


Predictors of premature termination from psychotherapy for anorexia nervosa: Low treatment credibility, early therapy alliance, and self-transcendence

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Abstract

Objective: Failure to complete treatment for anorexia nervosa (AN) is common, clinically concerning but difficult to predict. This study examines whether therapy-related factors (patient-rated pretreatment credibility and early therapeutic alliance) predict subsequent premature termination of treatment (PTT) alongside self-transcendence (a previously identified clinical predictor) in women with AN.

Methods: 56 women aged 17–40 years participating in a randomized outpatient psychotherapy trial for AN. Treatment completion was defined as attending 15/20 planned sessions. Measures were the Treatment Credibility, Temperament and Character Inventory, Vanderbilt Therapeutic Alliance Scale and the Vanderbilt Psychotherapy Process Scale. Statistics were univariate tests, correlations, and logistic regression.

Results: Treatment credibility and certain early patient and therapist alliance/process subscales predicted PTT. Lower self-transcendence and lower early process accounted for 33% of the variance in predicting PTT.

Discussion: Routine assessment of treatment credibility and early process (comprehensively assessed from multiple perspectives) may help clinicians reduce PTT thereby enhancing treatment outcomes.

KEYWORDS

anorexia nervosa, drop out, premature termination, self-transcendence, therapy alliance, treatment credibility

Retention in treatment for anorexia nervosa (AN) offers the best chance of achieving symptom improvement yet premature termination of treatment (PTT) is common, with 30–40% of adult outpatients failing to complete psychotherapy (DeJong, Broadbent, & Schmidt, 2012). This is a significant concern for those affected, families and services, given serious morbidity and elevated mortality in AN (see Elbaky, Hay, Le Grange, Lacey, Crosby, & Touyz, 2014). Much research on PTT

focuses on pretreatment patient clinical characteristics however significant methodological issues including inconsistent definitions of PTT, differing measures, timing of assessments, and sample characteristics have led to conflicting results and non-replication (Fassino, Piero, Tomba, & Abbate-Daga, 2009; Jordan et al. 2014). Attention has now turned to potentially potent transdiagnostic therapy-related common factors influencing PTT, including patient treatment credibility beliefs

and the quality and process of the therapeutic relationship itself (Sly, 2009).

Research on therapeutic alliance in outpatient treatment for AN has been hampered because relatively few treatment trials in adults measure process-related factors (Brauhardt, de Zwaan, & Hilbert, 2014; Zaitsoff, Pullmer, Cyr, & Aime, 2015). Studies of family therapy for adolescent AN highlight that timing (early, middle, or late stage) and perspective (adolescent, parent, therapist, or observer) yield different findings regarding alliance; however, high parental alliance reliably predicts treatment completion (Zaitsoff, Pullmer, Cyr, & Aime, 2015). In adults, higher early therapy alliance was associated with reduced PTT in one study (Sly, Morgan, Mountford, & Lacey, 2013), however, another reported early positive alliance did not predict PTT or weight gain – conversely, early weight gain predicted later positive alliance (Brown, Mountford, & Waller, 2013). Patient treatment credibility ratings have received relatively little attention in predicting PTT in AN, although lack of congruence between patient and therapist expectations of treatment predicted drop-out in those with eating disorders (Clinton, 1996).

The need for further process-outcome (including PTT) research in eating disorders has been noted (Zaitsoff et al., 2015), however it is important that identified clinical predictors are examined in relation to process variables, preferably within the same samples to advance understanding of the relative strength, and treatment implications, of these associations.

Our previous study examining clinical predictors found low self-transcendence was associated with PTT, whereas demographic, eating disorder severity, AN subtype, and Axis I comorbidity variable were not (Jordan et al., 2014).

In this study, we hypothesize that low patient-rated treatment credibility and low early therapeutic alliance will predict subsequent PTT in our AN psychotherapy trial. We then examine the relative contribution of these therapy-related predictors with our previously identified clinical predictor (self-transcendence) in predicting PTT within the same sample.

1 | METHODS

1.1 | Participants

Participants were 56 women aged 17–40 years with spectrum AN (strict AN, BMI 14.5–17.5; and Lenient AN, BMI 17.6 < 19) presenting to a randomized outpatient psychotherapy trial (McIntosh et al., 2005). All had DSM-IV psychological features of AN. Amenorrhea was not required. The Southern Regional Health Authority Ethics Committee (Canterbury) provided ethical approval. Specialist Supportive Clinical Management (SSCM) was superior to Interpersonal Psychotherapy (IPT) in intention to treat analyses and to IPT and Cognitive Behavior Therapy (CBT) in completer analyses (McIntosh et al., 2005).

1.2 | Procedure

1.2.1 | Treatment completion definition

PTT was defined as a premature end to planned treatment, whether client-initiated, staff-initiated or due to logistic reasons (Sly, 2009) as

reasons for PTT (below) were varied, PTT timing was steady (mean 8.1, range 1–14 sessions), and subgroup numbers (including for PTT timing) were too small for meaningful analyses.

Treatment completion [Completers group ($n = 35$, 62.5%); PTT group ($n = 21$, 37.5%)] was defined a priori as completing 15 or more of 20 (75%) scheduled sessions. PTT reasons (DeJong, Broadbent, & Schmidt, 2012) included: staff-initiated clinical withdrawals due to deterioration (medical, $n = 3$, 5.4%; psychiatric, $n = 1$, 1.8%); patient-initiated withdrawal ($n = 10$, 17.9%); logistical withdrawal [moved city ($n = 3$, 5.4%) and progress withdrawal (early improvers who discontinued, $n = 4$, 7.1%)].

1.3 | Measures

1.3.1 | Treatment credibility scale

This three question scale, self-rated after session one used a 6-point Likert-type scale: How logical does the treatment seem? How applicable to your problems does treatment seem? How helpful do you think treatment will be? (Morrison & Shapiro, 1987).

1.3.2 | Temperament and character inventory

The TCI has 293 yes/no items (Cloninger, Svrakic, & Przybeck, 1991). The self-transcendence scale (51 items) comprises five facets: (a) creative self-forgetfulness versus self-consciousness; (b) transpersonal identification versus self-isolation; (c) spiritual acceptance versus rational materialism; (d) enlightened versus objective; (e) idealistic versus practical.

1.3.3 | Vanderbilt Therapeutic Alliance Scale-revised (VTAS-R)

The VTAS-R is a 37 item observer rating scale comprising therapist, patient, and therapist + patient together subscales (Krupnick, Sotsky, Watkins, Eklin, & Pilkonis, 1996).

1.3.4 | Vanderbilt Psychotherapy Process Scale (VPPS)

The VPPS is a 90-item observer rating scale with eight subscales: patient participation, negative therapist attitudes, patient exploration, patient psychic distress, therapist warmth and friendliness, patient hostility, therapist exploration and patient dependence (O'Malley, Suh, & Strupp, 1983).

1.4 | Rating of therapy alliance

Raters were graduate clinical psychology students or clinical psychologists unaware of therapy randomization. Early phase sessions (sessions 1–5) were used. Inter-rater reliability checks were conducted on 25/156 sessions (16%) for the VTAS and 40/156 (26%) for the VPPS. Intra-class correlations for both the VTAS-R and VPPS subscales indicated moderate reliability (Table 1). The coefficient of variation (variation between raters relative to the overall mean for each subscale) was satisfactory for VTAS-R subscales and acceptable to satisfactory for the VPPS.

TABLE 1 Inter-rater reliability of tape ratings in the therapy alliance scales

Measure/subscales	Intraclass correlations ^a	Coefficients of variation ^b
Vanderbilt therapeutic alliance scale (VTAS-R)		
Therapist	.66	6.6%
Patient	.78	7.7%
Therapist + patient together	.78	8.6%
Vanderbilt psychotherapy process scale (VPPS)		
Patient participation	.74	10.7%
Patient exploration	.65	13.0%
Patient psychic distress	.65	7.1%
Negative therapist attitudes	.85	9.1%
Patient hostility	.67	3.6%
Therapist warmth	.26	16.0%
Therapist exploration	.39	11.9%
Patient dependence	.43	6.1%

Note. Inter-rater reliability checks were conducted on 25/156 sessions (16%) for the VTAS and 40/156 (26%) for the VPPS.

^aIntraclass correlations (two way mixed effects model).

^bThe coefficient of variation (variation between raters relative to the overall mean for each subscale).

1.5 | Statistical analyses

The Statistical Package for the Social Sciences (version 23) was used to analyze data. Statistics included student t-tests, Pearson's correlations, odd ratios, and Cohen's *d* effect sizes. Sequential binary logistic regression analyses identified the strongest alliance/process predictor among those statistically significant in univariate analyses. The relative contribution of the strongest alliance/process predictor was examined then in relation to treatment credibility and to self-transcendence in logistic regression models. The *p* values was .05 with no correction for multiple comparisons.

2 | RESULTS

There were no statistically significant differences across therapies in the rate of PTT: SSCM 28.6%, CBT 38.9% and IPT 42.9%, $\chi^2(2, 56) = 0.75, p = .69$. Odds ratios and confidence intervals (CI) for 2-way comparisons between therapies were SSCM versus CBT, OR = 1.59 (CI 0.36, 7.12); SSCM versus IPT, OR = 1.88 (CI 0.44, 7.96); CBT versus IPT, OR = 1.12 (CI 0.33, 4.25).

Table 2 presents univariate and logistic regression analyses of early variables potentially associated with PTT.

Total credibility predicted PTT. VTAS-R early phase total mean (SD) score was 4.17 (0.26). Low scores on VTAS-R patient, and VPPS patient exploration, therapist exploration, and therapist warmth subscales predicted PTT. Patient exploration was the strongest alliance/process predictor in logistic regression so was used to represent therapy alliance in subsequent analyses. VTAS and VPPS totals were highly correlated (.64). Correlations were small for ST-VTAS .16, ST-VPPS -.02 and ST-credibility .21.

Sub-analyses of the self-transcendence subscale indicated statistically significant differences on two of the five facets: facet 4: enlight-

ened versus objective [Completers $M = 5.06$ ($SD = 3.51$) versus PTT $M = 2.93$ ($SD = 2.34, t = 2.09, p < .05$)] and facet 5: idealistic versus practical [Completers $M = 5.17$ ($SD = 1.99$) versus PTT $M = 3.64$ ($SD = 1.78, t = 2.50, p < .05$)] (Jordan et al., 2014).

VTAS and VPPS totals were highly correlated (.64). Correlations were small for ST-VTAS .16, ST-VPPS -.02 and ST-credibility.21.

Binary logistic regression models established the relative contributions of key variables associated with PTT. The best model accounted for 33% of the variance in predicting PTT, with both self-transcendence and patient exploration remaining in the model. In each pairwise regression, all variables remained in the model, indicating that patient exploration, treatment credibility and self-transcendence all make independent contributions to PTT.

In post hoc exploratory analyses examining whether varying the definitions for PTT affected these results, the pattern of key findings remained (Supporting Information Table S1 available from the corresponding author).

3 | DISCUSSION

As hypothesized, low scores for treatment credibility and (some) early therapeutic alliance/process subscales were associated with PTT. Treatment credibility, patient exploration, and self-transcendence all made independent contributions in predicting PTT. Mean alliance levels in this study benchmark favorably with the original VTAS-R paper, and the variance accounted for by these therapy-process variables in the models is consistent with other psychotherapy research (Horvath, Re, Fluckiger, & Symonds, 2011).

Our finding of low patient alliance predicting PTT is consistent with Sly, Morgan, Mountford, & Lacey (2013) but not Brown, Mountford, & Waller, (2013). It aligns with previous research regarding the predictive power of patient alliance (see Horvath, Re, Fluckiger, & Symonds, 2011) and mounting evidence suggesting that regular monitoring of client progress and response to session content improves outcomes (see Dyer, Hooke, & Page, 2014; Peterson, Becker, Treasure, Shafran, & Bryant-Waugh, 2016). Several VPPS therapist subscales also predicted PTT, highlighting therapist contribution to the alliance/process and countering previous reports that only patient perspectives were informative (see Del Re, Flückiger, Horvath, Symonds, & Wampold, 2012).

Findings from the AN family therapy literature noted earlier, and variability across our measures suggest that alliance/process should be comprehensively assessed (whose perspective, how and when measured) to deepen understanding of nuances in the relationship between alliance/process and outcomes including PTT (Crits-Christoph, Gibbons, & Mukherjee, 2013; Zaitsoff et al., 2015). Variability in alliance levels across studies may account for conflicting results therefore benchmarking levels of alliance is important (DeRubeis, Gelfand, German, Fournier, & Forand, 2014). That alliance did not predict PTT in the Brown et al. study may relate to their consistently high levels of alliance (Brown et al., 2013). Low treatment credibility also predicted late dropout from web-based CBT for eating disorders (ter Huurne, Postel,

TABLE 2 Association of key variables assessed early in therapy to subsequent PTT

Variables	Completed ^a Mean (SD)	PTT Mean (SD)	t	p	Effect size ^b
Treatment credibility ratings^c					
Total credibility	n = 35 12.90 (2.07)	n = 21 11.38 (2.44)	2.49	.02	0.69 (0.12–1.23)
Vanderbilt Therapeutic Alliance Scale – Early phase^d					
Therapist subscale	n = 31 55.51 (2.55)	n = 19 56.32 (3.58)	–.94	.35	–0.27 (–0.84–0.31)
Patient subscale	48.03 (4.15)	45.37 (4.30)	2.12	.03	0.67 (0.08–1.25)
Therapist & Patient subscale	52.03 (4.56)	50.00 (4.78)	1.52	.14	0.44 (–0.15–1.01)
Vanderbilt Psychotherapy Process Scale – Early phase					
Patient participation	n = 33 4.06 (0.77)	n = 20 3.72 (0.98)	1.40	.17	0.40 (–0.17–0.95)
Negative therapist attitude	1.01 (0.04)	1.01 (0.04)	.16	.87	0.00 (–0.56–0.56)
Patient exploration	2.98 (0.57)	2.56 (0.58)	2.62	.01	0.73 (0.15–1.29)
Patient psychic distress	2.06 (0.40)	2.02 (0.37)	.40	.69	0.10 (–0.45–0.66)
Patient hostility	1.10 (0.22)	1.08 (0.20)	.21	.84	0.09 (–0.46–0.65)
Therapist warmth	3.65 (0.53)	3.27 (0.55)	2.51	.02	0.71 (0.13–1.27)
Therapist exploration	2.82 (0.29)	2.59 (0.37)	2.51	.02	0.71 (0.13–1.27)
Logistic regression model^e					
Self-transcendence vs. Treatment credibility (total)					
Model Nagelkerke $R^2 = .29$, cases correctly classified 72.7%					
Variables remaining in the model					
Self-transcendence		0.92	0.85–0.99	5.35	.02
Treatment credibility (total)		0.75	0.57–1.00	5.35	.05
Self-transcendence vs. Patient Exploration^f					
Model Nagelkerke $R^2 = .33$, cases correctly classified 71.2%					
Variables remaining in the model					
Patient Exploration		0.27	0.08–0.94	4.26	.04
Self-transcendence		0.91	0.85–0.98	6.25	.01
Treatment credibility (total) vs. Patient Exploration					
Model: Nagelkerke $R^2 = .29$, cases correctly classified 75.5%					
Variables remaining in the model					
Patient Exploration		0.25	0.07–0.85	4.96	.03
Treatment credibility (total)		0.72	0.54–0.96	5.06	.03

^aCompleter status is defined as completing 15 of 20 planned sessions. The PTT group includes those who completed <15 sessions for whatever reason.

^bCohen's *d*.

^cTotal credibility is the sum of Logical, Applicable, and Helpful subscales.

^dEarly phase is sessions 1–5.

^eLogistic regression stepwise (forward conditional procedure). Degrees of freedom = 1.

^fSequential pairwise logistic regression analyses were run to identify the strongest of the statistically significant alliance/process subscales (Patient Exploration, Therapist Warmth and Therapist Exploration). VPPS Patient exploration as the strongest variable was then used to represent alliance/process in the logistic regression models with treatment credibility and self-transcendence.

de Haan, van der Palen, & DeJong, 2017). The importance of considering patient preferences in AN therapies has been highlighted, notwithstanding that non-negotiable elements of evidenced-based treatments (e.g., weight-gain focus) may not be preferred (Peterson, Becker, Treasure, Shafran, & Bryant-Waugh, 2016).

A statistically significant association of self-transcendence with PTT has been reported in only one other study (Pham-Scottet et al., 2012) although the direction of effect is unclear from that report. Self-consciousness, impatience, and concreteness characteristics of low self-transcendence have clear relevance to credibility and alliance beliefs.

Study limitations include that the PTT definition (including all reasons for noncompletion) risked obscuring differences through increased heterogeneity. Post-hoc analyses however confirmed that the pattern of findings remained regardless of definition, supporting use of this broad PTT definition. Study strengths include use of established alliance measures, independent blinded raters, and inter-rater reliability data.

Monitoring treatment credibility and early alliance/process will increase clinician awareness of PTT risk, enabling intervention to redress these issues to enhance retention and outcomes for AN. The finding of low self-transcendence predicting PTT requires replication.

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CONFLICT OF INTEREST

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SUPPORTING INFORMATION

Additional Supporting Information may be found online in the supporting information tab for this article.

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