Short report: Therapeutic alliance in youth with autism spectrum disorder receiving cognitive-behavioral treatment for anxiety

Connor M. Kerns[1,2], **Amanda Collier**[3], **Adam B. Lewin**[3], and **Eric A Storch**[3]

[1]Drexel University, USA

[2]Adelphi University, USA

[3]University of South Florida, USA

Abstract

Symptoms of autism spectrum disorder may influence alliance in psychotherapy. This study examined therapeutic alliance and its relationship to child characteristics and anxiety treatment outcomes in youth with autism spectrum disorder. Youth ($N = 64$) with autism spectrum disorder and co-occurring anxiety (7–16 years, IQ >70) received 16 sessions of modular cognitive-behavioral therapy. Post-treatment therapist, youth and parent ratings of alliance as well as pre- and post-treatment ratings of child behavior were gathered. Ratings of alliance were commensurate to ratings seen in children without autism spectrum disorder. Measures of treatment outcome, but not pretreatment characteristics, were significantly associated with therapist ratings of alliance strength. Data suggest that therapeutic alliance may not be impaired in anxious youth with autism spectrum disorder and may be associated with treatment outcome.

Keywords

Anxiety; autism spectrum disorder; cognitive-behavioral therapy; therapeutic alliance

Introduction

Therapeutic alliance, defined as the extent to which client and therapist connect interpersonally and collaborate around goals, is a promoter of behavior change in cognitive-behavioral therapy (CBT) for children with anxiety (McLeod, 2011; Shirk and Karver, 2003). A strong therapeutic alliance may enhance children's willingness to learn CBT concepts and strategies, such as new ways of thinking, between session practice and exposure to feared situations (Chiu et al., 2009). Consistent with this thinking, a number of empirical reviews suggest a relationship between therapeutic alliance and child therapy outcomes (r=0.14–0.22; McLeod, 2011; Shirk and Karver, 2003). This relationship is fairly consistent across treatment types and child characteristics, but can vary by assessment

Corresponding author: Connor M Kerns, A.J. Drexel Autism Institute and Division of Community Health and Prevention, Department of Psychology, Dornsife School of Public Health, Drexel University, 3020 Market Street, Suite 560, Philadelphia, PA 19130, USA., cmk352@drexel.edu.

method: therapist-reported and late-treatment ratings of alliance predict outcome better than child-reported or early-treatment ratings (Shirk and Karver, 2003).

CBT is a promising treatment for cognitively able youth with autism spectrum disorder (ASD) that has been associated with medium to large (d=0.68–1.21) reductions in anxiety across eight clinical trials (Sukhodolsky et al., 2013). Concerns about child motivation and engagement in CBT may be magnified in youth with ASD who experience deficits in social reciprocity and communication. Reduced social awareness and motivation, preoccupying interests, as well as attention and learning differences associated with ASD may also limit child engagement and mastery of CBT skills (Sze and Wood, 2007). Given these challenges, the majority of empirically-investigated CBT protocols have been modified to enhance child involvement and comprehension of sessions (Moree and Davis, 2010). Adaptions have included increased parental involvement, visual/multimodal learning aids, modular protocols tailored to the child, and the use of preoccupying interests as motivators.

Although CBT has been modified to facilitate therapeutic alliance and response in children with ASD, little is known regarding the actual quality of alliance and its relationship with CBT outcomes in this population. Puleo and Kendall (2011) found that youth with moderate autism symptoms were significantly less involved in and less likely to respond to individual versus family-format CBT for anxiety. This finding suggests that parental involvement may be key to engaging children with ASD in CBT, yet other aspects of alliance were not investigated. In a small qualitative study, Houlding (2014) found that mothers of children with ASD (N=3) perceived strong therapeutic alliance as essential to their and their child's participation in CBT for obsessive compulsive disorder (OCD). Furthermore, among children who participated in modular CBT for anxiety, Klebanoff (2015) found that therapist alliance ratings were weaker for youth with versus without ASD, but still positively associated with anxiety improvement in the ASD group. These studies suggest connections between alliance and CBT response in children with ASD that warrant further investigation.

This study evaluated the consistency and quality of therapist, parent, and child ratings of therapeutic alliance in youth with ASD who participated in a modular CBT for anxiety. Relationships between alliance, child characteristics (age, severity of internalizing, externalizing, and autism-related symptoms), and treatment response were explored.

Method

Participants

Participants were 64 children (ages 7–16 years) with ASD and their parents. Participants were recruited as part of two randomized controlled trials evaluating the efficacy of a modular CBT for anxiety in children (n=34) and adolescents (n=30) with ASD at the University of South Florida. Inclusion criteria were as follows: (a) diagnosis of autistic disorder, Asperger's syndrome, or pervasive developmental-disorder, not otherwise specified (PDD-NOS) and (b) diagnosis of separation anxiety disorder, social phobia, generalized anxiety disorder, or obsessive-compulsive disorder per the *Anxiety Disorders Interview Schedule–Child and Parent Versions* (ADIS-IV-C/P). Exclusion criteria were as follows: (a) full scale or verbal comprehension IQ < 70 on standardized testing; (b) bipolar, psychotic

disorder, or suicidality in past 6 months; and (c) currently receiving psychotherapy for anxiety. See (Storch et al., 2013; Wood et al., 2015) for more details regarding participant selection and Table 1 for participant characteristics.

Procedure

Both clinical trials received approval from the local institutional review board and obtained written, informed consent, and assent from participating parents and children. Participants completed a phone prescreen and then were scheduled for an in-person assessment with an independent evaluator (a post-doctoral- or doctoral-level clinician not involved in the child's treatment). Independent evaluators were reliably trained, blind to group assignment, and completed pre/post-assessments for the same child 90% of the time. Pre/post-assessments included semi-structured interviews (*ADIS-IV-C/P; Pediatric Anxiety Rating Scale* (PARS)) and clinician ratings of anxiety severity (*Clinical Global Impression–Severity* (CGI-S)), as well as parent ratings of autism-related symptoms (*Social Responsiveness Scale* (SRS)) and child internalizing and externalizing behavior (*Child Behavior Checklist* (CBCL)). ASD diagnosis was confirmed using combined information from the *Autism Diagnostic Observation Schedule–Generic*, *Autism Diagnostic Interview–Revised* (results from prior evaluations were accepted to reduce burden), and clinical judgment. Although efforts to refine anxiety assessment in ASD are underway, the PARS and ADIS-IV-C/P have shown adequate reliability and validity in children with ASD here (see Storch et al., 2013; Wood et al., 2015) and in prior studies (Kerns et al., 2016). Eligible participants were randomized by computer-generated algorithm in a 1:1 ratio to CBT or treatment as usual (TAU). The CBT intervention involved 16-weekly, 60- to 90-min individual and family sessions of the Behavioral Intervention Anxiety in Children with Autism (BIACA), a modular CBT designed to target anxiety and related difficulties (e.g. social skills) in youth with ASD (Sze and Wood, 2007). Modular programs tailor intervention strategies to each child rather than following a uniform protocol. Parents were included for a portion of each session to learn CBT concepts and facilitate child application of these concepts in daily life. In TAU, families could begin, continue, or change any psychosocial or pharmacological treatments for 16 weeks before being offered free BIACA. Post-treatment assessments, completed within 1 week of the last CBT session, included all screening measures plus parent, therapist, and child-versions of the *Therapeutic Alliance Rating Scale for Children – Revised* (TASC-R) and the *Clinical Global Impression-Improvement scale* (CGI-I). The CGI-I is a 6-point Likert rating of treatment-related improvement (anchors range from "very much worse" to "very much improved") based on the clinician's impression of treatment response after considering all information from the post-treatment assessment. Participants who received a CGI-I rating of "very much" or "much improved" were considered "treatment responders." The primary continuous outcome was change in anxiety severity on the PARS. Participants were all youth who received CBT, including those originally randomized to TAU (*n*=26). For further details regarding the administration and psychometric characteristics of study measures and other study procedures, see Storch et al., 2013; Wood et al., 2015.

Alliance Assessment

The TASC-R (Shirk and Saiz, 1992) is a 7-item (parent version) to 12-item (therapist and child versions) measure of therapist-client agreement about therapy goals and feelings about the therapeutic relationship. The TASC total score is based on a composite of all items. Child/therapist versions pertain to child-therapist alliance and the parent version pertains to parent-therapist alliance. The TASC has internal consistency in samples of youth with (α=0.84–0.93; Klebanoff, 2015) and without ASD (α=0.81–0.88; Shirk and Saiz, 1992). Social desirability is not explicitly assessed.

Results

Data was missing for some therapist (n=11), parent (n=6) and child (n=3) alliance ratings; however, no significant differences in age, gender, ethnicity, treatment response, or pretreatment SRS, CBCL, or CGI-S scores were found for those with versus without alliance data. Pretreatment PARS totals were statistically higher for participants without M(SD)=16.64 (2.31) versus with alliance data M(SD)=15.13(2.72), t(62)= −2.05, p<0.05, but differences were not clinically meaningful.

Therapeutic alliance ratings and inter-rater agreement

Table 1 presents the internal consistency, means, standard deviations, and range of TASC ratings per therapist, child, and parent reports. Ratings by children, therapists, and parents had acceptable internal consistency (α>0.70) and suggested relatively strong alliance between parents and therapists as well as children and therapists. Parent ratings were positively skewed.

Pearson correlations evaluated inter-rater agreement. For inter-rater agreement regarding alliance, child and therapist ratings of alliance were significantly associated (r=0.27, p=0.05). Agreement was not significantly different between youth 7 – 11 years (r=0.21) and 12 – 16 years (r=0.39, z=−0.69, p=0.49). Parent ratings of parent-therapist alliance were not significantly associated with child ratings (r=0.02) or therapist ratings (r=−0.07) of child-therapist alliance.

Pretreatment characteristics and alliance

One-way analysis of variance and Pearson correlations assessed relationships between pretreatment child characteristics and alliance (Table 2). Age, gender, ethnicity, initial anxiety severity (per PARS and CGI-S), primary anxiety diagnosis, CBCL externalizing and internalizing behaviors, and pretreatment ASD severity (per SRS) were not significantly associated with therapist, parent, or child ratings of alliance.

Association of alliance with treatment outcome

Therapist-rated alliance was significantly stronger for treatment responders M(SD)=37.21 (6.55) versus non-responders M(SD)=30.06 (5.75), t(51)=−3.77, p<0.01, and associated with reduced global severity ratings (CGI-S; r=−0.30, p<0.05) and greater reductions in anxiety (PARS change; r=.40, p<.01) at post-treatment; however, these relationships were not found for parent and child-ratings of alliance (Table 2).

Discussion

This study evaluated multi-informant ratings of therapeutic alliance and their relationship with pretreatment child characteristics and treatment outcome in a well-characterized sample of youth with ASD who received modular CBT for anxiety. Therapist, child, and parent alliance ratings at post-treatment were internally consistent, generally positive, and commensurate to those seen in children without ASD treated with CBT (Kendall et al., 2009), suggesting strong alliance between children and therapists and parents and therapists by the end of treatment. Therapist, parent, and child alliance ratings were not significantly associated with pretreatment child characteristics, such as age, externalizing behavior, anxiety, or ASD severity. Although children with ASD experience inherent difficulties with social reciprocity as well as an array of co-occurring behavioral symptoms, these findings suggest that they can develop a strong relationship with their therapist and work collaboratively around the goals of CBT tailored to their needs. This appeared true regardless of the child's age, sex, and the severity and complexity of their initial clinical profile, supporting the appropriateness and acceptability of this treatment for cognitively able youth with ASD. Findings suggest that parents of children with ASD also report strong alliance with therapists and agreement about treatment goals when they are active participants in the CBT process.

Child and therapist ratings of alliance were moderately positively related and associated with independent assessments of treatment outcome

Although youth with ASD may struggle with social insight, findings suggest that they and their therapists agreed about as much as children without ASD and their therapists agree regarding the quality of their therapeutic relationship. Further, the level of child-therapist agreement regarding alliance was similar for children and adolescents with ASD. Alliance may be related to treatment outcome because it facilitates child engagement and completion of CBT strategies, particularly exposures. Notably, Puleo and Kendall (2011) found that children with anxiety disorders and autism-related symptoms were rated as more involved in and more likely to complete exposures and to benefit from family versus individual CBT.

Limitations

The association of alliance with treatment outcome in this study is difficult to interpret because alliance was only assessed post-treatment. Therapeutic alliance may play a role in children's participation and ability to benefit from treatment; alternatively, therapists and youth may rate alliance higher when youth respond positively to treatment (Marker et al., 2013). The conflation of therapeutic progress and process seen here is a common issue in alliance research, which finds alliance ratings collected later as opposed to earlier in treatment more predictive of outcome (Shirk and Karver, 2003). Furthermore, although alliance ratings were positive, particularly for parents, this may reflect social desirability, which was not directly assessed by the TASC-R. Repeated, longitudinal and observational alliance assessment by independent raters over the course of therapy may help address these issues in future research (McLeod, 2011). Another limitation of this study was the lack of a comparison group. Direct comparisons of youth with and without ASD in extant (see

Klebanoff, 2015) and future studies may suggest differences in the ways in which youth with and without ASD build and use alliances with their therapist to benefit from CBT.

Conclusion

Although preliminary, the present findings suggest therapeutic alliance is a measurable and potentially influential component of CBT for youth with ASD that has important implications for clinical practice (e.g. increased focus on rapport building for youth with ASD) and research (e.g. alliance may explain variance in treatment response).

Acknowledgments

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Table 1

Participant pretreatment characteristics (*N*=64) and TASC ratings.

	N (%)
Male	52 (81)
Ethnicity	
White	54 (84)
Asian	5 (5)
Latino/Hispanic	7 (11)
Taking psychotropic medication	40 (63)

	M (SD)
Age in years	10.81 (2.25)
PARS 5-item Total	15.53 (2.69)
CGI-S	3.59 (0.77)
CBCL Externalizing Problems Raw Total	16.00 (11.38)
CBCL Internalizing Problems Raw Total	21.00 (10.14)
SRS Raw Total	144.85 (21.93)

	Cronbach's α	M (SD)	Possible range	Observed range
Child TASC	0.88	37.95 (8.07)	12 – 48	15 – 48
Therapist TASC	0.90	35.06 (7.09)	12 – 48	21 – 47
Parent TASC	0.76	26.97 (1.89)	7 – 28	20 – 28

SD: standard deviation; PARS: Pediatric Anxiety Rating Scale, 5-item total score; CGI-S: Clinical Global Impression – Severity; CBCL: Child Behavior Checklist; SRS: Social Responsiveness Scale; TASC: Therapeutic Alliance Scale for Children.

Table 2

Relationship of alliance to pretreatment characteristics and treatment response.

Child characteristics	Child TASC	Therapist TASC	Parent TASC
	Pearson's R	Pearson's R	Pearson's R
Age in years	0.17	0.13	0.03
PARS 5-item Total	−0.03	−0.06	−0.12
Pre-treatment CGI-S	0.05	−0.09	0.02
CBCL Externalizing Raw Total	−0.10	−0.19	−0.02
CBCL Internalizing Raw Total	0.14	−0.20	0.05
SRS Raw Total	0.01	−0.12	0.01
Treatment response	*M (SD)*	*M (SD)*	*M (SD)*
Responder	40.15 (6.61)	37.21 (6.55) [a]	26.82 (2.07)
Non-responder	37.14 (9.98)	30.06 (5.75) [a]	27.64 (0.63)
	Pearson's R	Pearson's R	Pearson's R
Change in PARS	0.20	0.40[**]	−0.22
Post-treatment CGI-S	−0.15	−0.30[*]	−0.02

TASC: Therapeutic Alliance Scale for Children; PARS: Pediatric Anxiety Rating Scale, 5-item total score; CGI-S= Clinical Global Impression – Severity, rating based on results of all measures collected at that time point; CBCL = Child Behavior Checklist, SRS = Social Responsiveness Scale.

[a] Means significantly different at $p < .01$ level;

[*] $p < .05$;

[**] $p < .01$