



Self-image and treatment drop-out in eating disorders

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Introduction. Drop-out from treatment is a serious problem in eating disorders which remains poorly understood. The present study investigated whether self-image and interpersonal theory could help to explain why eating disorder patients drop out of treatment.

Method. Intake data on eating disorder patients who terminated treatment prematurely ($N = 54$) were compared with patients who had completed treatment ($N = 54$) and those who were still in treatment after 12 months ($N = 54$). Self-image was assessed using the structural analysis of social behaviour (SASB), and comparisons were made on demographic and clinical variables.

Results. Patients who dropped out had initially presented with less negative self-image and fewer psychological problems compared with remainers. Low levels of SASB self-blame discriminated drop-outs from completers and remainers and significantly predicted treatment drop-out.

Discussion. Drop-out in eating disorders appears to be a complex phenomenon, not necessarily as pathological as often assumed. There may be important differences in the treatment goals of drop-outs and therapists; patients who drop out may be choosing to disengage at a time when symptom improvement creates space for closer examination of interpersonal issues.

Drop-out from treatment is considered a serious problem in eating disorders (Agras *et al.*, 2000). Up to 57% of patients terminate treatment prematurely (Di Pietro, Valoroso, Fichelle, Bruno, & Sorge, 2002). Drop-out has been associated with poor

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long-term outcome (Baran, Weltzin, & Kaye, 1995) and relapse among anorexics (Strober, Freeman, & Morrell, 1997). A number of patient characteristics have been associated with drop-out, such as bulimia (Franzen, Backmund, & Gerlinghoff, 2004; Surgenor, Maguire, & Beumont, 2004; Waller, 1997; Woodside, Carter, & Blackmore, 2004), longer duration of illness (Vandereycken & Pierloot, 1983), greater drive for thinness (Fassino, Abbate-Daga, Piero, Leombruni, & Rovera, 2003), borderline personality (Waller, 1997), impulsivity and anger problems (Fassino *et al.*, 2003), depression, hopelessness and external locus of control (Steel *et al.*, 2000). Other patient characteristics impacting on drop-out have included low levels of self-directedness and cooperativeness (Fassino *et al.*, 2003; Fassino, Daga, Piero, & Rovera, 2002).

Although research on patient characteristics has shed some light on the problem, such work tends to be limited to information gathered at assessment for general research or clinical purposes and does not necessarily help to explain why a patient chooses to remain in treatment or not (Mahon, 2000). Other related factors that may help to explain drop-out include parental break-up (Mahon, Winston, Palmer, & Harvey, 2001), divergence in treatment expectations between patients and therapists (Clinton, 1996), discrepancies between what patients expect of treatment and what they receive (Walsh, Fairburn, Mickley, Sysko, & Parides, 2004), lack of motivation to change (Geller, Cockell, & Drab, 2001), difficulties trusting and relating to others (Blouin *et al.*, 1995) and social insecurity (Fassino *et al.*, 2002). All of these factors have an important interpersonal underpinning; however, they have not been explored within the context of an empirically valid interpersonal theory.

The structural analysis of social behaviour (SASB) developed by Benjamin (1974, 2000) provides such a theory and could be used to investigate drop-out in ways that are both clinically and theoretically meaningful. Unlike methods that focus on a single dimension, the SASB model is built upon two axes, interdependence and affiliation, which are measured in terms of three aspects (or *surfaces* as they are termed within the theory). The theoretical basis of the model is to be found in Sullivan's (1953) interpersonal theory, where self-image (i.e. how an individual views him/herself) is seen as constituting a guiding force in a person's perceptions of interactions with others and reflecting on with how much importance others have treated the individual. Since negative self-image appears to be typical of eating disorders (Björck, 2006), it may increase the risk for negative therapeutic reactions and premature termination of treatment.

Investigating self-image in relation to drop-out could, therefore, help us to understand an important clinical problem fully. How such work is carried out is important since previous studies have suffered from problems with the definition of drop-out and use of appropriate comparison groups. Patients who are classified as having dropped out may have done so early in treatment (Clinton, 1996) or relatively late (Vandereycken & Pierloot, 1983). Other studies have combined early and late drop-out (Eivors, Button, Warner, & Turner, 2003) or have failed to report data on time in treatment prior to drop-out (Blouin *et al.*, 1995; Favaro & Santonastaso, 2000; Franzén *et al.*, 2004; Surgenor *et al.*, 2004; Tasca, Taylor, Bissada, Ritchie, & Balfour, 2004; Walsh *et al.* 2004). Such differences make between-study comparisons problematic. Furthermore, drop-outs tend to be compared with those who have not dropped out when data is collected. However, it is not known whether those who remained in treatment dropped out at a later stage. If drop-outs are not compared with remainers they tend to be compared with patients who have completed treatment, and the question of comparisons with those remaining in treatment is ignored. A more robust

design would be to compare drop-outs with both those who remain in treatment and those who have completed treatment.

The present study adopts such a design and explores the relationship of self-image to drop-out. In particular, the study aimed to examine whether SASB self-image and interpersonal theory could help to explain treatment drop-out in a heterogeneous sample of eating disorder patients that could be divided into: *drop-outs* (that is, patients who terminated treatment prematurely), *completers* (that is, patients who had completed treatment according to plan) and *remainers* (that is, patients who were still actively receiving treatment at 12-month follow-up). We anticipated that initial negative self-image would be significantly greater among patients who later dropped out compared with those who completed or remained in treatment. The study was conducted within the framework of the Coordinated Evaluation and Research at Specialized Units for Eating Disorders in Sweden (CO-RED) project, a longitudinal and naturalistic study following eating disorder patients treated at 14 specialist treatment centres across Sweden over a 6-year period. Participating centres offer a wide variety of treatment such as inpatient, day-patient and out-patient care, individual psychotherapy, family and group therapy, psychoactive drugs, as well as expressive forms of treatment using dance and art, etc. Psychotherapeutic treatment was individually designed for each patient, depending on both the patient's needs and the treatment approaches offered at each centre. Standard symptom-focused interventions of cognitive behavioural character were almost always present; these were often complemented by supportive interventions, and, to a lesser extent, psychodynamically based interventions focusing on, for example, problems with interpersonal relationships, self-image, as well as the identification and expression of affect. A battery of self-report and interview-based measures is used to assess eating disorder and concomitant psychopathology at initial assessment, and subsequently after 6, 12, 18 and 36 months. Data collection commenced in August 1995 and ended in December 2001. No exclusion criteria were applied; simply having an eating disorder and being treated at the unit provided the basis for inclusion in the project.

Method

Participants

Three equally sized groups of eating disorder patients who were randomly selected following the recommendations of Hair, Anderson, Tatham, and Black (1998) to avoid the risk of overestimating prediction accuracy in the largest group (total $N = 162$). This comprised 35% of the 465 patients who were followed up after 12 months. The groups studied were:

Remainers

A random sample ($N = 54$) was selected from 323 patients who were still actively receiving treatment at 12-month follow-up: 16 patients were receiving psychotherapeutic treatment in out-patient settings, 21 patients were receiving inpatient treatment and 17 patients were receiving a combination of in- and out-patient treatment.

Completers

A random sample ($N = 54$) was selected from 86 patients who had completed treatment according to plan (one patient was excluded due to missing data). Average length of treatment was 9.3 months ($SD = 5.4$): 27 patients had completed treatment in out-patient settings and 27 had received a combination of in- and out-patient treatment.

Drop-outs

All documented cases of drop-out prior to follow-ups at either 6 or 12 months were selected ($N = 54$). Drop-out was defined as termination of treatment by the patient prior to completion of the treatment plan. A total of 56 patients were initially classified accordingly as drop-outs; two were excluded due to missing data. Treatment lasted on average for 5.5 months ($SD = 3.2$): 45 patients had received out-patient treatment, and nine had received a combination of in- and out-patient treatment.

Measures

The rating of anorexia and bulimia (RAB) was used to assess eating disorder and related psychopathology (Clinton & Norring, 1999). The RAB is a semi-structured interview comprising 56 items covering a wide range of eating disorder and related psychopathology, as well as background variables, and has shown good internal consistency, as well as inter-rater and test-retest reliability (Clinton & Norring, 1999; Nevenon, Broberg, Clinton, & Norring, 2003). Diagnoses were based on RAB data together with expert ratings of specific DSM-IV criteria.

The eating disorders inventory, version 2 (EDI-2) was used to measure self-reported eating disorder symptoms (Garner, 1991; Garner, Olmsted, & Polivy, 1983). This questionnaire is widely used in the study of eating disorders, and generates measures of central symptoms and the psychological correlates of eating disorders.

The symptom checklist (SCL) was used to measure self-reported psychiatric symptoms. A shortened, 63-item version of the SCL-90 (Derogatis, Lipman, & Covi, 1973) was utilized by removing the subscales for phobic anxiety, paranoid ideation, psychoticism and additional scales.

The SASB (Intrex version, third surface, self-image) was used to assess self-image (Benjamin, 1974, 2000). The questionnaire comprises 36 self-referential statements, some framed positively and others negatively. Responses are given on a scale from 0 to 100 with 10-point increments. Responses of 40 or above represent confirmation of the statement, whereas responses below 40 designate non-confirmation. The questionnaire forms eight clusters of self-image: (1) self-emancipation, (2) self-affirmation, (3) active self-love, (4) self-protection, (5) self-control, (6) self-blame, (7) self-hate and (8) self-neglect. Cluster scores are obtained by dividing the sum of the items comprising the cluster by the number of items in the cluster. Recent empirical studies support the reliability of the SASB self-image questionnaire with a total $\alpha = .74$ (Lorr & Strack, 1999; Benjamin, 2000).

Procedure

Data were collected at intake by staff at participating treatment units. For the most part, these were either qualified psychiatrists or clinical psychologists with experience in the assessment and treatment of eating disorders, although other professionals, such as experienced nurses and social workers, also took part. Administration of measures took place at initial diagnostic assessment prior to treatment or within two (in-patient) to four (out-patient) weeks of commencing of treatment at the latest.

Results

In order to test whether sample sizes were sufficient for comparative purposes, a power analysis was calculated with an alpha level of .05. The lowest power value was .81, which suggests that the samples were of sufficient size.

Between-group comparisons

The distribution of eating disorder diagnoses across groups along with the number of patients fulfilling specific diagnostic criteria for bulimia nervosa and anorexia nervosa are presented in Table 1. Using Chi-squared tests, there were no significant deviations from expected frequency distributions on these variables. Between-group comparisons on continuous variables were made using one-way ANOVA and conducting *post hoc* Scheffé tests of pairwise differences when overall F was significant (i.e. $p < .05$). Effect sizes for pairwise comparisons were evaluated using Cohen's d (Cohen, 1988). When drop-outs, completers and remainers were compared on DSM-IV diagnoses, age, age of onset, BMI, compensatory behaviours (i.e. bingeing, purging and use of laxatives), anorexic weight (i.e. BMI < 18) and amenorrhoea, no significant differences emerged. However, significant between-group differences were found on SASB self-emancipation, self-affirmation and self-blame. Drop-outs reported more self-emancipation ($d = .53$) and self-affirmation ($d = .56$), as well as less self-blame ($d = -.67$) compared with remainers, while they expressed less self-blame ($d = -.66$) compared with completers. Drop-outs reported significantly lower levels of the psychological correlates of eating disorders on the EDI-2 ($d = -.57$), as well as lower levels of psychiatric symptoms on the SCL ($d = -.64$) compared with remainers. No significant differences were found between completers and remainers. Detailed results are presented in Tables 1 and 2.

Table 1. Frequencies of eating disorder diagnoses, and numbers of patients fulfilling specific diagnostic criteria relating to BN (binge eating, compensatory behaviour) and AN (anorexic weight, amenorrhoea) across groups with results of Chi-squared tests

Variables	Drop-outs (N = 54)	Completers (N = 54)	Remainers (N = 54)	χ^2
DSM-IV diagnoses				
Anorexia nervosa	9	10	13	ns
Bulimia nervosa	18	18	19	ns
EDNOS	24	22	17	ns
Binge eating disorder	3	4	5	ns
Specific DSM-IV criteria				
Binge eating	24	28	25	ns
Compensatory behaviour	23	27	26	ns
Anorexic weight	15	12	19	ns
Amenorrhoea	14	16	14	ns

Prediction of drop-out

Stepwise multiple discriminant analysis was used to predict group membership. Since the primary focus of the study was to investigate the relationship between self-image and drop-out, all SASB clusters were used as potential predictors. Together with age and BMI, this resulted in a total of 10 independent variables, in a three-group stepwise discriminant analysis. The stepwise method was used in order to evaluate the distinct discriminatory effect of each SASB cluster. Prior to computation of discriminant analysis, all independent variables were tested for normality and outliers were examined on both univariate and multivariate levels. A recommended cut-off score of ± 2.5 for standardized residuals was used (Hair *et al.*, 1998). SASB clusters displayed normal distributions and no outliers were found. Overall, the resultant discriminant function

Table 2. Means and standard deviations on age, age at onset, BMI, SASB, EDI-2 and SCL-63 with ANOVA, significance of *F* and *post hoc* Scheffé tests

	Drop-outs (<i>N</i> = 54)	Completers (<i>N</i> = 54)	Remainers (<i>N</i> = 54)		
Variables	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>F</i>	<i>p</i>
Age (years)	23.4 (5.7)	25.5 (6.9)	24.8 (6.5)	1.0	ns
Age at onset (years)	16.7 (2.8)	17.8 (4.8)	17.3 (5.9)	0.9	ns
Body mass index (BMI)	20.4 (3.3)	22.1 (6.3)	20.5 (6.1)	1.5	ns
SASB					
Self-emancipation	33.9 (13.1)	28.8 (15.7)	26.9 (13.5)	3.4	b*
Self-affirmation	29.7 (20.3)	24.6 (22.1)	19.6 (16.1)	3.5	b*
Active self-love	32.0 (16.5)	29.4 (19.7)	25.8 (15.3)	1.7	ns
Self-protection	42.7 (16.0)	38.8 (16.5)	41.4 (15.1)	0.8	ns
Self-control	51.2 (16.2)	55.8 (19.7)	56.6 (20.1)	1.3	ns
Self-blame	50.5 (21.1)	62.5 (21.2)	65.0 (22.0)	6.8	a*,b**
Self-hate	45.8 (20.3)	53.8 (23.0)	56.6 (20.1)	3.6	b*
Self-neglect	33.7 (16.5)	39.7 (19.5)	37.1 (16.2)	1.6	ns
EDI psychological subscales	51.8 (22.8)	62.2 (26.2)	67.1 (30.5)	4.4	b*
EDI eating disorder subscales	35.2 (14.8)	38.8 (15.2)	39.1 (14.6)	1.1	ns
SCL symptom index	1.4 (.63)	1.6 (.64)	1.7 (.62)	3.9	b*

MANCOVA was also carried out, using age and BMI as covariates, with similar results being found. a, drop-outs vs. completers; b, drop-outs vs. remainers; c, completers vs. remainers.

* $p < .05$; ** $p < .01$.

classified 44% of the sample correctly. Drop-outs were classified best (36 of 54, or 67%). The equation classified 54% of remainers correctly (29 of 54), but only 9% of completers (5 of 54).

SASB self-blame was the only significant variable that discriminated between the three groups (Wilk's $\lambda = .92$, $\chi^2 = 13.2$, $p = .001$). The validity of these results was further tested using a split-sample procedure with two independent discriminant analyses. Self-blame was the only significant discriminating variable in both the first subsample (Wilk's $\lambda = .89$, $\chi^2 = 10.8$, $p = .005$) and second subsample (Wilk's $\lambda = .69$, $\chi^2 = 24.2$, $p < .001$; Figure 1).

Discussion

The present study aimed to examine whether SASB self-image could help to explain treatment drop-out in a heterogeneous sample of eating disorder patients. Our most important finding was a significant relationship between SASB and drop-out, but not in the expected direction. Compared with patients who remained in treatment, patients who dropped out had presented with a considerably more positive self-image at intake (i.e. significantly lower levels of self-blame and self-hate, and significantly higher levels of self-emancipation and self-affirmation). They also presented with lower levels of the psychological correlates of eating disorders on the EDI-2, along with fewer psychiatric symptoms on the SCL compared with patients who remained in treatment. Patients who dropped out also reported significantly less self-blame compared with patients who completed treatment.

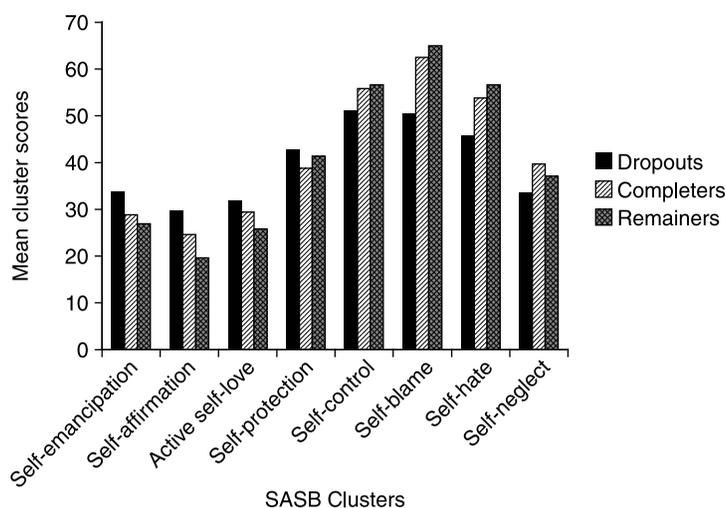


Figure 1. SASB self-image profiles among drop-outs, completers and remainers at initial presentation.

Strengths of the present study include the use of a large heterogeneous sample of eating disorder patients and the use of a three-group design that allowed drop-outs to be contrasted with both the patients who remained in treatment and those who completed treatment. Nevertheless, there are also limitations to the study. The total drop-out rate of 12% may be an underestimation, since the CO-RED project did not systematically assess drop-out after 12-month follow-up. Neither was it possible to ascertain exactly how many sessions each patient had completed, even though data on time of treatment suggests that results concern patients who prematurely terminate treatment relatively late, nor to analyse results in relation to the type of treatment, which could be an important mediating variable. Although the drop-out group was classified with 67% accuracy using discriminant analysis, the overall rate was only 44%, which is low. Finally, although systematic analysis of drop-out in relation to diagnostic groups was not possible due to small group sizes, analyses of DSM-IV diagnoses and diagnostic symptoms using chi-squared techniques suggested no significant between-group differences on these variables.

The present results may seem surprising compared with those of others who have found that eating disorder patients who drop-out tend to have more severe symptoms at presentation (Baran *et al.*, 1995; Fassino *et al.*, 2003; Surgenon *et al.*, 2004; Vandereycken & Pierloot, 1983; Waller, 1997; Woodside *et al.*, 2004). There are, however, studies suggesting that drop-out may be unrelated, or even inversely related, to symptom severity (Kahn & Pike, 2001; Palmer, 2000), social functioning (Mitchell *et al.*, 2002) and factors associated with poor prognosis (Di Pietro *et al.*, 2002). This leads to the most important implication of our findings, namely that drop-out in eating disorders must be studied more systematically. Discrepancies between studies may be largely due to research design (e.g. naturalistic vs. experimental, single centre vs. multi-centre), research aims, the particular treatment programmes that have been studied or relevant to specific diagnostic groups, all of which make generalization problematic. In order to better understand drop-out, it will be important to pay closer consideration to how it is defined, as well as who these patients are compared with.

When SASB was used to discriminate between patients who had been divided into drop-outs, completers and remainers, it provided important information for predicting drop-out. However, it was less successful in predicting who remained in treatment, and largely immaterial in predicting who actually completed treatment. Self-blame was most important for discriminating drop-outs from completers and remainers. We distinguish three basic interpretations of these findings.

The first interpretation concerns how treatment practitioners and researchers tend to view the nature of drop-out. It must be borne in mind that all groups in the present study presented with negative self-image, although patients who later dropped out had initially presented with significantly less negative self-image compared with those who remained in or completed treatment. They also reported fewer psychological problems and fewer psychiatric symptoms. Between-group differences, therefore, tended to be of degree rather than kind. Drop-out might not, therefore, be as pathological as therapists may assume. Given the lesser degree of psychopathology among drop-outs, and how drop-out tended to take place relatively late in treatment, it could reflect a healthy decision to end treatment at a stage when patients felt they had received sufficient help and could continue to manage on their own. As Mahon (2000) has pointed out, a patient who is registered as a drop-out might consider him/herself a 'completer', although the therapist wanted to achieve more. Here, there may be important differences in the treatment goals of drop-outs and therapists.

The second interpretation of our results concerns interpersonal dynamics. It could be argued that less negative self-image, as found among drop-outs in our study, does not necessarily indicate a lesser degree of interpersonal problems. The pattern of self-image found among drop-outs could be indicative of interpersonal difficulties centring on a tendency to avoid relationships that demand change. This could be especially relevant later in the treatment process, when symptoms of eating disorder have improved and focus often shifts to examining underlying interpersonal relationships and problems. At this point, emotionally laden issues about opening up and trusting the therapist may tend to come to the fore, as there is a shift away from focus on eating behaviour. Patients with an avoidant interpersonal style may find this anxiety-provoking, leading to a flight reaction. Empirically, there is support for such an interpretation. Patients with avoidant attachment patterns have been found to be less sensitive to positive therapeutic interactions and more likely to disengage from a help provider (Chen & Mallinckrodt, 2002). Similarly, anorexics (bulimic subtype) with high avoidant attachment are more likely to drop-out than patients reporting high anxious attachment (Tasca *et al.*, 2004).

Our third line of interpretation, which may be the most viable, combines the aforementioned lines of reasoning. Patients who later drop out may have more limited treatment goals. Together with less self-blame, it may have been easier for these patients to disengage from treatment when they experience symptom improvement. At the same time, they may be choosing to disengage when symptom improvement creates space for closer examination of interpersonal issues. When questions of opening up and trusting the therapist come to the fore, separation anxiety may be awoken. Instead of choosing to engage in this new phase of therapy, such patients may decide to terminate in order to maintain their psychological equilibrium.

Our work underscores the potential of using interpersonal theory and SASB for a better understanding of drop-out in eating disorders. SASB could be used to help identify eating disorder patients with interpersonal profiles who are at risk for drop-out. By identifying such patients and alerting therapists to important interpersonal dynamics, such as issues of trust and separation anxiety, it may be possible to improve

interpersonal functioning. Future research could focus more directly on what happens with patients who drop-out by collecting outcome data on patients who complete treatment and those who terminate prematurely. This is currently the focus of ongoing research within our project.

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