# Therapeutic Alliance in Two Treatments for Adolescent Anorexia Nervosa

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## Abstract

**Objective**—The aim of this study was to examine the relationship between therapeutic alliance and treatment outcome (remission status) in Family-Based Treatment (FBT) and Adolescent Focused Therapy (AFT) for adolescents with Anorexia Nervosa (AN).

**Method**—Independent observers rated audiotapes of early therapy sessions using the Working Alliance Inventory-Observer Version (WAI-o). Outcome was defined using established cut-points for full and partial remission. To control for effects of early symptom improvement, changes in weight and eating related psychopathology prior to the alliance session were calculated and entered as a covariate in each analysis.

**Results**—Participants in AFT had significantly higher alliance scores; however, overall scores were high in both therapies. The alliance was not a predictor of full remission for either treatment, though it was a non-specific predictor for partial remission.

**Conclusions**—Therapeutic alliance is achievable in adolescents with AN in both AFT and FBT, but demonstrated no relationship to full remission of the disorder.

Clinicians report challenges in developing a therapeutic alliance with patients with anorexia nervosa (AN). This may result in part because of the ego-syntonic nature of the disorder (1.). Nonetheless, studies of therapeutic alliance in psychosocial treatments for most child and adolescent disorders suggest that alliance is likely as important for younger patients as it is for adults (2.). However, challenges to developing therapeutic alliance may be even greater when working with children and adolescents with AN because they are usually brought to treatment by their parents, deny there is a problem with their behaviors or thinking, are often treated in a family context, and often do not trust adults' ability to understand their concerns (3.). Only two previous studies have explored the relationship between therapeutic alliance and treatment outcome for adolescents with eating disorders. No association between therapeutic alliance and outcome was found in a study comparing individual Supportive Psychotherapy (SFT) and Family-Based Treatment (FBT-BN) in adolescents with bulimia nervosa (BN), but more severe symptoms at baseline was associated with poorer alliance in FBT (4.). In a study of adolescents with AN who received different doses of FBT, early

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behavioral change (weight gain) rather than alliance predicted outcome. However, greater parental alliance early in treatment improved treatment retention (5.).

In order to better understand the role of therapeutic alliance in treatment of adolescents with AN, we compared the relationship between early therapeutic alliance and outcome in manualized individual therapy (Adolescent Focused Therapy—AFT) and manualized family therapy (Family-Based Treatment - FBT) using audiotaped therapy sessions from a large randomized clinical trial (RCT) of adolescents treated for AN (6.) For the purposes of this study, therapeutic alliance was defined using Bordin's pantheoretical conceptualization, encompassing both collaborative elements (engagement and agreement on tasks and goals of therapy) as well as the interpersonal bond between patient and therapist (7.). Our primary hypothesis was that early therapeutic alliance scores would be higher in AFT compared to FBT, as AFT particularly focuses on developing early alliance as part of treatment while FBT does to a lesser extent. However, because previous studies did not suggest that alliance was a predictor of outcome in adolescent eating disorders, we hypothesized that, based on type of treatment, early alliance would not have a differential effect on clinical remission at the end of treatment (EOT).

## METHOD

This study was approved by IRB's at both universities (Chicago and Stanford) where participants were enrolled.

### Participants

Participants in the current study were a subsample drawn from a multi-site RCT (N=121) for adolescents with AN. To be eligible for the original RCT, participants met criteria for DSM-IV AN except for the requirement of amenorrhea. Individuals were excluded if they had co-morbid diagnoses of psychosis, drug or alcohol dependence, were acutely suicidal, or were medically unstable according to published criteria. Participants were randomly assigned to either FBT or AFT.

To examine the relationship of therapeutic alliance measured early in treatment to outcome, we restricted our sample of tapes to those who had audible recordings of therapy at session 3, 4 or 5, and who completed EOT assessment (N=78). Our final therapeutic alliance participant sample was 91% female; 76% were White, 13% were Asian, 5% were Hispanic, 5% were Biracial and 1% were African American. Mean duration of illness was 10.6 months (SD=7.7), and 21% of participants had a co-morbid psychiatric diagnosis. At time of BL assessment, the average percent expected body weight (%EBW) of the sample was 80.7% (SD=3.6%) and the mean global eating disorder examination (EDE) score was 1.7 (SD=1.4).

We compared the alliance sample (N=78) to those remaining in the original sample but were treatment dropouts (N=21), as well as to those who were missing tapes or other data (N=22). Pair-wise comparisons for each group using the Kruskal-Wallis one-way analysis of variance, adjusting the p-value to account for multiple analyses ($p$<.017) were conducted. The three groups were compared on the following variables: BL %EBW, BL EDE scores, BL BMI percentile, duration of illness, age, and total therapy minutes. Categorical demographic variables (gender and ethnicity) and psychiatric co-morbidity were examined using the chi – square test.

Based on these analyses, participants in the alliance sample did not differ from the original sample on any measures examined, except for number of therapy minutes, with those who dropped from treatment having significantly less time in treatment ($p$<.001).

Additionally, we compared BL differences in the alliance sample by treatment group. Those in AFT had significantly lower BL BMI percentiles than individuals in FBT ($p$=.025) and higher BL EDE scores ($p$=.006); thus, these differences were controlled for in all subsequent analyses (see description of factors obtained from a principle components analysis below).

## Treatments

**Family-Based Treatment (FBT)—**The form of family therapy used in this study was manualized FBT. In FBT the focus is on parental management of maintaining behaviors (severe caloric restriction, excessive exercise, purging behaviors) that perpetuate extreme low weight. FBT has three stages (8.). In the first stage, parents are charged with the task of helping their child restore weight. During the second phase, control over eating is gradually returned to the adolescent by the parents. Phase three shifts away from food and eating to target developmental issues around adolescence as well as relapse prevention and termination.

**Adolescent Focused Therapy (AFT)—**The form of individual therapy used in the study is manualized AFT. AFT is based on a self-psychology model (9.). In this model, the focus is directed towards the ways in which AN serves to protect an individual from negative affect and conflict around developmental challenges. The model focuses on increasing self-awareness and facilitating self-efficacy wherein the patient-therapist relationship is hypothesized to be the primary mechanism of change. AFT has three phases. The first phase focuses on building rapport and exploring the ways AN serves to distract the patient from stressful affective experiences. The second phase examines issues of development and individuation. The third phase promotes developing alternative strategies to manage stress, and involves problem solving around potential future difficulties typically associated with adolescence.

## Measures

**Working Alliance Inventory (WAI)—**The Working-Alliance Inventory (WAI) was first developed by Horvath and Greenberg (1989) and was transformed into an observer-version by Tichenor and Hill (1989) (10; 11.). Each component of the alliance (agreement on tasks, agreement on goals, and affective bond) is represented by 12-items which can be examined at the subscale level, or can be combined to provide a general alliance score. Items are rated on a Likert scale ranging from 1 (never, or no agreement/indication of agreement on tasks and goals/affective bond) to 7 (always, or full agreement on tasks and goals/strong affective bond). The WAI is one of the most frequently used instruments in the therapeutic alliance literature, and has been shown to have good internal validity, test-retest reliability and inter-rater reliability (12.).

**Eating Disorder Examination (EDE)—**The EDE (version 12.0) is a structured clinical interview assessing for varying levels of eating disorder pathology (13.). Change in restraint over eating early in treatment was assessed during sessions 1,2, 4, 6, and 8 using a single question from the EDE.

**Weight—**Heights and gowned weights for participants were obtained at BL, weekly (ungowned) at each treatment session thereafter, and at end of treatment.

## Rater Training

Two graduate-level clinical psychology students, who were otherwise not involved in the original RCT, conducted therapeutic alliance ratings of all available participants. Raters were trained to use the WAI-o (11.). Tapes were assigned to each rater using a random

numbers table, to increase variability of treatment condition, site and therapist, within each rater. Each rater also rated ten of the same tapes to examine interrater reliability (IRR). Ratings were coded for interactions between the therapist and identified patient in both therapies. Raters used a benchmark of "4" (no evidence for/equal evidence for and against), rating up or down as information was collected. If a tape was inaudible, or session four was missing, raters attempted to rate the next closest audible session (either session three or five). Session three was selected first, as studies suggest that alliance measured early in treatment is typically a better predictor of outcome, and when session three was unavailable, session five was rated instead (12.). If all of these sessions were either inaudible or unavailable, the individual participant was excluded from the study. IRR was calculated as $r=.88$ using Spearman's correlations.

## Data Analysis

In the original RCT, the primary outcome of full remission was defined *a priori* as those individuals meeting a minimum of the 95th percentile of mean body weight for age, height, and gender using Center for Disease Control norms, and achieving a score on the EDE within 1 SD of globally published norms (M=1.59). Partial remission, defined as greater than the 85th percentile of mean body weight for age, height and gender using CDC norms was examined as a secondary outcome. For the purposes of our analyses, significance values used throughout the study were set at .05, and all tests were 2-tailed. Data were checked for normal distribution and non-parametric tests were used when samples were not normally distributed.

To examine whether therapeutic alliance was a predictor of full remission status (as defined above), and whether predictive power of alliance differed by treatment group, we conducted a binary logistic regression. The categorical dependent variable was full remission status at EOT (coded 1=yes, 0=no). We controlled for early change (before the measured alliance session) in these variables as well as BL differences in weight and eating disorder symptomology using factors generated from a principal components analysis. Factor 1 (BL BMI percentile and early full remission status) and Factor 2 (BL EDE and early change in restraint) were entered at step 1 of the regression model. The centered mean therapeutic alliance scores, Coded Treatment (AFT=-.5, FBT=.5), and the computed Treatment × Alliance interaction term were entered as predictors at Step 2.

We repeated the primary logistic regression analyses using partial remission status (coded 1=yes, 0=no) as the outcome variable. In this analysis BL differences in weight and early change in weight were controlled for as the definition of partial remission only involves weight criteria. Factor 3 (BL BMI percentile and early partial remission status) was entered as a covariate at step 1. The centered mean therapeutic alliance score, coded Treatment (−.5, +.5), and the Treatment × Alliance Interaction were entered simultaneously at Step 2.

# RESULTS

## Alliance Scores

We compared mean alliance scores (global, task, goal and bond scores) by treatment group using Independent Sample T Tests. Participants in AFT had significantly higher alliance scores on all scales. Effect sizes measured between the two treatment arms on measures of alliance were large, by Cohen's standards (Total Alliance: AFT M=5.31 (.67), FBT M=4.25 (.99), d=1.26, p<.001).

### Full Remission

At EOT, 14 (36.8%) of participants met full remission criteria in FBT and 9 (22.5%) in AFT. The rate of full remission status in FBT in this subsample is lower than that found in the original study (42%), but nearly equivalent to rates of the original study in AFT (23%). Results of the regression demonstrated no main effect or interaction effect for alliance on outcome (Table 1).

### Partial Remission

At end of treatment 27 (67.5%) in AFT and 34 (89.4%) in FBT met a minimum of partial remission criteria. These rates of partial remission are similar to those found in the original study for both treatments. Results of the regression demonstrated that the total alliance score was predictive of outcome ($p$=.021). A unit increase in alliance score resulted in an increase in the odds of being partially remitted by weight (>85%) by a factor of 3.32. However, there was no significant interaction between alliance and treatment type on outcome (Table 1).

## DISCUSSION

As predicted, we found significantly greater therapeutic alliance ratings in AFT. Also as hypothesized there was no main effect or interaction effect for alliance on full remission. However, results suggest alliance was a significant non-specific predictor of partial remission.

Findings from this study are best interpreted in light of important limitations. It is a secondary analysis of results from an RCT designed to test differences in remission rates between two active treatments. Addressing the nuances of the alliance-outcome relationship is complex and a further understanding of the relationship among adolescents with AN would benefit from a careful examination of how the alliance develops over time. Thus, it is not possible to assess the relationship between the alliance and symptom change prior to session 3, 4 or 5 or later in therapy. We did not identify other studies that measured alliance earlier than the second session. Therefore, our methodology was consistent with the majority of previous studies measuring early alliance around the 3rd or 4th session of treatment and controlling for change prior to the alliance session. By measuring alliance around session 4, our goal was to measure it early enough that the majority of symptom change had not yet occurred, but there was enough time to develop a relationship. However, in our sample, even within the first month of treatment 35% of change in weight (BMI percentile) had occurred in both treatment arms, suggesting that it may be necessary in future studies to look at the alliance even earlier in treatment. Nonetheless, we controlled for this change prior to measurement of the alliance session to prevent this potential confound in illuminating the direction of the alliance-outcome relationship (14.). In addition, while research suggests that observer ratings may be less subject to bias and are as effective at predicting outcome as therapist and participant ratings, understanding of the alliance in AN may be improved by including therapeutic alliance ratings made by participants and therapists in future studies. (12; 15.).

These results have several potentially important implications for future treatment alliance research, specifically in the context of adolescent AN. The sample we examined did not appear to have systematic biases. The assessments of therapeutic alliance were made independent of clinicians and participants, and without knowledge of outcomes. The measure of therapeutic alliance used is considered the gold standard. In addition, the data analysis controlled for baseline differences as well as any symptomatic change related to outcome (EDE and weight) prior to therapeutic alliance assessment thereby mitigating any effects of early treatment response in the analysis.

Consistent with expectations, alliance was effectively established in AFT and superior to that established in FBT. However, the benefits of a good therapeutic alliance in FBT did not lead to better outcomes, nor did the lack of a strong alliance in FBT appear to negatively effect outcomes. The current study fills an important gap in the alliance-outcome literature. Few studies have examined the alliance among adolescents with AN, and further, none have compared its impact on outcome in two active treatments. Our findings suggest that even among adolescents with AN, a group who may present with characteristics that implicate possible challenges in developing an alliance, a strong alliance is achievable. Therefore, consistent with DeRubeis' and colleagues' view on the varying role that common factors like the alliance may play in differing treatments, it appears that among adolescents with AN, a strong therapeutic alliance may be important in establishing the context for treatment success, but is not sufficient on its own to produce meaningful clinical change (16.).

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**Table 1**
**Logistic Regressions for Treatment Outcome Measures**

| Predictors | OR | 95% CI | df | P |
|---|---|---|---|---|
| Predictors of Full Remission | | | | |
| Constant | .38 | | 1 | .005 |
| Factor 1 | 2.24 | [1.24, 4.05] | 1 | .007 ** |
| Factor 2 | 1.03 | [.56, 1.88] | 1 | Ns |
| Alliance: Total Score | 1.54 | [.69, 3.45] | 1 | Ns |
| Treatment | 1.42 | [.36, 5.66] | 1 | Ns |
| Treatment × Alliance Interaction | 1.46 | [.29, 7.31] | 1 | Ns |
| Predictors of Partial Remission | | | | |
| Constant | 12.89 | | 1 | <.001 |
| Factor 3 | 4.73 | [1.80, 12.46] | 1 | .002 ** |
| Alliance: Total Score | 3.32 | [1.20, 9.20] | 1 | .02 * |
| Treatment | 19.04 | [1.72, 210.87] | 1 | .02 * |
| Treatment × Alliance Interaction | 2.74 | [.40, 18.85] | 1 | Ns |

*Note*. OR=Odds Ratio; CI=Confidence Interval; df=degrees freedom; Factor 1=Baseline BMI%ile and Early Full Remission by weight; Factor 2=Baseline EDE and early change in restraint; Factor 3=BL BMI%ile and Early Partial Remission status; Full Remission=>95% Expected Body Weight and Eating Disorder Examination scores within 1SD of community norms; Partial Remission=>85% Expected Body Weight; ns=non-significant.

*
p<.05

**
p<.01.