



A PILOT STUDY OF A RANDOMISED TRIAL OF COGNITIVE ANALYTICAL THERAPY VS EDUCATIONAL BEHAVIORAL THERAPY FOR ADULT ANOREXIA NERVOSA

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Summary—The aim of this study was to compare two forms of outpatient treatment, educational behavioural treatment and cognitive analytical therapy for adult anorexia nervosa. Thirty patients were randomly allocated to the two treatments. At one year, the group had gained 6.8 kg, 19/30 (63%) had a good or intermediate recovery in terms of nutritional outcome. The group given cognitive analytical treatment reported significantly greater subjective improvement but there were no differences in other outcome parameters. In conclusion outpatient treatment of adult onset anorexia nervosa leads to an improvement in two thirds of cases. Larger studies will be needed to determine the most effective form of treatment in this group.

INTRODUCTION

Great advances have been made in the treatment of bulimia nervosa (Freeman, Barry, Dunkeld-Turnbull & Henderson, 1988; Fairburn, Jones, Peveler, Carr, Solomon, O'Connor, Burton & Hope, 1991). In contrast the development and evaluation of psychological treatments for anorexia nervosa is still in its infancy (Fairburn, 1990).

The traditional form of treatment for anorexia nervosa has involved skilled nursing in specialised inpatient units (Russell, 1970; Garfinkel, 1986). Unfortunately the relapse rate after discharge is high; up to a third fail to show any improvement at follow-up (Garfinkel & Garner, 1982). Relapse can be minimised by specific psychotherapeutic interventions after discharge (Russell, Szmulker, Dare & Eisler, 1987; Dare, 1990). In 1983 Morgan and colleagues provocatively questioned the place of inpatient treatment: "whilst admission to hospital might make the situation safe for a while, especially when weight is very low or there is a suicidal risk, it can also involve considerable disruption in the patients management: it may represent counterproductive retreat from confrontation with certain life difficulties and signify confirmation of the sick role in the eyes of relatives who then dissociate themselves from active participation in therapy. It is not always a major therapeutic step forward to admit a patient to a hospital ward, and our findings suggest that criteria for hospital admission in anorexia nervosa should always be scrutinized carefully."

The study of Crisp, Norton, Gowers, Halek, Bowyer, Yeldham, Levett & Bhat (1991) was designed to test Morgan's challenging statement. It compared inpatient and outpatient treatments with a no-treatment option. The design of the study posed practical difficulties particularly with compliance and recruitment (Gowers, Norton, Yeldham, Bowyer, Levett, Heavey, Bhat & Crisp, 1989). In the short term, after one year, no differences were found between the treatments. In particular inpatient treatment did not appear to result in advantages.

Outpatient treatment has proved to be effective in several studies (Hall & Crisp, 1987; Channon, De Silva, Hemsley & Perkins, 1989; Le Grange, Eizler, Dare & Russell, 1992). Most of these have involved young patients with a short duration of illness, the group with the best prognosis. It is uncertain whether outpatient treatment can be as effective in older, more chronic patients. These

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two prognostic groupings respond differently to treatment. Family therapy was more effective at preventing relapse in the younger, good prognosis group whereas for older patients individual therapy was better (Russell *et al.*, 1987).

The aim of the present study was to compare two forms of individual outpatient therapy in this older, poor prognosis group. We compared two treatments which could be given by all members of the multidisciplinary team after training and both of which had a manual which described the process of treatment: (1) educational behavioural therapy, (2) cognitive analytical therapy (CAT) a brief form of psychotherapy devised by Ryle (1990); Beard, Marlow & Ryle (1990). A no-treatment group was not thought to be feasible in view of the serious medical consequences of weight loss. Our hypothesis was that cognitive analytical therapy would be superior to educational therapy as in addition to active participation in treatment it emphasized the links between current behaviour and earlier difficulties.

METHODS

Design

After assessment patients were randomised using random numbers to the two treatment groups, (1) educational behavioural therapy and (2) cognitive analytical therapy. The therapists were nurses (who treated the majority of cases), social worker, psychologist and junior doctor. Each therapist gave both forms of treatment. All of the therapists had worked with patients with eating disorders for several years.

Subjects

The Ss were a consecutive series of outpatients from the Eating Disorder Clinic at the Maudsley Clinic who were referred for treatment during the eighteen month recruitment phase of the trial. All patients met ICD-10 diagnosis for anorexia nervosa and were over 18 years in age. Patients with a mixed diagnosis of anorexia nervosa and bulimia nervosa were included (see Table 1 for details of how many binged or used the various weight control measures). Patients were excluded if the psychiatrist giving the assessment interview judged that inpatient treatment was necessary because of extreme, rapid weight loss with additional symptoms and signs of severe emaciation such as proximal myopathy, marrow suppression or hypoglycaemia. Thirty eight patients were assessed and thirty two fulfilled these entry criteria. Of these one lost further weight after the assessment interview and was admitted before therapy began. One eligible patient refused the offer of treatment.

Table 1. Clinical features at presentation

	EBT Mean (SD) (range) n = 16	CAT Mean (SD) (range) n = 14
Age (years)	25.3 (7) (18–39)	24.7 (5) (18–35)
Age onset (years)	20.8 (5) (12–34)	20.4 (5) (17–30)
Weight (kg)	42.2 (4) (34–50)	42.9 (5) (34–51)
BMI (kg/h ²)	15.0 (1.0) (12.5–17.3)	15.6 (2.1) (13–17.5)
Percentage weight loss	28.9 (8) (20–24)	25.5 (7) (18–42)
Duration amenorrhoea (months)	50.1 (60) (6–224)	63.1 (77) (6–264)
Height (metres)	1.67 (0.80) (1.55–1.3)	1.66 (0.09) (1.5–1.85)
Premorbid weight (kg)	60.3 (10) (44–80)	56.5 (8) (46–77)
Bulimic episodes	4/16	5/14
Vomiting	7/16	7/14
Laxatives	4/16	5/14
Previous hospitalisation	6/16	3/14

Measures

Clinical ratings were made using the Morgan and Russell (1975) scales, which comprise five subscales measuring nutritional, menstrual, mental state, psychosexual and social functioning. In addition general outcome was based on measures of body weight and menstrual function. Three categories were defined: (1) Good outcome: body weight maintained within 15% of the average body weight (ABW) according to actuarial tables and menstrual cycles regular. (2) Intermediate outcome: body weight has risen to within 15% of ABW with persistent amenorrhoea. (3) Poor outcome: less than 15% below the ABW. Patients who had made a good recovery from anorexia nervosa in terms of weight and menstruation but who had developed bulimia nervosa were categorised as having a good outcome.

Procedure

After randomisation the *Ss* were assigned to a therapist. Each treatment comprised of 20 weekly, 50 min sessions. Two hourly supervision was available for each treatment fortnightly. Common to both of these types of treatment was structure (each had a detailed therapist's manual); symptoms were monitored and patients played an active part in treatment completing homework assignments etc.

(1) *Educational Behavioral Treatment*. *Ss* were encouraged to monitor their daily intake using a diary. Goals to increase the amount and range of food eaten were set each week. Weight and shape issues were discussed and goal to gradually increase weight were set. Information and education about nutrition, metabolism, anorexia nervosa and bulimia nervosa were given.

(2) *Cognitive Analytical Therapy*. The manual of Ryle (1990) was followed. The therapist and patient collaborate to produce a written reformulation of the patients' history and problems. Patients also receive a sequential diagrammatic reformulation which interprets their behaviour visually and displays maladaptive patterns of thinking, feeling and acting (known as procedural sequences). Target problems are monitored each week.

Cognitive analytical therapy differs from the education therapy in that it integrates psychodynamic factors with behavioural ones and focuses on interpersonal and transference issues.

The patients were weighed weekly in both treatment groups. If the therapist was concerned about the medical status of a patient a clinical assessment was arranged. The patients understood that if their condition deteriorated inpatient treatment would be arranged.

Assessments

Follow-up assessments occurred at the end of treatment and at 3 monthly intervals up to a year. These were conducted by a psychiatrist who had not been involved in the treatment programmes. Two patients failed to come for the follow-up appointment. Clinical information from these two was obtained by a telephone interview with the patient and the general practitioner. A semistructured interview based upon the Morgan and Russell scales was used.

RESULTS

Thirty patients including one male were entered into the study. Sixteen patients were randomised to educational behavioural therapy (EBT) and 14 to cognitive analytical therapy (CAT). The randomisation was successful in that the groups were well matched before treatment (shown in Table 1).

Compliance

A total of 10 cases from each group completed the course of 20 sessions. Those who dropped out of treatment had a minimum of 3 sessions; there were no differences in the pattern of drop-outs between groups. No patient required inpatient treatment during the study. All of the patients who remained in the poor outcome category at the end of treatment were offered inpatient treatment but all of them refused this option.

Table 2. One year outcome data (Weight and Morgan & Russell Scores (whole sample and those who completed treatment))

	Whole Group		Compliers (> 15 sessions)	
	EBT Mean (SD) (range) n = 16	CAT Mean (SD) (range) n = 14	EBT Mean (SD) (range) n = 10	CAT Mean (SD) (range) n = 10
BMI (kg/m ²) at 1 year	17.4 (3.0) (12.3–20.7)	18.5 (2.1) (14.1–21.8)	17.2 (3.2) (12.3–20)	18.2 (2.1) (14–21)
Weight at 1 year (kg)	47 (7) (33–58)	50 (6) (34–59)	45 (7) (33–58)	50 (6) (39–59)
Mean weight gain (kg)	6.7 (5.2) (–1–14)	6.9 (4.3) (–8–16)	5.6 (4.5) (–1–11)	6.9 (4.6) (–8–16)
Self rated improvement	1.7 (0.9) (0–3)	2.4 (0.5)* (2–3)	1.5 (0.7) (0–2)	2.4 (0.5)* (2–3)
Nutrition	6.2 (4.0) (0–12)	7.1 (2.8) (3–12)	4.9 (4) (0–10)	7.4 (2.4) (4.7–11)
Psychosexual adjustment	7.9 (2.9) (1.6–1.2)	8.4 (2.4) (2.4–12)	8.2 (2.6) (1.6–12)	8.6 (2.3) (4–12)
Socio-economic adjustment	7.8 (2.7) (1.6–11.2)	8.4 (2.4) (4.8–12)	8.2 (2.6) (3.2–11.2)	8.6 (2.3) (4–12)
Menstrual pattern	4.5 (5.6) (0–12)	6.6 (5.6) (0–12)	3.6 (5.1) (0–12)	5.6 (1.9) (0–12)
Mental state	6.2 (2.9) (0–12)	7.1 (3.2) (0–12)	6.0 (2.8) (0–8)	7.6 (2.3) (4–12)
Average score	6.4 (2.8) (1.8–11.7)	7.3 (2.7) (3.3–11)	6.2 (2.4) (3.2–9.4)	7.6 (2.5) (4–12)
Bulimia nervosa	3 (19%)	2 (14%)	1 (10%)	2 (20%)
Good outcome	5 (31%)	6 (42%)	2 (20%)	4 (40%)
Intermediate outcome	3 (19%)	5 (36%)	20 (20%)	1 (10%)
Poor outcome	8 (50%)	3 (22%)	6 (60%)	5 (50%)

Clinical features at one year follow up

The clinical features at one year are shown for the total group and for the subgroup who complied with the full course of treatment.

The only difference in outcome between the two groups was in terms of a self progress scale, the patient's subjective reported improvement. The CAT group rated themselves as improved significantly more than the EBT group (Mann-Whitney-U test $U = 41$, $W = 119$, 2 tail $P = 0.045$ $z = -2.2$). There was a trend for fewer of the patients in the CAT group to remain in the poor outcome category but this did not reach significance.

Prognostic factors

The group with a good outcome ($n = 11$) were compared with those with a poorer outcome. Those with a good outcome had a shorter duration of amenorrhoea [Good Outcome duration $x = 30$ (34) vs Poor and Intermediate $x = 72.6$ (78) months, $t = 2.02$, $P = 0.05$]. Also the good outcome group had less severe weight loss [Good Outcome percentage weight loss $x = 22.4$ (5) vs Poor and Intermediate Outcome $x = 29.7$ (7.7), $t = 3.02$, $P = 0.006$]. Logistic regression was used to investigate which factors contributed to good outcome. Age, body mass index, percentage weight loss and duration of amenorrhoea were entered. Only percentage weight loss contributed significantly to the good outcome category ($R^2 = -0.22$ sig = 0.05).

DISCUSSION

This study suggests that outpatient treatment in older patients with a longer history of anorexia nervosa can lead to a substantial improvement in symptoms after one year. Within this clinical group the severity of weight loss (as expressed as a percentage loss of pre-morbid weight) was the only predictor of outcome. The greater the loss of weight the poorer the response to treatment. We were unable to find many significant differences between the two forms of treatment although self reported improvement was greater with cognitive analytical therapy.

There are methodological shortcomings to this study which need to be considered before evaluating the findings further. The size of the study was small and so the power to distinguish between two forms of treatment was limited. As this was a pilot study of a new approach the therapists were relatively inexperienced.

It is encouraging to find that the outcome in this patient group was similar to that found in previous outpatient studies (Hall & Crisp, 1987; Channon *et al.*, 1989; Crisp *et al.*, 1991) as

this group were older, with a later age of onset and longer duration of illness, all factors which are known to be associated with a poor prognosis (Morgan & Russell, 1975; Steinhausen, Rauss-Mason & Seidel, 1991). Moreover outcome at one year resembles that following a period of inpatient treatment (Russell *et al.*, 1987). However such a comparison may be unfair given that we have found that severity of weight loss is an important predictor and critically ill patients are excluded from outpatient studies. Five year follow-up data on larger studies need to be available before we can confidently predict which is the best form of treatment for anorexia nervosa.

Ambivalence about treatment is a hall mark of anorexia nervosa. Only two thirds of the present sample completed the full course of treatment, a similar proportion to that found in other studies (Crisp *et al.*, 1991; Russell *et al.*, 1987) and in bulimia nervosa (Fairburn *et al.*, 1991). The outcome did not differ between the cohort who complied with treatment and those who did not. This raises the possibility that shorter courses of treatment are appropriate for some cases. Crisp *et al.* (1991) found that compliance was least for inpatient treatment, but on average only 6 of the 20 outpatient sessions offered was attended. We also found that many patients are reluctant to accept inpatient treatment despite a failure of outpatient treatment to produce any symptomatic benefit. The Royal College of Psychiatrists working party on eating disorders (Royal College of Psychiatrists, 1992) recommended a stepped care approach to the management of anorexia nervosa. The findings of this study suggest that an initial step of outpatient treatment is appropriate even for the older group with a longer history. Treatment should be tailored to the presenting clinical features; a family approach is suitable for younger cases. There is less certainty about the intensity of treatment needed. A proportion of patients respond to a brief outpatient intervention of a non specific nature. Whereas other cases particularly those with severe weight loss require more specialised treatment of longer duration. The clinical need for inpatient treatment to avert death or serious complications is indisputable but the stage and the form of inpatient treatment required remains untested.

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