



Anxiety and Autism Spectrum Symptoms

Jeffrey J. Wood, Ph. D.
University of California, Los Angeles



Anxiety in ASD

- Anxiety disorders are very common in youth with autism (30-80% prevalence)
- In our clinical trial, 80% of youth had social anxiety disorder—e.g., specific fears about approaching peers (Wood et al., 2009)
- The sample are high-functioning youth with IQs over 70 (often over 110) and functional speech



Anxiety and Core Autism Symptoms

Anxiety
in Youth
with ASD



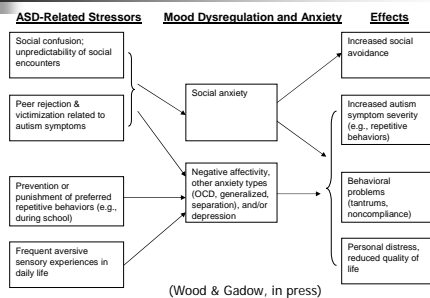
- Repetitive behaviors
- Special interests
- Sensory overresponsiveness
- Social skills deficits
- Total autism symptoms (after controlling for language and social impairment)

(Bellini, 2004; Ben-Sasson et al., 2008; Guttman-Steinmetz, Gadow, DeVincent, & Crowell, in press; Kelly, Garnett, Attwood, & Peterson, 2008; Spiker & Wood, under review; Sukhodolovsky et al., 2008)

Understanding the Linkage

- Genetic markers of anxiety in typical youth are also present for some with ASD and anxiety (Cohen et al., 2003; Gadaw et al., 2008, 2009, 2010, under review; Roohi et al., 2009)
 - Do susceptibility genes for autism and ASD travel together to some extent? Is there a common denominator?
 - Susceptibility to repetitive/"sticky" thoughts (e.g., Segerstrom, Tsao, Alden, & Craske, 2000)
- Elevated (ASD-related) stress (Gillott & Standen, 2007)

Hypothetical Model



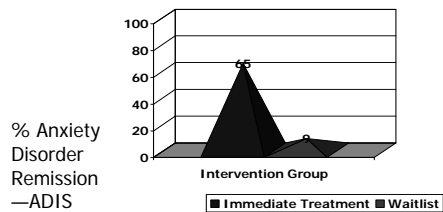
Putative Pathway Linking Anxiety and ASD Symptoms and Functioning

- Due to frequently experiencing negative emotion and arousal (in anticipation of threat), attention is divided and feared stimuli (e.g., peers) are avoided.
- Mental effort needed to maintain "new" schemata in working memory is overwhelmed by loss of attention resources → recall of *suppressed* maladaptive schemata (cf. Brewin, 2007; Wenzlaff & Bates, 1998)
 - "How to talk to other kids" (the wrong way) > smooth talk
 - Special interests > social connectedness
 - Fairness/justice > social connectedness
 - Solve problems by tantruming > negotiating with composure
- Academic, other focused tasks adversely affected

Implications for Treatment?

- What comes first? What to treat first?
- Is meaningful “anxiety reduction” possible in the absence of addressing ASD-specific stressors?
 - E.g., learning to overcome shyness and approach groups without achieving some level of conversation skill first
- Can preliminary anxiety reduction enable learning skills that can reduce ASD-specific stress?
 - Address GAD, OCD, SAD symptoms first; and, preliminary social exposures other than in peer contexts that promote hope/confidence
 - Then learn/practice conversation skill and reduce repetitive behaviors
 - Then transition to “keystone” exposures with peers

% Diagnostic Remission @ Post



$\chi^2 [1] = 12.28, p < .0001$

Anxiety-Social Responsiveness Linkage

- Regression models:
 - ADIS-C/P change score \rightarrow SRS post-treatment score... beta = .53, $p < .01$
 - SRS change score \rightarrow ADIS-C/P post-treatment score... beta = .63, $p < .01$
- When anxiety decreased over treatment, so did autism symptoms (and vice versa).

New Trial

- CBT for Early Adolescents with ASD and anxiety (ages 11-14)
- Study Phone #: 310-882-0537
