



Severity of Autistic Symptoms as a Predictor of Treatment Response to CBT for Anxiety in Youth with Autism Spectrum Disorder



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Introduction

- Individuals with ASD experience high rates of psychiatric comorbidity, with anxiety among the most prevalent co-occurring conditions (Hollocks et al., 2019).
- A number of Cognitive Behavior Therapy (CBT)-based interventions have been developed to address anxiety in ASD (Sukhodolsky et al., 2013)
- Although results have been generally positive, there is significant variability in individual treatment response (Ung et al., 2015)
- Recent work has called for the examination of mechanisms of change (i.e., mediators) in anxiety-focused interventions in ASD, as well as factors predicting whom is most likely to respond (i.e., moderators) in given treatments (White et al., 2018)
- The influence of core ASD symptoms (i.e., social communication deficits and restricted and repetitive behaviors) has not yet been fully explored

The current study examined factors predicting response to Facing Your Fears (FYF; Reaven et al., 2018), an evidence-based group CBT program for youth with ASD and anxiety. Our study had two specific aims:

- Examine the extent to which core ASD symptoms predicted pre-post change in anxiety symptoms
 - H_1 : Youth with greater ASD symptoms will demonstrate significantly less improvement in anxiety symptoms
- Evaluate the role of core ASD symptoms as predictors of improvement in specific anxiety disorders
 - H_1 : Anxiety diagnoses associated with core ASD deficits (e.g., social anxiety) will be less likely to improve

Methods

Previously collected were analyzed from 73 participants in a multi-site randomized trial of the FYF intervention (Reaven et al., 2018).

Measures

- Screen for Child Anxiety Related Disorders, parent report (SCARED; Birmaher et al., 1997)
- Autism Diagnostic Observation Schedule, 2nd Edition (ADOS-2; Lord et al., 2012)
- Wechsler Abbreviated Scale of Intelligence, 2nd Edition (WASI-II; Wechsler, 2011)
- Anxiety Disorders Interview Schedule (ADIS-C/P; Silverman & Albano, 1996)

Data Analysis: Descriptive statistics and hierarchical linear regressions were used to analyze previously collected data.

Participants

- Inclusion criteria for the study were as follows: chronological age 7-14, confirmed diagnosis of ASD, no diagnosis of intellectual disability, and clinically significant anxiety symptoms

Final sample

- $N = 73$ children and adolescents (87% male) with confirmed diagnoses of ASD
- Age: $M = 10.93$, $SD = 1.97$
- Full Scale IQ (FSIQ): $M = 103.70$, $SD = 14.87$
- Parents reported clinically significant levels of anxiety on the SCARED at baseline, $M = 28.27$, $SD = 11.39$

Results

Aim 1: Does ASD severity predict change in anxiety symptoms?

Hierarchical multiple regression

Step 1

- Independent variables: age, IQ, baseline parent-reported anxiety
- Dependent variable: Parent-reported SCARED change score (post-pre)

Step 2

- Addition of ADOS-2 severity scores to determine impact of ASD severity on treatment response

ASD severity scores emerged as a significant predictor of change in overall anxiety symptoms from pre- to post-treatment

Table 1. Regression Models Predicting Pre-Post Change in Anxiety Scores

	β	F	Adj. R^2	ΔR^2
Model 1		5.59**	.16	--
Age	-.09			
IQ	-.10			
Baseline Anxiety	-.45**			
Model 2		6.57**	.24	.08**
Age	-.16			
IQ	-.09			
Baseline Anxiety	-.48**			
ADOS Severity	.30**			

Note. * $p < .05$; ** $p < .01$

Aim 2: Does ASD severity predict change in specific domains of anxiety?

Hierarchical multiple regressions

Step 1

- Independent variables: age, IQ, baseline parent-reported anxiety in specific domains (i.e., separation, panic, social, generalized, specific phobia)
- Dependent variable: Parent-reported SCARED change score in relevant domain (post-pre)

Step 2

- Addition of ADOS-2 severity scores

ASD severity did not predict treatment response in any specific domain of anxiety

Discussion

Conclusions

- Youth with higher levels of core ASD symptoms demonstrate significantly less improvement in anxiety symptoms from pre- to post-treatment when participating in FYF protocol
- ASD severity does not predict response to treatment with regard to specific domains of anxiety, including separation anxiety, panic, social and generalized anxiety, and specific phobia
- Youth with particularly severe social communication deficits and clinically significant anxiety may be less likely to benefit from anxiety treatment
- Severity of ASD symptomatology should be taken into consideration when considering the appropriateness of FYF

Limitations

- SCARED anxiety measure may not have been sensitive enough to detect change in specific anxiety domains
- Reliance on parent report data
- Homogenous, high-SES sample

Future Research Directions

- Examine changes in specific domains of anxiety as measured by interview-based measure (e.g., ADIS-C)
- Consider role of ASD symptomatology as a predictor of treatment response using protocols other than FYF
- Group-based versus individual treatment modalities
- Variation in the extent to which comorbidity-focused interventions incorporate elements of social skills training or other ASD-focused interventions
- Mediators of change in anxiety symptoms

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