

# The Role of Collegial Alliance in Family-Based Treatment of Adolescent Anorexia Nervosa: A Pilot Study

Stuart B. Murray, PhD<sup>1,2\*</sup>  
Scott Griffiths, BPsych(Hons)<sup>2</sup>  
Daniel Le Grange, PhD<sup>3</sup>

## ABSTRACT

**Objective:** In keeping with broader efforts to identify mediators and moderators of treatment outcome in anorexia nervosa, this pilot study investigated the association between collegial alliance, which refers to the perceived alliance between case-involved professionals, and treatment outcomes in adolescent patients undergoing family-based treatment (FBT) for anorexia nervosa.

**Method:** The self-reported collegial alliance scores of five FBT practitioners were collected, alongside weight- and cognitive-related outcomes for 29 consecutive cases of adolescent anorexia nervosa under their care.

**Results:** Collegial alliance discriminated between patients who dropped out of treatment and patients who completed treatment,  $t(27) = 3.68$ ,  $p = .001$ ,  $\eta^2 = .33$ . Furthermore, there was a strong negative correlation between collegial alliance scores early

on in treatment and disordered eating symptoms later in treatment,  $r(23) = -.67$ ,  $p < .001$ . Moderate but non-significant associations were observed between early collegial alliance and patient's percentage of expected body weight later in treatment,  $r(23) = .32$ ,  $p = .13$ .

**Discussion:** These findings have important implications for the augmentation of FBT, suggesting that unity amongst clinicians promotes positive treatment outcomes, particularly with regard to disordered eating symptomatology. © 2013 Wiley Periodicals, Inc.

**Keywords:** adolescent anorexia nervosa; eating disorders; family-based treatment; family therapy; collegial alliance

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Currently, family-based treatment (FBT) of adolescent anorexia nervosa (AN) is endorsed as the first-line outpatient treatment for medically stable adolescents presenting with anorexia nervosa. However despite the promising evidence for FBT,<sup>1–3</sup> it is not without challenges, and a sizeable minority of patients either fail to reach full symptom remission or prematurely drop out of treatment.<sup>4</sup>

A potentially important factor affecting treatment outcomes in FBT may be the collegial alliance

amongst those involved in patient care,<sup>5</sup> given that FBT typically involves treatment across several team members, including for instance, FBT clinicians, psychiatrists, and pediatricians. Diverse and differing beliefs amongst clinicians as to the role of parents and families in the management of eating disorders may occur, with such incongruent messages being particularly detrimental in the context of the intensely challenging nature of FBT.<sup>5, 6</sup> Indeed, poor systemic and collegial support of FBT has recently been cited as a crucial factor inhibiting the uptake of FBT amongst clinicians working with adolescent AN,<sup>7</sup> although little empirical evidence has examined the role of collegial alliance upon FBT outcome.

The aim of this present pilot study was to investigate the role of collegial alliance, from the perspective of the FBT clinician, in treatment outcomes for adolescent patients receiving FBT for AN. Three predictions were made. First, it was predicted that collegial alliance would discriminate between patients who dropped out of treatment and patients who completed treatment. It was further predicted that collegial alliance measured early on during

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\*Correspondence to: Dr. Stuart B. Murray, The Redleaf Practice, 5 Redleaf Ave, Wahroonga, Sydney, NSW 2076, Australia. E-mail: drstuartmurray@gmail.com

<sup>1</sup> The Redleaf Practice, Wahroonga, Sydney, New South Wales, Australia

<sup>2</sup> School of Psychology, University of Sydney, Sydney, New South Wales, Australia

<sup>3</sup> Department of Psychiatry and Behavioral Neuroscience, The University of Chicago, Chicago, Illinois

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treatment would be associated with (a) disordered eating symptoms, and (b) patient's percentage of expected body weight (EBW).

## Method

### Participants

**Clinicians.** Five FBT practitioners (three females, two males), who were registered clinical psychologists formally trained in FBT, contributed data from 29 consecutive FBT cases of manualized FBT from private practice settings. Each FBT practitioner completed a measure of collegial alliance (indexing their sense of perceived cohesion and alliance with other professionals involved in the case) at five session intervals, and provided corresponding outcome data (weight and EDE-Q data) for patient progress at the same five session intervals, which included markers of bodyweight and eating disordered cognitions and behaviors. Of the five participants, the mean age was 33.2 years ( $SD = 3.3$ ), and the mean number of years in clinical practice was 6.5 ( $SD = 2.9$ ). The other professionals involved in co-managing FBT cases typically comprised psychiatrists, pediatricians, and primary care physicians, although no demographic data was collected for this group.

**Patients.** Patients' average age was 14.86 years ( $SD = 1.38$ ) with a range of 12–17 years. Ninety-three percent of patients were female ( $n = 27$ ), 76.7% ( $n = 23$ ) of the patients came from intact families, with 20% ( $n = 6$ ) reconstituted or single-parent families, and all patients completed measures of eating disorder pathology at five session intervals up until treatment session 15. Family type was not recorded for one patient. All families received conjoint FBT in which treatment sessions took place with all family members present.

### Measures

Once informed consent was obtained, patients' age, body weight, and height were measured which allowed for the calculation of a percentage of each patient's EBW, which has recently been advocated in recent clinical and empirical guidelines.<sup>8</sup>

*Eating Disorder Examination-Questionnaire (EDE-Q):* The EDE-Q<sup>9</sup> is a 36-item self-report questionnaire that measures the central behavioral and attitudinal features of eating disorders over the previous 28 days. The EDE-Q shows good test-retest reliability,<sup>10</sup> convergent validity with the Eating Disorder Examination, concurrent validity, and criterion validity.<sup>11</sup> In the present study, the EDE-Q demonstrated good internal consistency (Cronbach's  $\alpha = .85$ ).

*Working Alliance Inventory—Revised—Short Form (WAI-SR):* The WAI-SR<sup>12</sup> is based on the three-element model of the therapeutic alliance—common therapeutic tasks, shared goals, and the attachment bond, which has recently been advocated in indexing the therapeutic alliance in eating disordered populations.<sup>13</sup> This scale was modified and used to index the collegial alliance amongst colleagues co-managing each patient's care, involving a modification in the subject of each statement such that the statements were oriented towards one's colleagues co-managing a patient's care, as opposed to one's patient/therapist as originally designed. For instance, the item “\_ and I are working towards mutually agreed upon goals” was modified to read “my colleagues and I are working towards mutually agreed upon goals in this case.” In keeping with the original WAI-SR, items were rated on a 7-point Likert scale, with higher scores indicating a stronger alliance. In the present study, the modified version of the WAI-SR demonstrated good internal consistency (Cronbach's  $\alpha = .81$ ).

## Results

Mean percentage of expected body weight (%EBW) at the start of treatment was 81.5% ( $SD = 2.25$ ) and mean global EDE-Q score was 3.97 ( $SD = 1.05$ ). There was no significant difference in %EBW,  $t(27) = -0.36$ ,  $p = .72$ ,  $\eta^2 = .01$ , and global EDE-Q scores,  $t(27) = 1.31$ ,  $p = .20$ ,  $\eta^2 = .04$ , between those who dropped out of treatment (mean %EBW = 82.1%,  $SD = 1.89$ ; mean EDE-Q = 3.48,  $SD = 0.68$ ) and those who completed treatment (mean %EBW = 81.6%,  $SD = 2.46$ ; mean EDE-Q = 4.10,  $SD = 1.10$ ), suggesting comparable symptom severity within the sample.

### *Effect of FBT on Global EDE-Q Scores and Percentage of Expected Body Weight*

Polynomial contrast analyses revealed a significant positive linear trend between percentage EBW and treatment session,  $F(1,22) = 73.40$ ,  $p < .001$ ,  $\eta^2 = .77$ , and a significant negative quadratic trend between percentage EBW and treatment session,  $F(1,22) = 25.88$ ,  $p < .001$ ,  $\eta^2 = .54$ . Taken together, these trends showed that percentage EBW increased as the number of treatment sessions increased, but that this increase slowed over time. A similar pattern of results was obtained for patients' global EDE-Q scores. A significant linear,  $F(1,22) = 102.07$ ,  $p < .001$ ,  $\eta^2 = .82$ , and quadratic,  $F(1,22) = 10.31$ ,  $p < .01$ ,  $\eta^2 = .32$ , trend between global EDE-Q scores and treatment session indicated that patients' EDE-Q scores decreased with more treatment sessions, but

that the rate of decrease in EDE-Q scores slowed over time.

### ***Associations Between Collegial Alliance, Global EDE-Q Scores, and Percentage of Expected Body Weight***

A one-way repeated-measures ANOVA revealed that collegial alliance scores did not change over time,  $F(3,66) = 0.40$ ,  $p = .75$ ,  $\eta^2 = .02$ , suggesting that unity or disunity amongst clinicians is a relatively stable construct throughout FBT. In support of the first hypothesis, collegial alliance at session 5 discriminated between those who completed treatment (mean = 43.43, SD = 18.40) and those dropped out of treatment (mean = 12.17, SD = 12.08), with significantly less collegial alliance reported by clinicians treating patients who dropped out,  $t(27) = 3.68$ ,  $p < .01$ ,  $\eta^2 = .33$ .

Support was obtained for the second hypothesis, insofar as a Pearson product correlation analysis revealed a medium to large negative correlation between collegial alliance at session 5 and global EDE-Q scores at discharge,  $r(23) = -.67$ ,  $p < .001$ . Indeed, approximately 45% of the variance in global EDE-Q scores at discharge was accounted for by collegial alliance scores at session 5. Support was not obtained, however, for the second hypothesis. Collegial alliance measured at session 5 was not significantly associated with percentage EBW measured at discharge,  $r(24) = .20$ ,  $p = .35$ . It is important to note, however, that size of this non-significant association was moderate, suggesting that a more powerful study with a larger sample size may detect this effect.

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## **Discussion**

In investigating the role of collegial alliance in relation to treatment outcomes for adolescents undergoing FBT for AN, two of our three hypotheses were supported. Collegial alliance discriminated between treatment completers and patients who dropped out, and collegial alliance measured early on during treatment was moderately to strongly negatively associated with disordered eating symptoms later on in treatment. However, collegial alliance was not significantly associated with weight gain.

The present findings suggest that poor collegial alliance and poor therapeutic consistency across clinicians is likely involved in drop out rates for FBT. Current literature reports that approximately 10% of those engaged in FBT dropout prior to treatment completion (Lock et al., 2010), although the present findings suggest that collegial inconsistencies and non-shared treatment goals across clini-

cians may result in the triangulation of FBT clinicians, with many families understandably leaning toward treatment providers who don't require intense and sustained parental involvement.<sup>5</sup> Thus, therapeutic endeavors to curb treatment dropout in FBT may involve collegial processes.

The finding that collegial alliance is more related to the outcome of cognitive- rather than weight-related symptomatology is a particularly interesting finding, in light of the extant evidence-based demonstrating that FBT is characterized by greater remission of weight-related symptoms than cognitive-related symptoms.<sup>4</sup> There are several possible interpretations of this finding, and it may be that the adolescent's anxiety around challenging core cognitive psychopathology in AN is reassured and alleviated to an extent upon mixed messages and disagreement between clinicians. Alternatively it may also be plausible that the continual empowerment of the largely behavioral role of parents throughout treatment is not as vulnerable to being impacted by conflicting clinician relationships, ensuring the re-feeding their child.

Furthermore, the present findings suggest that the collegial alliance established with the first five sessions of FBT remains relatively stable throughout treatment, underscoring the importance of establishing a cohesive and functional collegial alliance early in treatment. This is consistent with wider research suggesting that the first five sessions may be a particularly important time during FBT in establishing factors which promote favorable treatment outcome.<sup>14, 15</sup>

However, despite providing the first empirical analysis of the impact of collegial alliance upon treatment outcome in FBT, several limitations of the present study should be noted. For instance, in each case only the FBT clinician provided collegial alliance data, meaning that potentially important data as to the perception of collegial alliance amongst the other clinicians involved was not captured. Furthermore, thirdly, the novel use of our modified measure used to index collegial alliance has not been validated, and despite demonstrating good reliability in our sample, requires further validation. In addition, since FBT centrally implicates parents as a primary agent of change during treatment, it may be of benefit to ascertain how parents versus adolescents are impacted by collegial alliance respectively. Thus, further research may seek to replicate and further expand upon the present findings and the novel modification of the WAI-SR in larger and more diverse populations.

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## References

1. Couturier J, Kimber M, Jack S, Niccols A, Van Blyderveen S, McVey G. Understanding the uptake of family-based treatment for adolescents with anorexia nervosa: Therapist perspectives. *Int J Eat Disord* 2012;46:177–188.
2. Le Grange D, Eisler I. Family interventions in adolescent anorexia nervosa. *Child Adolesc Psychiatric Clin N Am* 2009;18:159–173.
3. Lock J, Couturier J, Bryson S, Agras S. Predictors of dropout and remission in family therapy for adolescent anorexia nervosa in a randomized clinical trial. *Int J Eat Disord* 2006;39:639–647.
4. Lock J, Le Grange D, Agras WS, Moyer A, Bryson SW, Jo B. Randomized control trial comparing family-based treatment with adolescent-focused individual therapy for adolescents with anorexia nervosa. *Arch Gen Psychiatry* 2010;67:1025–1032.
5. Murray SB, Thornton C, Wallis A. A thorn in the side of evidence-based treatment for adolescent anorexia nervosa. *Aust N Z J Psychiatry* 2012;46:1026–1028.
6. Le Grange D, Lock J, Loeb K, Nicholls D. Academy for Eating Disorders position paper: The role of the family in eating disorders. *Int J Eat Disord* 2010;43:1–5.
7. Couturier J, Kimber M, Szatmari P. Efficacy of family-based treatment for adolescents with eating disorders: A systematic review and meta-analysis. *Int J Eat Disord* 2013;46:3–11.
8. Le Grange D, Doyle PM, Swanson SA, Ludwig K, Glunz C, Kreipe RE. Calculation of expected body weight in adolescents with eating disorders. *Paediatrics* 2012;129:e438–e446.
9. Fairburn CG, Beglin JS. Assessment of eating disorders: Interview or self-report questionnaire? *Int J Eat Disord* 1994;16:363–370.
10. Luce KH, Crowther JH. The reliability of the Eating Disorder Examination-Self-Report Questionnaire version (EDE-Q). *Int J Eat Disord* 1999;25:349–351.
11. Mond JM, Hay PJ, Rodgers B, Owen C, Beumont PJV. Validity of the Eating Disorder Examination Questionnaire (EDE-Q) in screening for eating disorders in community samples. *Behav Res Ther* 2004;42:551–567.
12. Hatcher RL, Gillaspay A. Development and validation of a revised short version of the Working Alliance Inventory. *Psychother Res* 2006;16:12–25.
13. Waller G, Evans J, Stringer H. The therapeutic alliance in the early part of cognitive-behavioral therapy for the eating disorders. *Int J Eat Disord* 2012;45:63–69.
14. Doyle PM, Le Grange D, Loeb K, Doyle AC, Crosby RD. Early response to family-based treatment for adolescent anorexia nervosa. *Int J Eat Disord* 2010;43:659–662.
15. Le Grange D, Accurso E, Lock J, Agras WS, Bryson SW. Early weight gain predicts outcome in two treatments for adolescent anorexia nervosa. *Int J Eat Disord*, in press.