The Relationship between Anxiety and Social Competence in ASD

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A national strategy on mental health

- Canada's first national mental health strategy was released in the Spring of 2012 (Mental Health Commission of Canada, 2012)
- http://www.mentalhealthcommission.ca/English/
- The Strategy translates this vision into 26 priorities and 109 recommendations for action, grouped under the following **6 Strategic Directions:**
- **Promote mental health across the lifespan** in homes, schools, and workplaces, and prevent mental illness and suicide wherever possible.
- **Foster recovery and well-being for people of all ages** living with mental health problems and illnesses, and uphold their rights.
- **Provide access to the right combination of services, treatments and supports,** when and where people need them.
- **Reduce disparities in risk factors and access to mental health services**, and strengthen the response to the needs of diverse communities and Northerners.
- **Work with First Nations, Inuit, and Métis to address their mental health needs,** acknowledging their distinct circumstances, rights and cultures.
- **Mobilize leadership, improve knowledge, and foster collaboration at all levels.**

National Strategy: Implications for people with developmental disabilities?

- The National Strategy's impact on people with developmental disabilities (DD) and mental health is unclear at this time
- Variations across regions in how mental health and DD services are delivered means that data/research findings from one jurisdiction may not translate well to another

Research is needed to inform policy

- If we are to move mental health policy ahead in Canada we need more research to identify mental health symptoms and how they impact youth with ASD in particular but also as compared to their TD peers
  - How significant a problem is it?
  - How does it manifest?
  - How can we treat it?

Anxiety in ASD

- Children with autism spectrum disorder (ASD) are at much higher risk for anxiety (rates range from 11-84%) and depression (1.4 to 48%) (Mayes, Calhoun, Murray, Ahuja, & Smith, 2011; White et al., 2009; Magnuson & Constantino, 2011)
- High functioning (HF) individuals with ASD are particularly at risk (Mayes, Calhoun, Murray, Ahuja, & Smith, 2011; Volker et al., 2010; Kuusikko et al., 2008; Bellini, 2004; Gillott et al., 2001)
- As many as 49% may have social anxiety in particular (Bellini, 2004)

Signs of anxiety in ASD

- Facial expressions, gestures, mannerisms may not be reliable indicators
  - Silly behaviour
  - Neutral or blank expression
  - Hyperactivity/Underactivity
  - Inattention
- Changes in sleep patterns, eating, physical symptoms may not be reliable indicators
  - Problems were always present in some form
- Internalizing behaviour may be absent or coupled with externalizing behaviour
  - E.g. Aggression, tantrums, refusal behaviours, increased rigidity
- Approach and avoidance are equally likely responses to threat
  - (E.g., stalking behaviour)

Environmental conditions that may maintain anxiety

- More vulnerable to negative experiences (e.g., failure, rejection, abuse, trauma)
- Have more 'rational fears'
  - "how likely is it that you will be socially rejected?"
- More idle time and "in their heads" most of the time
- Have a restricted range of interests/activities
  - Actively pursue evidence to support their theories. Lack of opportunities to disconfirm theories "everyone is out to get me"
- More dependent on caregivers to meet basic needs
  - Feelings of anger and resentment along with fear of losing lifeline

Factors that may hinder treatment

- Resistance to change
  - anxiety may become a comfort zone or even part of one's identity
- Perceptual, cognitive strengths and challenges
  - Events may be recalled vividly in a detail oriented fashion without a good grounding in context
  - More likely to have "black and white thinking"

Factors that may hinder treatment

- Low threshold of reactivity to novel or unexpected events
- Longer recovery time during periods of distress
  - Exposure techniques are challenging
    - Tolerance for new experiences is low
    - Anxiety level does not necessarily dissipate with exposure

Factors that may facilitate treatment

- Highly verbal, intelligent, enjoy structure and willing to follow rules
- Cognitive behaviour therapy is a good match
  - Can be adapted to suit their needs—more behavioural when needed
  - Rationale/logical approach
  - Explicit goals
  - Visible monitoring of progress and use of tangible rewards
  - Homework provides practice and repetition

Study on anxiety and social competence

(Johnston & Iarocci, 2017: Journal of autism and developmental disorders)

- Participants
  - 67 children with ASD (IQ>70) and 67 TD children (IQ>70) between the ages of 6 and 14 and their parents
  - 24 (34%) children with ASD had a diagnosed co-morbid mental health condition
  - 8 (12%) children with ASD had more than one comorbid condition
  - 7 TD participants had a mental health diagnosis, only 2 participants had more than one condition

Study on anxiety and social competence

- Measures
  - Social Responsiveness Scale (autism symptoms)
  - Behavioural Assessment System for Children 2nd Ed
    - Generalized Anxiety and Depression symptoms
  - Cognitive assessment
    - IQ > 70
  - The Multidimensional Social Competence Scale (MSCS)
    - Social competence (parent report)

Sample characteristics

Continuous variables	ASD Mean (SD; range)	TD Mean (SD; range)	
Age	9.82 (2.11;6–14)	9.44 (1.80; 6–13)	$p < .26$
IQ	102.59 (15.01; 74–139)	108.85 (14.35; 75–142)	$p < .02$
Autistic social impairment (SRS)	76.19 (11.69; 49–107)	51.77 (7.98; 39–74)	$p < .00$
Generalized anxiety symptoms	57.40 (12.53; 36–91)	50.64 (9.65; 32–76)	$p < .00$
Depression symptoms	63.07 (13.62; 41–102)	50.05 (8.72; 37–74)	$p < .00$
Social competence (MSCS)	204.95 (31.40; 124–260)	281.88 (36.66; 185–353)	$p < .00$

T scores were used for autistic social impairment, generalized anxiety symptoms, and depression symptoms

Under-diagnosis of mental health symptoms in ASD?

- 9% were diagnosed with an anxiety disorder
- 34% had levels of anxiety symptoms that fell in the clinically significant range
  - Contrast with 1% and 15% in TD youth
- 3% were previously diagnosed with a mood disorder
- 48% had levels of depression symptoms that fell in the clinically significant range
  - Contrast with 0% and 15% in TD youth

Pattern of parent endorsement of items

- Core symptoms of depression
  - Negative emotions
  - Self-dislike
  - Suicidal thoughts
- Social symptoms of depression
  - Not understood or liked by others

Depression symptoms: Social vs. non-social

Table 6 Proportion of depression items on the BASC-2 positively endorsed by parents of children with ASD

BASC-2 Item	Item related to core or social symptoms of depression	Total positive endorsement by parents (%)
Item 10, *82*	Core	92.53
Item 156, *68*	Core	85.07
Item 28, *8*	Core	74.62
Item 74, *38*	Core	88.05
Item 114, *142*	Core	83.58
Item 106, *52*	Core	38.80
Item 92, *90*	Core	37.31
Item 138, *60*	Core	26.86
Item 18, *22*	Social	73.13
Item 60, *112*	Social	58.20
Item 42, *30*	Social	58.20
Item 124, 98	Social	20.89
Item 82, *128*	Social	52.23

Non-italicized items are from the PRS-C form; Italicized items are from the PRS-A form

High depression scores in youth with ASD were not solely based on the social difficulties associated with depression but also on core symptoms

Depression but not generalized anxiety predicted social competence in ASD youth

- Hierarchical multiple regression analyses
  - Depression was strongly and significantly predictive of social competence in both TD and ASD
  - Over and above age, IQ and gender
    - Already known to be associated with depression
  - Generalized anxiety was only in the TD group

Practical implications

- Anxiety and depression symptoms need to be monitored regularly in youth with ASD
  - Course of symptoms - a change in prior functioning
- Core features of depression symptoms are present and need to be addressed in their own right
- Atypical symptom presentation is also present (Maguson & Constantino, 2011; Johnston et al., 2017)

Practical implications

- Social competence is a core problem of youth with ASD
- Social difficulties and mental health symptoms are likely reciprocal
  - Increased symptoms are associated with increased social difficulties and, in, turn increased symptoms
  - Social difficulties may also be associated with increased symptoms
    - Longitudinal studies are needed to determine direction
- Social competence and mental health problems are both highly prevalent and adversely affect social adaptation
  - Need to be considered concurrently and in relational terms
  - E.g., how does x social problem(s) affect mental health or how does y mental health problem(s) affect social abilities

Resources

- There are freely available screening tools
  - The Screen for Child Anxiety Related Disorders (SCARED; Birmaher et al. 1997, 1999; Su et al. 2008)
    - http://www.pediatricbipolar.pitt.edu/content.asp?id=2333#3304
  - Spence Children's Anxiety Scale
    - http://scaswebsite.com/
- Kreiser, N.L., & White, S.W. (2011, November). Measuring Social Anxiety in Adolescents and Adults with High Functioning Autism: The Development of a Screening Instrument. In N.L. Kreiser & C, Pugliese, Co-occurring psychological and behavioral problems in adolescents and adults with features of Autism Spectrum Disorder: Assessment and characteristics. Symposium conducted at the meeting of the Association for Behavioral and Cognitive Therapies, Toronto, Canada.
- Faulstich ME, Carey MP, Ruggiero L, et al. 1986. Assessment of depression in childhood and adolescence: An evaluation of the Center for Epidemiological Studies Depression Scale for Children (CES-DC). *American Journal of Psychiatry* 143 (8): 1024-27. http://www.depressedchild.org/Tests/Depression%20Test.htm
- Self-report on mental health is valid if child with ASD is over 8 years old and has average IQ
  - (data from our lab not yet published)
- Autism and Developmental Disorders lab at SFU for more articles and updates on mental health and ASD
  - http://autismlab.psyc.sfu.ca/