about RRB, reduces learning opportunities)
• Not a great deal of research apart from within the neuropsychology literature
  • Direct pathway to externalising problems, indirect pathway to internalising problems (via IU) (Ozsivadjian et al, 2020 JCPP)
  • Inflexibility may inhibit the development of flexible, adaptive strategies to managing stress
  • Bidirectional, for example, anxiety may exacerbate inflexibility, resulting in an insistence on sameness, as well as inflexibility preventing effective management of anxiety (Wood and Gadow)
  
• Does cognitive inflexibility affect treatment outcome?
The role of alexithymia

- Alexithymia is characterised by difficulties identifying, expressing and feeling emotional states (Nemiah, 1976).
- Internal sensations may be confusing and unpredictable and makes ER harder

- The relationship between anxiety symptoms and features of ASD has been shown to be mediated by alexithymia (Stephenson et al, 2016)
- A lack of reactivity to inner experiences was found to be a powerful predictor of anxiety and worry in adults with ASD (Maisel, 2016).
The role of sensory function

- Hypersensitivity
- Hyposensitivity
- Sensory processing differences – sensory prediction reduces uncertainty
- A bidirectional relationship
- Atypical habituation processes
- Also intense imagery experiences – an often-neglected area of cognition and CBT
Intolerance of ... more than uncertainty?

- Of discomfort?
  - Of internal state
  - Of external stimuli
Emotional regulation

ER defined as efforts to modify or control the intensity of an emotional reaction, usually in the service of an individual goal (Thompson, 1994).

Reappraisal, problem-solving

Emotional dysregulation may present as:

<table>
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<tr>
<th>‘Meltdowns’</th>
<th>Irritability</th>
<th>Aggression</th>
<th>Self-injury</th>
<th>Impulsivity</th>
<th>Suppression, rumination</th>
<th>And anxiety</th>
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</table>

Emotional response/reactivity requires emotional regulation
Emotional regulation

• Individuals with ASD have been shown to use adaptive ER strategies (such as cognitive reappraisal) less frequently, and maladaptive ER strategies (such as avoidance) more frequently in the management of negative emotion (e.g. Samson et al, 2014).

• White et al (2014) detail two proposed pathways to anxiety via impaired ER: a direct pathway, whereby ER difficulties, considered intrinsic to ASD lead directly to anxiety; and an indirect route whereby the pathway is via by neural, physiological, and socio-cognitive factors, with a number of proposed moderators such as rigidity, cognitive bias and social motivation.
Affective neuroscience

Abnormal prefrontal cortex function

Abnormal connectivity between PFC and Amygdala (eg South et al 2012)
Affective neuroscience

Reduced heart rate and cortisol response to psychosocial stress in ASD (Hollocks et al 2016)

Similar to chronic stress/PTSD including early childhood maltreatment
South and Rodgers (2016)
Anxiety occurs at greatly increased rates in the ASD population.

It may present typically but also atypically.

Identifying pathways to ASD will help us refine treatments.
Implications for treatment

- Adapted CBT
- Medication
Implications for treatment

- Addressing alexithymia – mindfulness/DBT
- Addressing imagery – imagery-enhanced CBT
Improving tolerance for uncertainty

- CUES approach
- Core component of Dugas and Robichaud model of GAD
Addressing cognitive inflexibility

- Unstuck and on target - teaches what flexibility, goal setting and planning are, why they are important, and how to use self-regulatory scripts that guide flexible, goal-directed and planning behavior

- Plan A/Plan B
- Big deal/little deal
However

The best intervention is prevention

Providing the right educational environment – reasonable adaptations, or specialist provision

Taking into account sensory needs

Autism friendly environments

Improving awareness of neurodiversity
Environmental supports in school

- Increase predictability, reduce confusion (visual timetables)
- Increase sense of calm if possible (reduce clutter, encourage use of calming techniques/objects)
- Have a plan in place for unmanageable anxiety (eg go-to person, go-to place)
- Meet and greet
- Having separate place to get changed (for example)
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<td>Know the child’s triggers – reduce some if possible – but not all as this does not reflect the real world</td>
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<td>‘Read’ the child’s behaviour – be aware of the impact of adult behaviour on the child (eg perception of being shouted at/told off, criticised, feeling pressured, getting into battles)</td>
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<td>Give opportunities for time out – and making child is confident to use them (eg time out card)</td>
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<td>Reduce pressure on the child, for example not expecting them to answer questions in front of the whole class, discuss homework requirements with parents</td>
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<td>Home school book</td>
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<td>Praise – public vs private – be aware that being the focus of attention is uncomfortable for some.</td>
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