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Partner distress in the context of adult anorexia nervosa: The role of patients' perceived negative consequences of AN and partner behaviors

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Abstract

Objective—Romantic partners can play an important role in the recovery from anorexia nervosa (AN). It is important to understand partners' behaviors and variables associated with their own distress. The aim was to examine associations of patients' perceived negative consequences of AN, behavioral strategies employed by partners, and partner distress.

Method—We used a cross-sectional design to assess associations between self-reports of patients' perceived negative consequences of AN, partners' caregiver distress, negative affect, relationship satisfaction, and observational coding measures of partners' behavioral strategies of *change promotion* and *acceptance/validation*. Sixteen adult patient-partner dyads in committed relationships were assessed at baseline of a couple-based intervention for AN.

Results—Partners' change promotion moderated the association between patients' perceived negative consequences of AN and partners' caregiver distress. Partners' acceptance/validation was associated with partners' negative affect.

Discussion—This report represents the first description of specific partner behaviors in the context of AN. Partners who reported the least distress were those who were trying to promote changes in AN behaviors in patients who reported high negative consequences of AN, and partners who were trying to show understanding of the patients' experience. Future studies should examine the impact of partner behaviors on AN treatment outcome.

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Disclosure of Conflicts

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The interpersonal context of anorexia nervosa (AN) is critical in adolescents, both in terms of the maintenance and treatment of the disorder.¹⁻³ However, for AN patients who are adults, their romantic partners may be their primary interpersonal relationship.⁴⁻⁶ Importantly, recent research suggests that involving partners in treatment of AN can be quite valuable.⁷ Thus, it is important to better understand partners' experience of and behavioral responses to AN to inform treatment.

Romantic relationships often experience significant strain related to AN,⁸⁻¹⁰ and family members report high levels of caregiver distress.¹¹ However, it is unclear what predicts the partners' distress. In addition to symptom severity,¹² other features of AN such as patients' low motivation to change appear to impact partners.¹³ Patients' experience of negative consequences due to AN is considered an important predictor of readiness for change,¹⁴ and patients who recognize few negative consequences may be reluctant to engage partners in recovery. Partners may be troubled if patients do not recognize the adverse effects of AN and may feel frustrated or hopeless that the patient will improve.^{15,16} In addition, this dynamic may interfere with adaptive dyadic coping,¹⁷ and a less favorable interpersonal environment for AN may be the result.

In addition, partners react to AN in ways that may inadvertently facilitate or detract from their own and the patients' ability to cope. For example, partners may engage in behaviors that aim at promoting changes in AN-related behavior and fundamental beliefs in the patients toward recovery, e.g., monitoring the patient's eating or trying to convince the patient she is thin. Also, partners may try to show acceptance and understanding as patients struggle with AN, for example, by expressing empathy for how challenging recovery is. These two behavioral strategies are defined as *Change Promotion* and *Acceptance/Validation* in the current study. Use of these constructs does not imply that partners employ them effectively or communicate their intentions constructively, only that they are salient goals that the partners actively pursue.

The goal of the current study was to explore how patients' perceived negative consequences of AN and partners' behavioral strategies are related to the partners' distress across three domains – relationship satisfaction, caregiver distress, and negative affect, after controlling for AN severity. Patients' lower perceived negative AN consequences was expected to be associated with greater partner distress. In addition, an interaction effect was expected between the patients' perceived negative consequences and partners' change promotion. More specifically, partners with high change promotion would experience more distress if patients' reported negative consequences were low because this directly interferes with the partners' goal of change toward recovery; conversely, partners with low change promotion would experience less of an impact from patients' low reported negative consequences. Further, it was expected that a higher level of acceptance/validation behaviors of the partners would be associated with less partner distress. Engagement in these behaviors may be rewarding for partners irrespective of patients' perception of negative consequences of AN, because the partners' efforts are directed at showing understanding, rather than at change. An interaction effect was included for exploratory purposes.

Methods

Given the novelty of this research area and small sample size, the analyses are seen as exploratory. Alpha levels were not adjusted to account for repeated testing due to the low power. Despite limited power, this research was viewed as valuable groundwork that may justify future efforts of collecting data from a larger sample of such a difficult to recruit population.

Participants and Procedure

Adult patients with AN and their partners were recruited for a treatment outcome study combining individual therapy for AN with a couple-based intervention. Couples had to be in a committed relationship and cohabiting for at least one year, patients had to have a BMI >16. Patients with a BMI <16 were referred for higher levels of care before being considered for participation. Individuals who were recruited during or immediately after inpatient or partial hospitalization weight restoration were allowed into the study if they otherwise met full criteria for AN. Additional details of the treatment procedures^{18,19} and methods²⁰ are reported elsewhere. Only baseline measures were used here. Informed consent was obtained. All procedures were approved by the Biomedical Institutional Review Board of the University of North Carolina at Chapel Hill. The measures used in the current study were available for $N = 16$ female patients and their male partners. The mean ages for patients and partners were 31.25 ($SD = 8.32$) and 34.25 ($SD = 9.37$) years, respectively.

Measures

Patients' perceived negative consequences of AN were measured with the Burden subscale of the Decisional Balance (DB) scale,^{14,21} which was seen as most pertinent to the couples context and appears most strongly associated with measures of motivation to change.¹⁴ Partners' caregiver distress was assessed with a subset of 12 items from the Caregiving Stress Scale (CSS)^{22,23} limited to items that assess the partner's experience directly related to the patient and AN. This subscale (CSS-12) had good reliability in the current sample (Cronbach's $\alpha = .89$). Partners' relationship satisfaction and negative affect were measured using the Dyadic Adjustment Scale – 4 (DAS-4)²⁴ and negative scale of the Positive and Negative Affect Schedule (PANAS),²⁵ respectively. The Eating Disorders Examination (EDE)²⁶ global score, patients' current BMI, and patients' lowest adult BMI were examined as indicators of AN symptom severity in preliminary analyses to determine which ones predict partners' distress and should be controlled for in the analyses. Only the lowest adult BMI and the PANAS negative scale were moderately correlated, $r = -.36$. Therefore, lowest adult BMI was used.

Partner behaviors were assessed using the *Partner Behaviors in the Context of AN* system, a macroanalytic observational coding system developed for this investigation. Couples were videotaped for 10 minutes while sharing their thoughts and feelings about a problem area in their relationship related to AN. A coding manual describes the system in detail (more information available from the authors). Three trained coders assigned one global code based on the entire conversation for each dimension, Change Promotion and Acceptance/Validation, on a 5-point scale. All interactions were coded by two coders. One-way mixed,

consistency, average measures intraclass correlation coefficients²⁷ were .83 for Change Promotion and .94 for Acceptance/Validation, indicating excellent interrater reliability.²⁸ Because the coding system was constructed for this investigation, additional evidence supporting validity is not available.

Results

Descriptive statistics are provided in Table 1. A series of hierarchical regression analyses was used with the following steps for each model: (a) lowest adult BMI; (b) patients' perceived negative consequences of AN; (c) the main effect of one of the partner behaviors; (d) the interaction term of the partner behavior and patients' perceived negative consequences. Table 2 shows results of the analyses yielding significant effects.

There was no main effect for patients' perceived negative consequences of AN on partners' relationship satisfaction, caregiver distress, or negative affect. There was a significant interaction effect of patients' perceived negative consequences of AN and partners' change promotion predicting caregiver distress (CSS-12; $\beta = -5.24$, $t(11) = -2.31$, $p < .05$). The interaction term explained 32% of the variance in the CSS-12 ($F(1,11) = 5.35$, $p < .05$). Given the small sample and number of predictors, it is likely that the R^2 is a positively biased estimate of the population squared multiple correlation.²⁹ Examining the adjusted (shrunken) R^2 , which takes both the sample size and number of predictors into account, provides a more realistic estimate of the population R^2 . Prior to adding the interaction term, the main effects model for caregiver distress yielded a negative adjusted R^2 , which is interpreted as zero variance explained.²⁹ In the final model, the adjusted R^2 equaled .09. Thus, the adjusted R^2 suggests that the reported interaction of patients' perceived negative consequences of AN and partners' change promotion explains a meaningful amount of variance in caregiver distress (ca. 9%). Given these results, the interaction term predicting the CSS-12 was probed. For partners with a higher level of change promotion, lower levels of patient perceived negative consequences of AN were associated with higher levels of caregiver distress. For partners with lower levels of change promotion, greater perceived negative consequences were associated with *higher* levels of caregiver distress.

Although there was no significant interaction effect of patients' perceived negative consequences of AN and partners' change promotion predicting negative affect or the DAS-4, the interaction term uniquely explained 25% of the variance of the DAS-4 ($\beta = 4.63$, $t(11) = 1.95$, $p = .08$). However, the adjusted R^2 was close to 0 for this model, and results for the DAS-4, therefore, should not be interpreted further.

The full model predicting negative affect from patients' perceived negative consequences of AN and acceptance/validation including the interaction effect did not yield any significant effects. However, the third step showed that a significant main effect for acceptance/validation ($\beta = -.59$, $t(12) = -2.26$, $p < .05$) explained about 23% in the variance in the partners' negative affect, which was a significant increase compared to the previous step ($F(1,12) = 5.11$, $p < .05$). The adjusted R^2 for this main effect model was .33 compared to .12 in the previous step without acceptance/validation, indicating that the increase in adjusted R^2 was similar to the unadjusted change in R^2 (about 21%). This model indicated that

greater engagement in acceptance/validation behaviors was associated with less negative affect for the partners. However, the effect of acceptance/validation was no longer significant in the final model including the interaction term, which was added for exploratory reasons and reduced power further. There were no significant main effects of acceptance/validation behaviors and no interaction effects predicting caregiver stress and relationship satisfaction.

Discussion

The current investigation is one of the first empirical studies using observational data to examine the intimate relationships of couples in which one partner suffers from AN. Simultaneously examining both the patients' perceived negative consequences of AN and how much partners try to promote changes toward recovery explained differences in partners' caregiver distress. Partners experienced the least caregiver distress if the partners' attempts to get the patient to change AN-related behaviors were "in sync" with the patients' level of perceived negative consequences, and, potentially, motivation to change. The pattern of patients feeling burdened by AN and partners trying to support and promote change likely facilitates the couples' ability to work as a team towards recovery and allows the partners to feel successful as a caregiver. On the contrary, if the patient experiences little negative consequences, the couple cannot benefit from this synergy. A similar, non-significant pattern was found for relationship distress. It was somewhat counter-intuitive that it was not always positive for partners when the patients endorsed high negative consequences of AN; that is, for partners who refrain from attempts to promote change. This pattern may be indicative of partners who may have become avoidant of directly addressing what needs to change, yet are overwhelmed and distressed in their role as a caregiver. Alternatively, it is possible that the critical ingredient is whether partners are "in sync" that explains partners' level of caregiver distress in either direction.

Partners' with higher acceptance/validation experienced less negative affect. Patients may be most likely to respond positively to these behaviors regardless of their perception of AN, and the couple has an opportunity to help each other cope with the strains AN has put on their lives. However, the opposite effect is also possible: If partners experience high negative affect, it may be difficult to show understanding and validate the patients' struggle with AN.

Limitations of this study include the small sample size and cross-sectional design. Alpha levels were not adjusted due to the small sample size. Patients were treatment seeking, partners were aware of the disorder, and the sample was homogeneous in terms of a number of demographic characteristics including gender. In addition, a newly developed coding system was used. Thus, validity of the codes is yet to be established; however, this also represents the only measure to date that assesses these disorder-specific partner behaviors. Despite the limitations, the findings are encouraging and represent a valuable first step towards a better understanding of the interpersonal context that affects both AN patients and partners. Future research should examine how AN treatment outcomes are affected by the partners' behaviors. Although couple-based interventions show promise for being effective,³⁰ it is unclear what exactly about the couple-based aspect of the treatment is

helpful. The partners' behaviors in response to AN might be part of the mechanisms that affect AN outcomes.

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Table 1

Descriptive Statistics for Study Variables (N = 16)

Variable	Mean (SD)	Minimum	Maximum
<u>Patient</u>			
Current BMI	18.86 (2.03)	15.95	23.45
Lowest Adult BMI	15.84 (1.22)	13.79	17.59
EDE Global Score	2.71 (1.47)	.55	5.30
DB Burden Subscale	58.07 (7.82)	47.00	72.00
<u>Partner</u>			
Relationship satisfaction (DAS-4)	12.25 (4.19)	5.00	20.00
Negative affect (PANAS)	17.28 (6.28)	10.00	29.00
Caregiver distress (CSS-12)	23.94 (6.88)	14.00	37.00
Change Promotion ^a	3.00 (1.18)	1.50	5.00
Acceptance/Validation ^a	2.28 (1.41)	1.00	5.00

Note:

^aPossible range of values 1–5.

EDE = Eating Disorders Examination; DB = Decisional Balance scale, Burden subscale; DAS-4 = Dyadic Adjustment Scale – 4; PANAS = Positive and Negative Affect Schedule; CSS-12 = Caregiving Stress Scale – 12

Table 2

Results from Linear Regression Analyses Yielding Significant Effects. Presented for Full Models and Changes in R^2 for each Step (N = 16)

Variable	F	R ²	R ²	B	SEB	β
CSS-12	1.37	.33				
Lowest adult BMI		<.01	-1.13	1.59		-.20
DB burden		<.01	1.34	.62		1.52
Change promotion		.01	28.20	12.54		4.85*
DB burden * change promotion		.32*	-.49	.21		-5.24*
PANAS negative affect	2.43	.47				
Lowest adult BMI		.15	-2.69	7.15		-.59*
DB burden		.09	-.12	-.32		-.17
Acceptance/validation		.23*	-5.00	7.15		-1.26
DB burden * acceptance/validation		.01	.04	.12		.75

Note: R^2 = Change in R^2 for each step compared to the previous model. CSS-12 = Caregiving Stress Scale - 12. DB = Decisional Balance Scale. PANAS = Positive and Negative Affect Schedule.

* $p < .05$