Behaviour Research and Therapy 49 (2011) 25–31

Contents lists available at ScienceDirect

Behaviour Research and Therapy

journal homepage: www.elsevier.com/locate/brat

Guided self-help for disordered eating: A randomised control trial

Gemma D. Traviss [a,*], Suzanne Heywood-Everett [b], Andrew J. Hill [a]

[a] Leeds Institute of Health Sciences, Academic Unit of Psychiatry & Behavioural Sciences, Charles Thackrah Building, Clarendon Road, University of Leeds, Leeds LS2 9LJ, UK
[b] Yorkshire Centre for Eating Disorders, Newsam Centre, Seacroft Hospital, Leeds, UK

ARTICLE INFO

Article history:
Received 22 March 2010
Received in revised form
6 October 2010
Accepted 27 October 2010

Keywords:
Guided self-help
Eating disorders
Transdiagnostic approach
Binge eating
EDNOS
Randomised control trial

ABSTRACT

Treatment guidelines recommend evidence-based guided self-help (GSH) as the first stage of treatment for bulimia nervosa and binge eating disorder. The current randomised control trial evaluated a cognitive behavioural therapy-based GSH pack, 'Working to Overcome Eating Difficulties,' delivered by trained mental health professionals in 6 sessions over 3 months. It was congruent with the transdiagnostic approach and so was intended as suitable for all disordered eating, except severe anorexia nervosa. Eighty one clients were randomly allocated to either a GSH or waiting list condition. Eating disorder psychopathology (EDE-Q), key behavioural features and global distress (CORE) were measured at pre- and post-intervention, and 3- and 6-month follow-up. Results showed significant improvements in eating disorder psychopathology, laxative abuse, exercise behaviours, and global distress, with the GSH condition being superior to the waiting list on all outcomes. Treatment gains were maintained at 3 and 6 months. This study adds to the evidence supporting GSH for disordered eating, including EDNOS. However, further work is needed to establish the factors that contribute to observed therapeutic improvements and determine for whom GSH is most suitable.

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Introduction

Treatment guidelines place cognitive behavioural therapy (CBT) at the heart of the management of bulimia nervosa and some forms of EDNOS (APA, 2006; NICE, 2004). However, CBT is lengthy, costly, and in relative short supply. In addition, the approach may be unnecessarily intense for some clients with mild to moderate symptoms of disordered eating. Accordingly, following an evidence-based self-help programme is the first step in the treatment of bulimia nervosa recommended by the UK National Institute for Clinical Excellence (NICE, 2004).

Self-help has demonstrated comparable results to CBT delivered individually and in a group format (Bailer et al., 2004; Durand & King, 2003; Thiels, Schmidt, Treasure, Garth, & Troop, 1998; Treasure et al., 1999). Self-help can be used alone (pure self-help, PSH) or with guidance from a mental health professional or layperson (guided self-help, GSH). Looking at relative effectiveness, Carter and Fairburn (1998) compared pure and guided self-help for BED, delivered by non-specialists, to waiting list controls. Remission rates for the groups were 43%, 50% and 8% respectively, with clients in the PSH group more likely to seek additional treatment. Guidance provided by non-specialists for bulimia nervosa was also effective in reducing and maintaining improvements in bingeing, vomiting and eating pathology compared to delayed treatment controls (Banasiak, Paxton, & Hay, 2005). Smaller effect sizes and higher attrition rates were found in a comparable study in Sweden, but conducted without a control group (Ghaderi & Scott, 2003).

Studies have compared pure and GSH for bulimia nervosa and binge eating delivered in specialist clinics. Direct comparisons showed both were effective in reducing binge eating and related psychopathology, however GSH achieved higher remission rates and was superior in reducing binge frequency, restraint and interpersonal sensitivity (Loeb, Wilson, Gilbert, & Labouvie, 2000). Palmer, Birchall, McGrain, and Sullivan (2002) investigated two methods of delivering guidance, compared with PSH and waiting list groups. Face-to-face guidance conferred greater treatment benefits to that delivered by telephone, with little support for PSH which failed to differ from waiting list controls (Palmer et al., 2002). Interventions lasted between 12 and 17 weeks, and the amount and standard of guidance varied, along with completion rates (58–78%).

Overall, evidence shows GSH to have a range of benefits compared with PSH, although compared solely on primary outcomes such as binge episodes there is less difference in effectiveness (Perkins, Murphy, Schmidt, & Williams, 2006). In addition, while intervention effects are modest in size, the evidence may be limited by the differences in guidance and the frequent absence of

* Corresponding author. Tel.: +44 0113 3430825.
E-mail address: g.traviss@leeds.ac.uk (G.D. Traviss).

0005-7967/$ – see front matter © 2010 Elsevier Ltd. All rights reserved.
doi:10.1016/j.brat.2010.10.007

true control groups. Furthermore, the extent to which such interventions may be useful for mixed patterns of disordered eating, such as EDNOS, is largely unknown.

The present study investigated the effectiveness of a new GSH intervention, 'Working to Overcome Eating Difficulties'. The intervention comprised three main elements that characterise its novelty and distinguish it from previous GSH resources. First, it was a CBT-based written manual congruent with a transdiagnostic perspective, in which all eating disorders share a common core psychopathology and network of inter-related maintaining mechanisms (Fairburn, Cooper, & Shafran, 2003; Fairburn & Harrison, 2003). Accordingly, the manual included all common features of eating disorders, not just bulimic disorders, along with sub-sections specifically focussed around the four additional maintaining mechanisms outlined by Fairburn – perfectionism, low self-esteem, mood intolerance and interpersonal difficulties (Fairburn et al., 2003). For example, it included mindful breathing and eating exercises aimed at encouraging awareness and acceptance of bodily sensations and adverse mood states, which enable individuals to make adaptive choices about responding, rather than reacting to aversive experiences. Mindfulness has shown to be effective in reducing binge eating and managing emotional distress in both bulimia nervosa and BED (Baer, Fischer, & Huss, 2005; Leahey, Crowther, & Irwin, 2008; Proulx, 2008). Also in line with the transdiagnostic approach, there was little focus on specific eating disorder diagnosis. Rather, the treatment content and goals were dictated by individuals' particular psychopathological features and maintaining factors, formulated in the early sessions and revisited throughout. With this in mind, the current manual was designed to be applicable to a range of disordered eating (including EDNOS).

Second, the intervention was guided by a number of non-eating disorder specialist mental health professionals in primary and secondary care settings. Much of the existing evidence on effectiveness of GSH has been conducted either in eating disorder specialist settings or delivered by specialists. And most have only assessed the effectiveness of delivery by a small number of therapists, which tells us little about its potential to be utilised across a range of services, by a range of professionals. Third, pre-intervention mandatory training and intervention-concurrent support was provided for those acting as guides. In some existing GSH programs, guidance was provided by trained therapists such as clinical psychologists, but few describe any GSH-specific training or supervision (Grilo & Masheb, 2005; Loeb et al., 2000; Palmer et al., 2002). Those that do, appear to have relied on instructions provided in a therapist's manual (Carter & Fairburn, 1998), with the exception of Ghaderi and Scott (2003) who describe reviewing and discussing the manual with the students who were to provide guidance. The latter two features are concerned with utility outside of specialist settings. The intervention therefore represented a low intensity approach, directed at all disordered eating, that was delivered by a range of non-specialists who were trained and supported in its delivery.

The study aim was to evaluate the intervention in a randomised controlled trial (RCT) with 6-month follow-up. Accordingly, it was hypothesised that the GSH intervention would lead to maintained reductions in eating disorder psychopathology, key behavioural symptoms, and global distress in clients with a range of disordered eating problems, including EDNOS.

Method

Design

The study was a randomised controlled trial, comparing clients with disordered eating receiving GSH delivered by trained mental health professionals, to those on a waiting list. Both conditions were 12 weeks in duration with follow-up assessments made at 3 and 6 months.

Participants and randomisation

Participants were 81 clients identified with primary and significant patterns of disordered eating, referred to trained guides working in primary and secondary care services in the north of England, between October 2006 and June 2008. Services included Primary Care Mental Health Teams operating primarily within health centres, Child and Adolescent Mental Health Services, Departments of Clinical Psychology located within general hospitals and Inpatient Mental Health Special Care Wards.

Participant inclusion criteria were a primary problem with disordered eating, aged 16 years or above at the time of assessment, and literate in the English language. EDE-Q (v 5.2 see below) was used to ascertain diagnosis in line with DSM criteria. EDNOS was defined when any one of the diagnostic criteria was missing. Clients who failed to meet EDNOS but nevertheless reported disordered eating symptoms that interfered with their everyday lives were included in the current study given the potential of GSH as an effective early intervention for mild and mixed patterns of disordered eating. For this reason, the study did not apply a rule regarding the minimum number of symptoms required for inclusion. The primacy of disordered eating was largely determined by the client, their presentation to the guide and their desire to seek help for their disordered eating, followed by discussion with their guide who had received training in how to recognise eating disorder features.

Clients were excluded if the primary problem was not deemed to be disordered eating, BMI was below 16 kg/m^2 or the client was rapidly losing weight, at high risk of self-harm or suicide, currently abusing drugs or alcohol, experiencing severe depression, or had a major co-morbid physical disorder. Clients were assessed for suitability by their guide following their service's usual assessment procedures which entailed an initial meeting to discuss the nature of the clients problems and treatment options, and for the purposes of this study a clinical assessment sheet, developed by the study team, was completed by the guide following in-depth discussion with the client. This covered the above exclusion criteria i.e. current and past co-morbid conditions and suicidal ideation/intent. Those suitable received a brief medical examination from their General Practitioner and provided informed consent before being allocated to a treatment condition. Ethical permission was obtained from Leeds East Research Ethics Committee and the trial was registered with the International Standard Randomised Controlled Trial Register (ISRCTN07665287).

A priori sample size calculation was carried out using Clinstat (Bland, 1996). The calculation was based on proportions from Palmer et al. (2002) where in a face-to-face GSH group 50% improved compared to 19% in a waiting list group. To obtain a similar outcome, 33 participants in each group were required to have an 80% power of detecting a difference at the 5% significance level. Given a drop-out rate of 25%, the intention was to recruit 41 in each group. Participants were randomly allocated to either the GSH or waiting list control condition by the first author (GT) using randomisation envelopes prepared by AJH, who was uninvolved in the recruitment process. Block randomisation for small samples was used to ensure equality of allocation to each treatment arm. Blocks of 20 were generated using computer software Clinstat (Bland, 1996).

Intervention

Guided self-help

Each client in the GSH condition received an introductory session at which they were given a copy of the Working to

Overcome Eating Difficulties GSH pack. This was an A4 printed manual, spirally bound, and comprised an introduction and six session chapters. The introduction had short sections which allowed the guide to discuss with clients the following issues: is this pack right for you; what is expected of you; the guides and their role; is this pack appropriate for you now. Material to be covered in the next 6 sessions was set out in the session chapters, which all included action points, information boxes, helpful hints boxes, troubleshooting tips, and thought boxes. The approach throughout was CBT-based. The session chapters were: 1) What are eating disorders? 2) Physical and psychological health, 3) Food, health and unwanted behaviours, 4) Negative thoughts: identifying and challenging, 5) Learning to feel good about you, and 6) Relapse prevention: preparing for the future. Clients were required to read and complete the action points in the relevant section prior to each appointment with their guide. During sessions, guides assumed a facilitative role, reviewing clients' work, clarifying and discussing any difficulties, and providing support where necessary. Including the introductory session, clients received seven, one hour sessions with their guide, spread over 12 weeks. The first four sessions were weekly, followed by two fortnightly, and the final session after a month. Further details about the pack can be obtained by contacting the first or second authors.

Guidance was provided by a trained mental health professional (guide). Training was open to NHS clinical staff working in mental health services in Yorkshire and Lancashire. No prior experience of working with disordered eating was necessary, but working in a service with eating disorder referrals was a requirement. Guides received two days group training designed and written by the second author (SHE), and delivered together with the other authors, a dietitian and a service user. Ongoing group supervision was offered throughout the recruitment period on a monthly basis by SHE. Guides were required to update GT of their progress and the dates of subsequent sessions, on a regular basis by telephone or email as a means of monitoring adherence to the protocol, however the actual content of sessions was not formally assessed. Of those trained, 36 went on to see clients in the trial. The majority of guides were female ($n = 34$) and ranged in professional background (mostly counsellors, psychologists, or cognitive behavioural therapists) and the amount of experience working with disordered eating clients.

Waiting list

Those allocated to the waiting list condition completed assessment questionnaires and were required to wait for 12 weeks (the period taken to deliver the intervention). After the waiting period, clients completed outcome questionnaires and were offered the GSH intervention and followed the same procedure detailed above (introductory appointment followed by 6 guidance sessions).

Measures

An assessment form was completed by the guide at the initial session to determine client suitability in terms of the inclusion/exclusion criteria and collect demographic information.

The following measures were administered pre- and post-intervention and at 3- and 6-month follow-up:

Eating disorder psychopathology and key behaviours

These were measured using the EDE-Q (v 5.2, Fairburn & Beglin, 2008). This is a 28 item self-report questionnaire that assesses the severity and frequency of symptoms over the past 28 days. Items were rated on a 7-point Likert scale (0–6), with higher scores reflecting a greater severity/frequency of symptoms. The EDE-Q comprised four subscales: restraint, eating concern, shape concern, and weight concern. An overall score was calculated by taking the mean of the four subscales. Key behavioural features included objective binge episodes (OBE), vomiting, laxative abuse and excessive exercise. All subscales have shown high internal consistency (Cronbach α coefficients > 0.70) and good test–retest reliability (Luce & Crowther, 1999; Peterson et al., 2007). Body mass index (BMI) was calculated using self-reported height and weight. However, when an exclusionary BMI was suspected, it was assessed by the guide (or General Practitioner at brief medical assessment if facilities did not permit) prior to treatment allocation.

Global distress

This was assessed by the CORE-10 (Connell & Barkham, 2007), a brief version of the Clinical Outcomes in Routine Evaluation-Outcome Measure (CORE-OM). Items cover four domains (subjective wellbeing, problems, functioning, risk), asking clients how often they experienced symptoms over the last week, and were rated on a 5-point scale ranging from 0 (not at all) to 4 (most of the time). The total mean score was calculated by dividing the total score by the number of completed items. Scoring was problem-based, with higher scores indicating more severe psychological distress. The scale has excellent internal validity and test-retest reliability ($\alpha = 0.75–0.95$), with good convergent validity. The measure has also demonstrated high discriminant validity (Evans et al., 2002).

Statistical analysis

Results were analysed and are reported on an intention to treat (ITT) basis using the last observation carried forward method (LOCF). This analysis included all clients who completed at least pre-treatment measures. Data were also analysed on a completer basis. To determine differences between GSH and waiting list groups at the end of the intervention period, 2 (group) $\times$ 2 (time) repeated measures analyses of variance (ANOVA) were conducted on EDE-Q and CORE scores. Planned comparisons were made using t-tests. Significance level was adjusted to 0.025 to account for the two comparisons made for each measure. One-way repeated measures ANOVAs were conducted to determine maintenance of treatment effects, comparing scores at the three time points (post-treatment, 3 and 6 months). For the GSH condition, pre–post-scores on the EDE-Q mean total were tested for clinical significance using the Jacobson–Truax method criterion C cut-off (the point which lies halfway between the means of the functional and dysfunctional populations for the measure) (Jacobson, Follette, & Revenstorf, 1984; Jacobson & Truax, 1991). This was calculated using normative data from papers by Fairburn and Beglin (1994) and Fairburn et al. (2007). The reliable change index (RCI) was also calculated which compares change pre–post-treatment to the standard error of the measurement. Clients were classified into one of four categories: 1) 'recovered' – passed cut-off C and RCI in the positive direction, 2) 'improved' – passed RCI in the positive direction but not cut-off C, 3) 'unchanged' – passed neither criterion and 4) 'deteriorated' – passed RCI in the negative direction. The proportion that fell below the cut-off prior to treatment was also calculated. Key behavioural features were analysed using non-parametric testing (Wilcoxon tests, Friedman's ANOVAs, and odds ratios (OR)). Only clients engaging in these behaviours at baseline were included in the analyses. All results were analysed using SPSSv15.

Results

Baseline demographics and study retention

Eighty one clients were identified as suitable for the trial and were randomly allocated to either the GSH or waiting list

conditions. Of these, data were available for 68 participants at baseline (GSH = 37 and WL = 31). These were included in the ITT analysis. All but two participants were female, with a mean age of 36.9 years (SD = 11.9) and BMI of 27.8 kg/m^2 (SD = 9.06). According to standard classification, 4 were underweight, 30 normal weight, 13 overweight and 21 obese (6 with a BMI over 40). The mean total EDE-Q score was 3.88 (SD = 1.28), compared to community norms of 1.55 (SD = 1.21) reported by Fairburn and Beglin (1994). Twenty-two participants met the DSM-IV-TR (APA, 2000) diagnostic criteria for bulimia nervosa, 14 for BED and 19 for EDNOS. Most cases of EDNOS either resembled anorexia nervosa but did not fall below the weight criteria (BMI < 17.5 kg/m^2) or reported the lack of menstrual cycles required for diagnosis, or had all features of bulimia nervosa but episodes were infrequent.

None of the participants met the full diagnostic criteria for anorexia nervosa and 13 did not meet the criteria for an eating disorder according to DSM, however they were deemed as experiencing primary and significant levels of disordered eating, according to trained guides. Examples of such clients included; those who had all key symptoms of anorexia or bulimia nervosa but, more than one was mild/moderate in nature. Such presentations are recognised in the International Classification of Diseases (ICD-10) (WHO, 1992) as atypical eating disorders. Those who scored extremely high on eating disorder psychopathology (eating, weight and/or shape concern) but had a BMI in the normal/overweight range, and either did not meet threshold for compensatory behaviours or failed to report objective binges. Or finally, individuals who engaged excessively in dieting or one or more compensatory behaviours but did not meet the remaining criteria for anorexia or bulimia nervosa. Fairburn argues that such atypical or mixed eating disorders should not be viewed as mild or subclinical in severity, since by definition, they are associated with a clinical level of impairment (Fairburn & Walsh, 2002).

The majority of the sample were British, full-time employed and had received no prior treatment for disordered eating (41 of 68). The two groups were equivalent on all demographic variables and pre-treatment symptomatology at baseline (Table 1).

Of those who provided baseline data and commenced the intervention, 13 participants dropped out in the GSH condition (35%), four were lost to follow-up and one was an investigator-exited participant (due to rapid weight loss, the intervention was deemed inappropriate by the guide and the patient was referred to secondary care). Participants lost to follow-up were those who completed the intervention (reported by the guide) but failed to return post-intervention measures. Reasons for dropping out included making good progress (n = 3), the guide leaving their post (n = 3), severe depression (n = 1) and issues outside of treatment resulting in inappropriate time to engage (n = 3). In three cases no reason was given for dropping out. In the waiting list condition, 5 participants did not return for treatment after randomisation. The overall drop-out rate from point of randomisation was 45% (n = 36/81). The flow of participants through each stage of the study is detailed in Fig. 1.

Eating disorder psychopathology and key behaviours

There was a significant group by time interaction for overall severity of eating disorder psychopathology measured by mean total EDE-Q scores ($F(1,66) = 6.66$, $p = 0.01$). Planned comparisons showed a significant reduction between pre- and post-score in the GSH group ($t(36) = 2.99$, $p = 0.005$). Mean total EDE-Q score at the end of treatment was significantly lower in the GSH group than in the waiting list group ($t(36) = 2.83$, $p = 0.006$).

Tests of clinical significance on EDE-Q mean total scores in the GSH group showed 6 participants classified as clinically recovered, 25 as unchanged, and none as deteriorated. Six participants were below cut-off at pre-treatment.

Table 1
Participant baseline demographics and symptomatology by condition.

Variable	GSH (n = 37) Mean (SD)	WL (n = 31) Mean (SD)	p
Age	37.1 (12.8)	36.8 (11.0)	0.92
BMI (kg/m^2)	28.0 (7.51)	27.6 (10.8)	0.84
Gender (%)			
Female	97.3	96.7	0.90
Male	2.70	3.30	
Diagnosis (%)			
AN	0.00	0.00	
BN	27.0	38.7	
BED	24.3	16.1	
EDNOS	24.3	32.3	
No diagnosis	24.3	12.9	
EDE-Q			
Psychopathology			
Restraint	3.06 (1.87)	3.45 (1.86)	0.40
Eating concern	3.28 (1.50)	3.60 (1.32)	0.36
Shape concern	4.47 (1.53)	4.74 (1.25)	0.43
Weight concern	4.05 (1.66)	4.56 (1.17)	0.14
Mean total	3.72 (1.35)	4.09 (1.17)	0.23
Key behaviours[a]			
OBE	12.0 (55.0)	15.0 (129)	0.53
Vomit freq	20.5 (55.0)	16.5 (199)	0.44
Laxative freq	15.0 (41.0)	12.0 (54.0)	0.38
Exercise freq	10.0 (27.0)	13.5 (26.5)	0.92
CORE			
Total	18.2 (6.41)	19.0 (6.89)	0.63

[a] Key behaviours presented using the median and range. Excludes participants reporting 0.

Significant group by time interactions were apparent on EDE-Q eating concern ($F(1,66) = 5.49$, $p = 0.02$) and shape concern subscales ($F(1,66) = 6.36$, $p = 0.01$) but not for restraint ($F(1,66) = 2.29$, $p = 0.14$) or weight concern scores ($F(1,66) = 3.46$, $p = 0.07$). Planned comparisons showed eating concern ($t(36) = 2.54$, $p = 0.02$) and shape concern ($t(36) = 2.77$, $p = 0.01$) were reduced between pre- and post-intervention in the GSH group. In addition, these scores were significantly lower in the GSH condition compared to the waiting list group at post-intervention (eating concern $t(66) = 2.50$, $p = 0.02$ and shape concern $t(66) = 2.41$, $p = 0.02$; Table 2).

Key behavioural symptoms decreased from pre- to post-treatment in the GSH group, significantly for laxative abuse ($z = 2.02$, $p = 0.04$) and exercise frequency ($z = 2.37$, $p = 0.02$) but not for OBEs ($z = 1.85$, $p = 0.07$) or vomiting ($z = 1.68$, $p = 0.09$). In the waiting list condition, there were small but non-significant reductions at post-intervention. The proportion who reported cessation of key behaviours was consistently higher in the GSH group, but results did not reach significance. For example, of those who engaged in objective binge episodes at pre-intervention, 30.4% (7/23) in the GSH condition ceased bingeing at post-treatment compared to 11.5% (3/26) in the waiting list condition (OR = 3.38, 95% CI = 0.75–15.0). Similar results were obtained for all behaviours.

Global distress and BMI

There was no significant group × time interaction for overall CORE scores ($F(1,66) = 2.36$, $p = 0.13$). Likewise, BMI showed no significant group × time interaction ($F(1,66) = 2.41$, $p = 0.13$), indicating no difference in change in either of these outcomes between

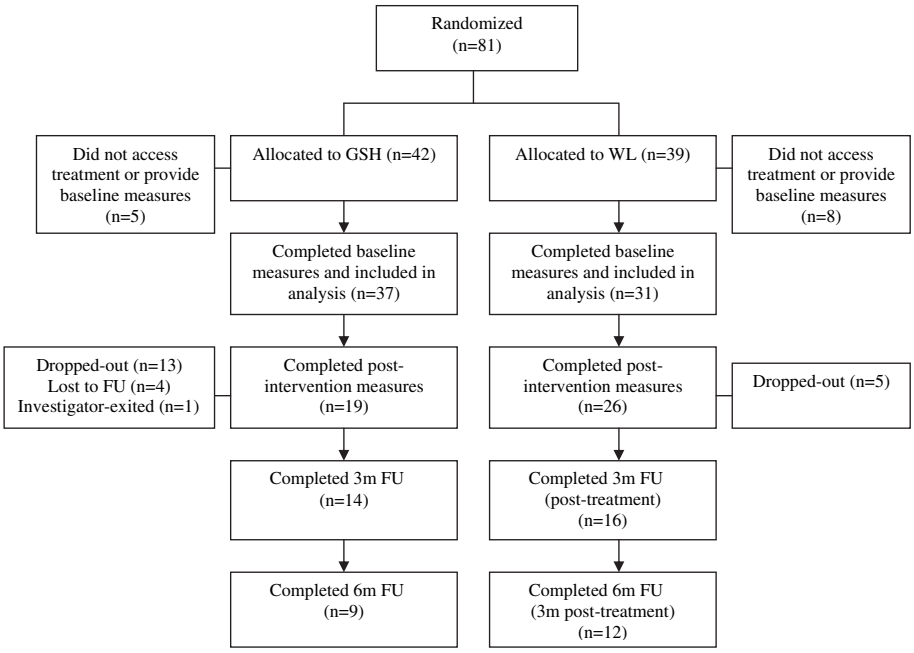

Fig. 1. Participant flow through each stage of the study.

the two groups (Table 2). In the GSH group, change in BMI did not differ by diagnostic group ($F(3,33) = 0.64$, $p = 0.60$).

All treatment gains were maintained at both 3- and 6-month follow-up. Maintenance was indicated by no significant change in scores between post-treatment and follow-up assessments. Mean scores for all variables at pre, post, 3- and 6-month follow-up are shown in Table 2. Improvements in mean total EDE-Q scores at post-treatment in the GSH group were maintained at 3- and 6-month follow-up ($F(2,53) = 0.38$, $p = 0.64$; Fig. 2), as were reductions in eating concern ($F(2,62) = 0.40$, $p = 0.65$) and shape concern ($F(2,66) = 0.26$, $p = 0.78$). Restraint ($F(2,58) = 1.62$, $p = 0.21$) and weight concern ($F(2,65) = 0.05$, $p = 0.94$) remained unchanged. Decreases in the frequency of laxative abuse ($\chi^2 = 2.00$, $p = 0.37$) and excessive exercise were maintained. There were no changes in objective binge episodes ($\chi^2 = 2.33$, $p = 0.31$), vomiting ($\chi^2 = 2.00$, $p = 0.37$), total CORE scores ($F(2,56) = 0.25$, $p = 0.74$) or BMI ($F(2,57) = 0.10$, $p = 0.88$) at follow-up.

In the completer analysis a similar pattern of results were achieved. However, in addition to the ITT findings, differences between the GSH and waiting list groups on EDE-Q weight concern ($F(1,43) = 4.58$, $p = 0.04$) and global distress ($F(1,43) = 6.50$, $p = 0.01$) now reached significance, as did the odds ratios for cessation of objective binge episodes (OR = 7.78, 95% CI = 1.52–39.8) and laxative abuse (OR = 15.0, 95% CI = 1.03–218). Overall, these results validate use of the LOCF as a conservative estimate of missing values.

Discussion

The present study suggests this GSH approach with trained and supported guidance from a mental health professional is an effective first stage of treatment for a range of disordered eating problems seen in primary and secondary care. Outcomes were similar to those of previous RCT's investigating GSH for bulimic disorders (Banasiak

Table 2
Mean (SD) BMI, EDE-Q and global distress scores pre- and post-intervention and at follow-up in both study conditions.

Variable	GSH				WL				ES	Sig
	Pre	Post	3m	6m	Pre	Post	3m (Post-treatment)	6m (Post-treatment)		
BMI	28.0 (7.51)	28.8 (8.51)	29.1 (8.68)	29.0 (8.61)	27.6 (10.8)	27.1 (10.6)	27.0 (12.2)	27.9 (11.2)	0.04	0.13
EDE-Q										
Restraint	3.06 (1.87)	2.50 (2.08)	2.50 (2.04)	2.65 (2.09)	3.45 (1.86)	3.47 (1.82)	2.33 (1.96)	2.30 (2.02)	0.03	0.14
Eating concern	3.28 (1.50)	2.72 (1.73)	2.61 (1.81)	2.69 (1.78)	3.60 (1.32)	3.75 (1.67)	2.46 (1.98)	2.43 (1.97)	0.08	0.02
Shape concern	4.47 (1.53)	3.89 (1.78)	3.92 (1.80)	3.98 (1.85)	4.74 (1.25)	4.81 (1.25)	3.63 (1.93)	3.83 (1.91)	0.09	0.01
Weight concern	4.05 (1.66)	3.61 (1.79)	3.65 (1.83)	3.62 (1.86)	4.56 (1.17)	4.75 (1.97)	3.53 (1.72)	3.51 (1.76)	0.05	0.07
Mean total	3.72 (1.35)	3.18 (1.57)	3.17 (1.61)	3.23 (1.66)	4.09 (1.17)	4.19 (1.35)	2.99 (1.73)	3.02 (1.76)	0.09	0.01
OBE[a]	12.0 (55.0)	7.00 (56.0)	7.00 (14.0)	6.50 (13.8)	15.0 (129)	11.0 (60.0)	4.50 (28.0)	2.50 (28.0)		
Vomit freq	20.5 (55.0)	3.00 (56.0)	2.00 (19.6)	2.00 (18.2)	16.5 (199)	12.5 (100)	5.00 (100)	6.00 (100)		
Laxative freq	15.0 (41.0)	3.00 (28.0)	2.00 (12.2)	2.00 (12.1)	12.0 (54.0)	10.0 (60.0)	2.00 (60.0)	2.00 (60.0)		
Exercise freq	10.0 (27.0)	2.00 (28.0)	2.00 (11.5)	2.00 (11.5)	13.5 (26.5)	1.50 (25.0)	3.00 (25.0)	5.00 (25.0)		
CORE										
Total	18.2 (6.41)	14.9 (7.88)	14.5 (8.34)	14.8 (8.25)	19.0 (6.89)	17.9 (7.92)	14.4 (9.63)	14.8 (9.21)	0.04	0.13

Effect size (ES) and significance values refer to pre–post comparisons only.
[a] Key Behaviours presented using the median and range. Analysis includes participants engaging in behaviours at baseline.

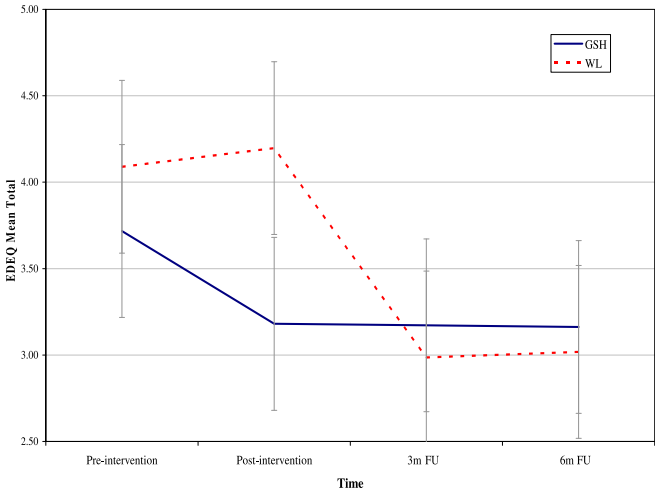

Fig. 2. Mean (SD) EDE-Q total scores by time (solid line GSH, dashed line WL control). Note that the WL group received the GSH intervention at the time-point labelled post-intervention.

et al., 2005; Carter & Fairburn, 1998; Loeb et al., 2000; Palmer et al., 2002). In support of the study hypothesis, the GSH condition was superior to the waiting list condition in reducing overall eating psychopathology and global distress. The GSH sample scored marginally lower on baseline global EDE-Q compared to those in the above studies (which were between 3.60 and 3.97), but achieved similar reductions of 1.09 compared to changes of −0.8 to −1.5 reported in previous studies. This information was not always available, given that most studies have been focussed on binge eating and vomiting as primary outcomes. The treatment group reported greater improvements in eating concern and shape concern (and weight concern in the completer analysis) compared to waiting list controls. Restraint scores remained largely unchanged. This may reflect the varied sample recruited and their conflicting treatment goals with regards dietary restraint. This may also explain the non-significant change in BMI. The findings for BMI are congruent with existing studies (Banasiak et al., 2005; Carter & Fairburn, 1998; Grilo & Masheb, 2005; Loeb et al., 2000) and may also reflect the relatively brief duration of GSH treatment (Grilo, 2007).

The GSH intervention significantly reduced the frequency of laxative abuse and excessive exercise but not objective binge episodes or vomiting. Cessation rates for all key behaviours (30–40%) were in line with existing studies which reported rates of between 10 and 50 percent for GSH completers (Banasiak et al., 2005; Carter & Fairburn, 1998; Palmer et al., 2002). Results showed that compared to those in the waiting list condition, clients who received GSH had up to 5 times the odds of ceasing compensatory behaviours. These results are promising given that only those engaging in behaviours at baseline were included in the analyses. This was deemed the most appropriate analytic strategy given the problems associated with analysing cessation of specific behaviours in a transdiagnostic sample. Not all clients engaged in behaviours at baseline. However, limiting the analysis to only those who did engage in the particular behaviours meant that in some cases, numbers were relatively small and the analyses under powered. Most existing studies have focussed on bulimia nervosa and/or binge eating disorder, with the primary outcome of reducing binge eating. Therefore, the entry criterion was engagement in this behaviour and all participants were included in the analyses. Studies in other areas have however, conducted analyses controlling for baseline abstinence (Dunn, Neighbors, & Larimer, 2006; Mead et al., 2005), which may have been an alternative method of analysing a heterogeneous sample. Given that previous studies have tended to focus on objective binge episodes and vomiting as primary outcomes, there is little comparable evidence for the effect of GSH on reducing laxative abuse and excessive exercise.

As regards the waiting list condition, abstinence rates for behavioural features were between 11 and 33%, which appear high. However, these were not accompanied by significant reductions in eating disorder psychopathology or distress. Similar reductions in the waiting list group were reported by Carter and Fairburn (1998). There are several known limitations of using a waiting list control design, such as the ethical implications of withholding treatment for a substantial period of time. However, the brevity of the current intervention was shorter than the usual waiting times of the services involved. Furthermore, the design does not allow long-term follow-up of the waiting group. Clients typically receive treatment following a waiting period, hence we do not know the longevity of the above abstinence rates. It is possible that changes in this group reflect client's knowledge that they were to be re-assessed and offered GSH at the end of the waiting period. Their activity during the waiting period was largely unknown and was not formally assessed in this study. Some clients reported receiving psychological work addressing issues other than their disordered eating and some may have been using other available self-help materials prior to treatment. Using a waiting list control design did not allow us to assess the merits of the current intervention versus full CBT. However, GSH studies in the past have shown comparable results to individual and group CBT (Bailer et al., 2004; Durand & King, 2003; Thiels et al., 1998; Treasure et al., 1999).

All treatment gains were maintained at 3- and 6-month follow-up. This is important, as relapse rates are generally high for this client group, estimated between 22 and 63% (McFarlane, Olmsted, & Trottier, 2008). The fact that clients still had the GSH manual to refer back to post-treatment may have enabled them to cope in times of difficulty, which could have contributed to a lapse or relapse following conventional psychotherapy. Further research is warranted to explore the utility of the pack in relapse prevention.

Aside from study design, there are several strengths of this study. First is the applicability of the research to 'real life' settings. Treatment was facilitated by mental health professionals who varied in experience and service settings. The inclusive nature of the study enabled us to access a diversity of clients in terms of their demographics and their presentation and severity of disordered eating. It should be noted that, whilst guides were trained and their progress through sessions monitored by a researcher, the actual content of sessions was not formally assessed, due to the locality of services and capacity of the current research team. Tape recording sessions may have proven beneficial to monitor whether guides adhered to the content of the manual, however as with previous GSH manuals, it was designed to be used with some clinical flexibility. Nevertheless, the results provided preliminary evidence for the effectiveness of the GSH approach with clients with EDNOS, an area which is largely unstudied. Approximately a third of the current sample fell into this category at baseline. Unfortunately the same cannot be said for anorexia nervosa. Although GSH was successful with some low weight clients, none of the study sample met the full diagnostic criteria for anorexia nervosa. With a larger sample, analysis by diagnostic category may have proved useful. It may also have been useful to consider the type of service (primary/secondary) in the analysis, but for the same reason, this was not feasible.

It is well known that the number of clients failing to engage or dropping out of treatment in this client group is high. The drop-out rate in the current study during the intervention period was (19/68) 27.9% which is in line with that of similar studies (Banasiak et al., 2005; Carter & Fairburn, 1998, Palmer et al., 2002). However the overall drop-out rate, from point of randomisation was higher

(45%), similar to that reported in the study by Ghaderi and Scott (2003). This was due to the large number of clients who were randomised and did not return assessment measures, so had to be classed as drop-outs. Direct contact between clients and the researcher, may have improved response rates. Better response rates and lower drop-out were observed in the waiting list condition, perhaps reflecting their option of receiving GSH at the end of the waiting period. Conducting a formal drop-out analysis may have been useful in exploring the reasons for clients terminating treatment and their severity of symptoms at the end of the intervention period. It is possible that some clients felt they had made sufficient progress and no longer required treatment. It should also be recognised that the study relied on self-report measures which have caused some speculation in eating disorders research. In some cases, the EDE-Q has resulted in higher reporting of symptoms (Mond, Hay, Rodgers, & Owen, 2007), however, it has shown to be similarly effective to the interview version in assessing overall diagnosis and well-defined features such as vomiting and laxative abuse (Wolk, Loeb, & Walsh, 2005).

In conclusion, the results of the current RCT provide promising evidence for the effectiveness of the Working to Overcome Eating Difficulties GSH intervention in the treatment of a range of disordered eating, in particular EDNOS. However, the observed drop-out and recovery rates suggest GSH may not be suitable and beneficial for all. Further work is needed to explore clients and guides experiences of using such treatment approaches, in order to investigate further, the factors that contributed to observed outcomes and to determine for whom GSH is suitable.

Acknowledgements

This study was supported by a PhD studentship funded by Leeds Partnership Foundation NHS Trust and Leeds Institute of Health Sciences.

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