Therapist-youth agreement on alliance change predicts long-term outcome in CBT for anxiety disorders

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Background: In individual cognitive behavioral therapy (ICBT) for youth anxiety disorders, it is unclear whether, and from whose perspective, the alliance predicts outcome. We examined whether youth- and therapist-rated alliance, including level of youth-therapist alliance agreement, predicted outcome in a randomized controlled trial. **Methods:** Youth (*N* = 91, *M* age = 11.4 years (*SD* = 2.1), 49.5% boys, 86.8% Caucasian) diagnosed with separation anxiety disorder, social phobia, or generalized anxiety disorder drawn from the ICBT condition of an effectiveness trial were treated with an ICBT program. Youth- and therapist-rated alliance ratings, assessed with the Therapeutic Alliance Scale for Children (TASC-C/T), were collected following session 3 (early) and 7 (late). Early alliance, change in alliance from early to late, and level of youth-therapist agreement on early alliance and alliance change were examined, in relation to outcomes collected at posttreatment and 1-year follow-up. Outcome was defined as primary diagnosis loss and reduction in clinicians' severity ratings (CSR; Anxiety Disorders Interview Schedule; ADIS-C/P) based on youth- and parent-report at posttreatment and follow-up, and youth treatment satisfaction collected at posttreatment (Client Satisfaction Scale; CSS). **Results:** Early TASC-C scores positively predicted treatment satisfaction at posttreatment. Higher levels of agreement on change in TASC-C and TASC-T scores early to late in treatment predicted diagnosis loss and CSR reduction at follow-up. **Conclusions:** Only the level of agreement in alliance change predicted follow-up outcomes in ICBT for youth anxiety disorders. The findings support further examination of the role that youth-therapist alliance discrepancies may play in promoting positive outcomes in ICBT for youth anxiety disorders. Clinical trial number NCT00586586, clinicaltrials.gov. **Keywords:** Alliance; alliance agreement; CBT; anxiety; youth.

Introduction

Up to 50% of youth with anxiety disorders do not respond to cognitive behavioral therapy (CBT), although CBT is considered the strongest evidence-based treatment (Silverman, Pina, & Viswesvaran, 2008). Identifying factors that can enhance CBT outcomes is important to help more youth benefit from CBT. One factor posited to enhance CBT outcomes for anxiety disorders in youth is the quality of the youth-therapist alliance (i.e., the emotional connection between youth and therapists, and their joint agreement on therapeutic tasks and goals; Chu et al., 2004). The quality of the youth-therapist alliance is believed to influence youth engagement in difficult therapeutic tasks, such as exposure for anxiety-provoking situations (Kendall et al., 2009).

The empirical evidence linking alliance and outcome in CBT for anxiety disorders is mixed. For youth-rated alliance, four studies (with independent samples) found no association with outcome (Chu, Skriner, & Zandberg, 2014; Kendall, 1994; Kendall et al., 1997; Marker, Comer, Abramova, & Kendall, 2013), whereas one study found youth-rated alliance predicted clinician-rated global improvement, but not diagnostic recovery (Cummings et al., 2013). For therapist-rated alliance, one study found alliance increase during treatment predicted youth-rated anxiety symptom reduction (Marker et al., 2013). For observer-rated alliance, one study found early alliance predicted mid-treatment parent-rated symptom reduction and satisfaction at posttreatment, plus, positive alliance shifts predicted parent-rated symptom reduction at posttreatment (Chiu, McLeod, Har, & Wood, 2009). A later study failed to find significant associations between observer-rated alliance and outcome (Liber et al., 2010).

Differences in how and when alliance (and outcome) was measured make it difficult to interpret the alliance-outcome findings in CBT for youth anxiety.

There is no gold standard for alliance measurement, though most studies have relied on single informants for the alliance (Elvins & Green, 2008). It has been recommended that combining alliance ratings from multiple informants may elucidate patterns of alliance-outcome associations that are difficult to discern using single informants (Elvins & Green, 2008). Combining informants' ratings is further recommended given cross-informant agreement is generally low between youth, therapist, and observer alliance ratings (r's range from .22 to .53; e.g., Creed & Kendall, 2005; Fjermestad et al., 2012; Kendall et al., 2009; McLeod & Weisz, 2005).

Because the alliance is an interpersonal construct, examining *shared* aspects of the alliance (i.e., alliance agreement) may represent a particularly important approach to understand the potential role of the alliance for outcome (Elvins & Green, 2008). Lack of agreement between youth and therapists regarding alliance quality (i.e., alliance discrepancies) may not be captured by observational measures, but can be examined via youth and therapists' subjective alliance experience (e.g., youth beliefs and feelings about the therapist and vice versa). One study has investigated youth-therapist alliance discrepancy as a predictor of outcome in CBT for youth anxiety disorders, with null findings (Zandberg, Skriner, & Chu, 2015). However, Zandberg et al. (2015) relied on a small university clinic sample with student therapists, limiting its generalizability to community clinic settings. Furthermore, Zandberg et al. (2015) examined alliance discrepancies at single time points, not change in alliance over time. Research shows the alliance quality may change over the course of CBT for youth anxiety disorders (Chu et al., 2014; Kendall et al., 2009), and such changes may influence outcomes independently from single time points (Chiu et al., 2009). Finally, Zandberg et al. (2015) did not include outcome beyond posttreatment. Research shows that positive outcomes persist and even improve at follow-up assessments in CBT for youth anxiety (Wergeland et al., 2014), suggesting that there may be value in also examining predictors of long-term outcomes (Elvins & Green, 2008).

In this study, we examined the impact of youth-therapist alliance discrepancy on outcomes in ICBT for youth anxiety disorders delivered in community clinics. We measured the alliance early and late in treatment, from the perspective of youths and therapists. We specifically examined whether *degree of discrepancy* between youth and therapist alliance ratings, above and beyond either informant's individual perspective on alliance quality or change, predicted ICBT outcomes for youth anxiety disorders. Outcome was clinician-rated anxiety diagnostic recovery and symptoms severity reduction based on youth and parent-report, and youth-rated treatment satisfaction, to examine cross-informant effects. In line with Zandberg et al. (2015), we hypothesized that larger youth-therapist discrepancy would predict poorer outcome.

Specifically, we expected alliance discrepancies to generally reflect poorer treatment quality, so that both early alliance discrepancy (i.e., single time point), and discrepancy in alliance change from early to late in treatment would negatively predict outcome, not only at posttreatment but also at 1-year follow-up.

Method
Sample

The sample was drawn from a randomized controlled trial (RCT) comparing ICBT and group CBT (GCBT) to waitlist in seven community mental health outpatient clinics in Norway (clinical trial number NCT00586586; clinicaltrials.gov). The RCT's main findings were: (a) ICBT and GCBT outperformed waitlist; (b) there were no differences in outcome between ICBT and GCBT; (c) the intent-to-treat diagnostic recovery rate from ICBT was 25.3% (posttreatment) and 33.0% (1-year follow-up); see Wergeland et al. (2014).

In this study, we used the ICBT data only from the larger trial, given the alliance likely plays a different role in GCBT (Liber et al., 2010). Ninety-one youth (M_{age} = 11.4 years, SD = 2.1, range 8–15, 49.5% boys) were included. Most (86.8%) were Caucasian and 1.1% was Asian (12.1% did not report ethnicity). Nineteen participants (20.9%) lived in single-parent households. Parents' occupational status was classified into high (25.3%), medium (51.6%), and low (9.9%) using the Registrar General Social Class coding scheme (Currie et al., 2008).

Inclusion criteria were separation anxiety disorder (SAD), social phobia (SoP), or generalized anxiety disorder (GAD; American Psychiatric Association, 1994). Exclusion criteria were pervasive developmental disorder, psychotic disorder, and/or mental retardation.

Therapists. Fifteen therapists (M_{age} = 49.8 years; SD = 9.4; 93.3% female; 100% Caucasian) who were regular clinic employees volunteered to participate. Nine were clinical psychologists (60.0%), five (33.3%) clinical pedagogues (masters of education with clinical training), and one (6.7%) a clinical social worker (bachelor-level degree with clinical training). Therapists had an average of 12.0 years of experience (SD = 6.0). The mean therapist to client ratio was 1:5.9 (SD = 2.5; range 2 to 10).

Treatment

The treatment program was the Norwegian translation of the FRIENDS manual (4th ed., Barrett, 2004), which targets emotional awareness and regulation, cognitive restructuring, and exposure tasks. The program comprised 10 weekly 60-min sessions with two booster sessions after 1 and 3 months. The mean treatment period was 13.5 weeks (SD = 3.7). The manual has evidenced efficacy (Liber et al., 2008; Shortt, Barrett, & Fox, 2001) and effectiveness (Wergeland et al., 2014).

Treatment integrity

Therapists attended six workshops focusing on the treatment manual, general ICBT, and youth anxiety disorders. Therapists received group supervision every 2 to 4 weeks provided by one of two psychologists experienced in ICBT for youth anxiety; each therapist receiving an average of 78.7 hr of supervision (SD = 34.0). All sessions were videotaped; 20% were randomly selected for adherence and competence ratings using an 11-item scale scored from 0 to 6. All therapists demonstrated adequate treatment integrity (M adherence = 4.5, SD = 0.9; M competence = 4.3, SD = 0.9).

Instruments

Alliance instrument. Therapeutic Alliance Scale for Children – Child and Therapist versions:
Twelve-item versions of the youth-rated Therapeutic Alliance Scale for Children (TASC) (TASC-C; Creed & Kendall, 2005) and the therapist-rated TASC (TASC-T; Accurso, Hawley, & Garland, 2013) were used. The TASC-C covers emotional bond with the therapist (e.g., I liked spending time with my therapist), and agreement on therapeutic activities (e.g., I worked with my therapist on learning new ways of handling my feelings). Items are scored on a 4-point scale ranging from 1 (not true at all) to 4 (very true). The TASC-T covers the therapist's perspective on his/her alliance with the youth (e.g., I liked spending time with this child). Note that an alternative version of the TASC-T exists, relying on the therapist's view on the child's perspective (e.g., This child liked spending time with you).

Scores on the 12-item TASC-C have demonstrated interrater reliability ($\alpha \geq$ .88; Creed & Kendall, 2005), convergent validity with other alliance instruments (Accurso et al., 2013; Fjermestad et al., 2012), and predictive validity in relation to outcome (e.g., Hawley & Weisz, 2005) in samples from the United States. The 12-item TASC-C translated into Norwegian also have demonstrated convergent validity with an observer-rated alliance instrument (Fjermestad et al., 2012) and predictive validity in relation to outcome (Ormhaug, Jensen, Wentzel-Larsen, & Shirk, 2014), as well as acceptable interrater reliability ($\alpha \geq$ .81; Fjermestad et al., 2012; Ormhaug et al., 2014). The 12-item version of the TASC-T have demonstrated interrater reliability ($\alpha >$ .88; Accurso et al., 2013), convergent validity with other alliance instruments (Accurso & Garland, 2015), and predictive validity in relation to outcomes (Accurso et al., 2013) in samples from the United States. In this study, internal consistency (α) for the Therapeutic Alliance Scale for Children – Child and Therapist versions (TASC-C/T), respectively, was .77 and .85 in session 3, and .84 and .77 in session 7.

Outcome instruments. Anxiety Disorders Interview Schedule– Child and Parent versions:
Anxiety diagnoses were derived using combined parent and youth information from the SAD, SoP, and GAD sections of the Anxiety Disorders Interview Schedule– Child and Parent versions (ADIS-C/P) (Silverman & Albano, 1996). The ADIS is a semi-structured interview with good psychometric properties both for reliability (intraclass correlation coefficients (ICCs) 0.78 to 0.95; Silverman, Saavedra, & Pina, 2001) and concurrent validity with anxiety symptom scales (Wood, Piacentini, Bergman, McCracken, & Barrios, 2002). Independent clinicians who were trained to administer the ADIS-C/P during a 2-day workshop conducted the assessments. Based on blinded rescoring of 20% of videotapes, the interrater agreement estimated by kappa (κ) for the presence of an inclusion anxiety diagnosis was 0.84 (ADIS-C) and 0.86 (ADIS-P).

For each ADIS-C/P section, a clinician's severity rating (CSR) ranging from 0 to 8 was assigned based on combined parent and child report (ADIS-CSR). Higher score reflects higher perceived impact on academic, social, and family functioning. ICCs for the ADIS-CSR were 0.82 (ADIS-C) and 0.82 (ADIS-P).

Client Satisfaction Scale.
The 10-item youth-rated Client Satisfaction Scale (CSS) was modeled after a treatment satisfaction scale developed by Barrett, Dadds, and Rapee (1996). Each item (e.g., How successful do you think this program was in teaching you to deal with your fears?) is rated on 1 to 5 scale (Ollendick et al., 2009). In samples from the United States, scores on the child-rated CSS has evidenced discriminant validity between CBT and educational support as well as predictive validity in relation to symptom improvement

(Ollendick et al., 2009). In our trial, the CSS was administered at posttreatment (internal consistency α = .78).

Instruments were translated into Norwegian by the research team, and back-translations were approved by the author(s) of each instrument.

Procedure

The Regional Ethics Committee approved the study. Parents and youth above 12 years provided written informed consent/assent and youth below 12 provided verbal assent. Participants were informed they would receive treatment even if they declined to participate in the RCT. Community clinic services are free-of-charge in Norway, as was treatment in this RCT.

Youth and parents completed assessments at pretreatment, posttreatment, and follow-up. The TASC-C/T were administered following sessions 3 (indicating early alliance; e.g., Baldwin, Wampold, & Imel, 2007), and 7 (indicating late alliance; e.g., Elvins & Green, 2008). Therapists were not present when youth completed the TASC-C. Youth were informed therapists would not see their ratings.

Data analytic plan

Analyses were run using 2-level hierarchical linear modeling (HLM; Raudenbush & Bryk, 2002), with the between-group (therapist) effects at level 2, and within-individual at level 1. Examination of univariate indices of skewness and kurtosis revealed no absolute skewness values greater than −0.96 and no absolute kurtosis values greater than 1.13. The mean amount of missing data across all study variables was 13.2%, which is within tolerable limits for HLM using full maximum likelihood estimation, assuming missingness-at-random (Gallop & Tasca, 2009). Little's Missing Completely at Random-test (MCAR) indicated that alliance data were missing completely at random, thus HLM using full maximum likelihood estimation was used. To parameterize alliance change as a predictor variable, we calculated residualized change scores for each alliance variable (youth and therapist) in an HLM framework, regressing late alliance onto early alliance and extracting Empirical Bayes residuals for each participant. This was done to control for baseline individual differences in subsequent models estimating effects of alliance change on treatment outcomes.

We used a moderation analysis framework to consider informant agreement (e.g., Laird & De Los Reyes, 2013). For early alliance, we centered each informant's scores (at the group mean; Enders & Tofighi, 2007), then multiplied them to generate an interaction term, which was later used to test whether the association between youth-reported alliance and each outcome was moderated by therapist-report; this process was repeated for the alliance change variables.

Standard Unconditional HLMs (Tasca & Gallop, 2009) were specified to examine our hypotheses. To reduce potential model overfitting, presence or absence of Level 2 variance terms (τ) was determined by examining ICCs from Base Models; if moderate τ values (e.g., > .08) of continuous variables or significant τ values (e.g., p-value of corresponding χ^2 < .05) for binary variables existed, a corresponding τ variable was estimated in the Unconditional Linear Model. Models were run for each outcome, with all predictors group (i.e., therapist) mean centered (Enders & Tofighi, 2007), considering early alliance and change in alliance in separate models. Across models, Type 1 error rate (α) was adjusted based on number of family wise comparisons (see Tables 1–3).

Results

Average youth-rated alliance was 3.3 (SD = 0.5) in session 3 and 3.4 (SD = 0.5) in session 7 (possible

range 1 to 4). The average therapist-rated alliance was 3.4 ($SD = 0.3$) in session 3 and 3.5 ($SD = 0.4$) in session 7. Correlations between youth- and therapist-rated alliance were $r = .21$ ($p = .116$) in session 3 and $r = .16$ ($p = .264$) in session 7. Mean change from early to late alliance was nonsignificant for both youth and therapist ratings.

Effects of early youth and therapist alliance and their discrepancy

Only early TASC-C predicted youth treatment satisfaction ($\beta = .47$, $p = .01$). No early alliance variable (TASC-C, TASC-T, or their interaction) predicted change in ADIS-CSR or likelihood of primary diagnosis loss at posttreatment or follow-up (all $p > .07$).

Effects of change in youth and therapist alliance and their discrepancy

Change in TASC-C and TASC-T from session 3 to 7 evinced an interaction, such that increased TASC-C was associated with higher youth satisfaction at posttreatment, but only when TASC-T also increased (see Table 1). This suggests that agreement on the (positive) direction of alliance change is related to higher youth treatment satisfaction.

Change in TASC-C and TASC-T was unrelated to change in ADIS-CSR at posttreatment (all $p > .09$). However, there was an interaction for the ADIS-CSR at follow-up, such that increased TASC-C was associated with lower ADIS-CSR, but only when TASC-T also increased. Decreased TASC-C was associated with lower CSR only when TASC-T also decreased (see Table 2, Figure 1). That is, lower CSR values were obtained only under the conditions of agreement in direction between TASC-C and TASC-T. When youth and therapists disagreed in the direction of the change in alliance between session 3 and session 7, higher ADIS-CSR values were obtained.

Change in TASC-C and TASC-T was unrelated to likelihood of primary diagnosis loss at posttreatment (all $p > .05$). However, at follow-up, there was an interaction such that increased TASC-C was associated with increased likelihood of primary diagnosis loss only when TASC-T also increased, and decreased TASC-C was associated with increased likelihood of primary diagnosis loss only when TASC-T also decreased (see Table 3, Figure 2). That is, loss of initial primary diagnosis at follow-up was found only under the conditions of agreement in direction between TASC-C and TASC-T; when they disagreed, likelihood of primary diagnosis loss was considerably lower.

Table 1 Youth treatment satisfaction at posttreatment predicted by change in youth and therapist alliance and alliance agreement

| Instrument | Para-meter | Fixed effects | | | | | σ^2 | τ |
		Coef.	SE	t-ratio	p-value	df		
Youth satisfaction at posttreatment							29.11	
Intercept	β_{00}	35.86	0.93	38.62	<.001	32		
ΔTASC-C	β_{10}	0.05	0.38	0.13	.898	32		
ΔTASC-T	β_{20}	0.29	0.33	0.87	.389	32		
ΔTASC-C × ΔTASC-T	β_{30}	0.18	0.07	2.60	.014	32		

TASC-C, Therapeutic Alliance Scale for Children – Youth Report; TASC-T, Therapeutic Alliance Scale for Children –Therapist Report; Δ, Residualized Empirical Bayes-estimated change scores. Robust standard error estimates are displayed. To reduce overfitting, τ estimated only for those variables with significant Level 2 variances in Unconditional Model. All variables group-mean centered.

Table 2 Change in Anxiety Disorders Interview Schedule for DSM-IV, youth version –clinical severity rating at follow-up predicted by change in youth and therapist alliance and alliance agreement

| Measure | Para-meter | Fixed effects | | | | | σ^2 | τ |
		Coef.	SE	t-ratio	p-value	df		
ADIS-C/P CSR at follow-up							7.789	
Intercept	β_{00}	3.49	0.29	12.19	<.001	24		
ADIS-C/P CSR – Pretest	β_{10}	0.25	0.74	0.34	.738	12		1.25
Δ TASC-C	β_{20}	0.20	0.11	1.75	.093	24		
Δ TASC-T	β_{30}	−0.26	0.14	−1.87	.074	24		
Δ TASC-C × Δ TASC-T	β_{40}	−0.21	0.07	−2.84	.009	24		

TASC-C, Therapeutic Alliance Scale for Children – Youth Report. TASC-T = Therapeutic Alliance Scale for Children –Therapist Report; ADIS-C/P CSR, Anxiety Disorders Interview Schedule for DSM-IV-TR, Youth Version – Clinical Severity Rating; Δ, Residualized Empirical Bayes-estimated change scores. Robust standard error estimates are displayed. To reduce overfitting, τ estimated only for those variables with significant Level 2 variances in Unconditional Model. All variables group-mean centered. α adjusted to 0.25 based on two familywise comparisons.
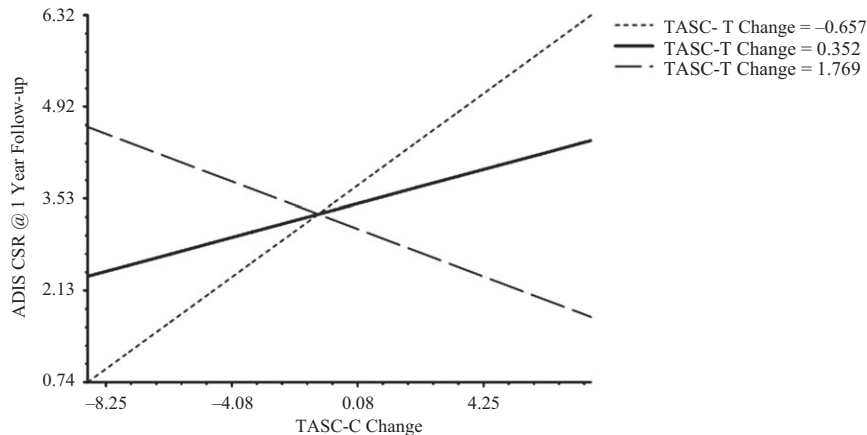
Figure 1 Interaction between change in Youth- (TASC-C) and Therapist-Report (TASC-T) Alliance predicting ADIS-C/P Clinical Severity Rating (CSR). TASC C/P scores are group-mean centered, so values represent deviations from each therapist's mean. TASC-C range represents ±2 standard errors, TASC-T values represent 25th, 50th, and 75th percentile. Youth and therapist agreement on a decrease in alliance *or* on an increase in alliance yielded a lower CSR, while disagreement on change in alliance predicted a higher CSR. This suggests that agreement on the direction of alliance (regardless of whether that direction was positive or negative) was most important for decreased CSR at 1-year posttreatment

Table 3 Total loss of primary diagnosis at follow-up predicted by change in youth and therapist alliance and alliance agreement

| Measure | Parameter | Fixed effects | | | | | σ^2 | τ |
		Coef.	SE	t-ratio	p-value	df		
Diagnosis Loss at follow-Up							N/A	
Intercept	β_{00}	0.29	0.25	1.17	.250	37		
ΔTASC-C	β_{10}	−0.18	0.10	−1.85	.072	37		
ΔTASC-T	β_{20}	−0.04	0.11	−0.35	.726	37		
ΔTASC-C × ΔTASC-T	β_{30}	0.31	0.13	2.43	.020	37		

TASC-C, Therapeutic Alliance Scale for Children – Youth Report; TASC-T, Therapeutic Alliance Scale for Children –Therapist Report. Δ, Residualized Empirical Bayes-estimated change scores. Robust standard error estimates are displayed. To reduce overfitting, τ estimated only for those variables with significant Level 2 variances in Unconditional Model. All variables group-mean centered. Diagnosis loss calculated as binary variable; Bernoulli distribution used, no σ^2 calculated. Population-average fixed effects are displayed. α adjusted to 0.25 based on two familywise comparisons.

Discussion

Our hypothesis that larger youth-therapist discrepancy in early alliance and alliance change would predict poorer outcomes at posttreatment and 1-year follow-up was partially supported. Discrepancy in alliance change predicted outcomes at follow-up. However, the pattern of findings is complex to interpret, and further research of youth-therapist alliance discrepancy in relation to ICBT outcomes for anxiety disorders is warranted.

The fact that only discrepancy in alliance change predicted follow-up outcomes bears further consideration. Agreement was associated with better outcomes at follow-up regardless of the direction of change. This suggests that alliance improvement may not be as important for long-term outcomes as the extent to which youth and therapist agree on the direction of alliance change. Therapists and youth who agree that the alliance is increasing (or decreasing) may thus be more 'tuned in' to each other's perspectives, which could help promote positive long-term outcomes.

Discrepancy in alliance change was only associated with outcomes at follow-up, suggesting that it may take up to a year for the effects to manifest. It is worthwhile to consider how youth-therapist agreement in alliance change may positively impact long-term outcome. If higher agreement on alliance change reflects greater youth-therapist synchrony, then higher agreement could play a facilitative role in ICBT. That is, agreement on alliance change may serve to maximize collaboration on therapeutic tasks, which, in turn, could lead to greater skill acquisition and the youth's ability to use these skills posttreatment. Importantly, there is evidence that the alliance is associated with long-term ICBT outcomes. Kendall (1994), for example, found that the youth's therapeutic relationship rating at posttreatment was correlated with parent-rated youth symptom improvement at follow-up. As another example, Kendall and Southam-Gerow (1996) found that youth identified the therapeutic relationship as an important aspect of treatment 3 years after ICBT. Thus, examining how the alliance impacts long-term
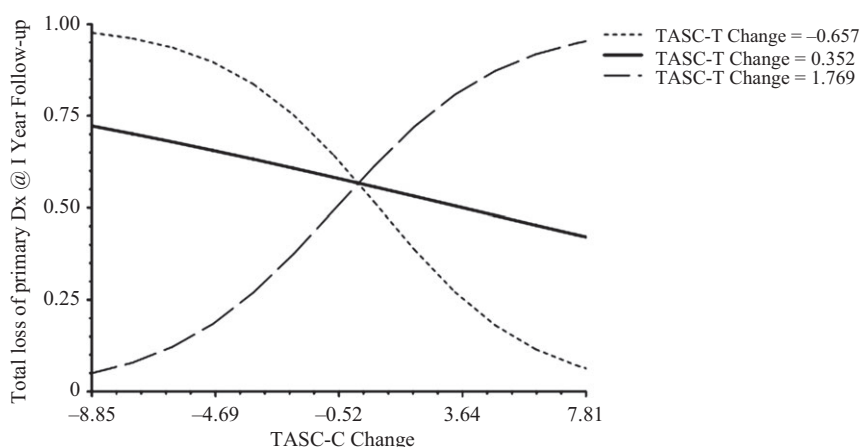
Figure 2 Interaction between change in Child- (TASC-C) and Therapist-Report (TASC-T) Alliance predicting likelihood of total loss of primary diagnosis at 1 year posttreatment. TASC scores are group-mean centered, so values represent deviations from each therapist's mean. TASC-C range represents ±2 standard errors, TASC-T values represent 25th, 50th, and 75th percentile. Youth and therapist agreement on a decrease in alliance *or* on an increase in alliance yielded much greater likelihood of total loss of diagnosis, while disagreement on change in alliance predicted a lower likelihood of diagnosis loss. This suggests that agreement on the direction of alliance (regardless of whether that direction was positive or negative) was most important for total diagnosis loss at 1 year posttreatment

outcome in ICBT represents an important goal for future research.

Early youth-rated alliance predicted youth treatment satisfaction, but no other youth or therapist alliance ratings predicted any outcomes. Our findings add to a small group of studies that have not found a significant relation between single-point alliance assessments and outcome (Chu et al., 2014; Kendall, 1994; Kendall et al., 1997; Marker et al., 2013). Together, these findings support calls for researchers to assess the alliance multiple times over the course of treatment (Elvins & Green, 2008). Our finding that early youth-rated alliance predicted treatment satisfaction also indicates that future studies should include a wide array of outcome instruments that go beyond symptom and diagnostic dimensions. If the alliance plays a facilitative role in promoting positive clinical outcomes, then an important direction for future research is to include instruments that assess factors such as consumer perspectives, implementation success, and treatment delivery.

The fact that therapist-rated alliance did not predict outcome is in contrast to a previous anxiety study (Marker et al., 2013). However, differences between how the studies assessed the alliance may, in part, explain the discrepant findings. Both studies used a 12-item version of the TASC-T, but there were important wording differences between the scales. In our version of the TASC-T, therapists rated their own perception of the alliance with the youth (e.g., I liked spending time with this child), while in Marker et al. (2013) therapists completed the TASC-T from the youth's perception (e.g., The child liked spending time with you, the therapist). While both instruments assess important aspects of the thera-

pist-rated alliance, this methodological difference makes comparisons between the studies difficult.

Our findings need to be considered in light of some limitations. We only assessed alliance at two time points and thus were not able to examine alliance trajectories over treatment. Furthermore, the alliance may fluctuate between and within sessions (Stiles & Goldsmith, 2010), and our design prevented us from examining such fluctuations. Outcome instruments were not collected during treatment, which prevented us from examining the direction of effects linking alliance and outcome during treatment. Therefore, we cannot rule out that early change in clinical severity influenced alliance. Our data analyses employed a contemporary centering procedure for both interaction term analysis and HLM, yielding a robust interaction (discrepancy) term. However, the centering procedure may have affected the size of the main effect (youth- and therapist-report alliance) terms, so one should interpret these terms with caution. Therapist competence scores varied, which could represent a confounding variable as more competent therapists may be more tuned in to the alliance perception of their clients. Finally, the psychometric properties of our instruments are largely based on studies conducted in the United States.

Clinical implications are evident. First, it may be beneficial for therapists to discuss potential alliance discrepancies with youth. This way, potential alliance disagreements may be addressed and therapists may obtain a more accurate perception of the youth's viewpoint, which could positively influence long-term outcomes. One way of doing this is through the use of feedback systems (see e.g., Bickman, Kelley, Breda, de Andrade, & Riemer, 2011).

Second, agreement scores were mean-centered within therapist so values represent deviations from each therapist's mean alliance score. Thus, a therapist may be best served to estimate degree of agreement among the population of clients s/he treats. Those that are relatively high on alliance change agreement are most likely to obtain the benefits outlined here (and vice versa), even if that agreement is objectively lower than among another therapist's caseload.

In sum, a key implication of this study is that therapists should not only rely solely on their own perception of the alliance but also request and consider the youth's perspective. Explicitly addressing the alliance and working toward a joint understanding of the collaborative relationship may help optimize ICBT for youth with anxiety disorders.

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Key points

- Youth-therapist alliance represents an interpersonal construct and agreement between their ratings may matter for outcome.
- Early alliance and alliance change was investigated as predictors of ICBT outcome among 91 youth with anxiety disorders from a RCT.
- Discrepancy between youth and therapist alliance change predicted diagnosis loss and clinical severity reduction at 1-year follow-up.
- Joint consideration of youth and therapist alliance is recommended for research and clinical practice.

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