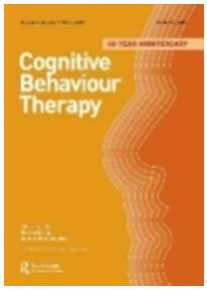

Article:
Homoz, E., Pugh, M. and Waller, G. orcid.org/0000-0001-7794-9546 (2019) Do eating disorder voice characteristics predict treatment outcomes in anorexia nervosa? A pilot study. Cognitive Behaviour Therapy, 48 (2). pp. 137-145. ISSN 1650-6073

https://doi.org/10.1080/16506073.2018.1476581



Do eating disorder voice characteristics predict treatment outcomes in anorexia nervosa? A pilot study.

Journal:	*Cognitive Behaviour Therapy*
Manuscript ID	SBEH-2017-0103.R1
Manuscript Type:	Original Article
Date Submitted by the Author:	n/a
Complete List of Authors:	Hormoz, Emma; Barnet Enfield and Haringey Mental Health NHS Trust, Pugh, Matthew; Central and North West London NHS Foundation Trust Waller, Glenn; University of Sheffield,
Keywords:	Anorexia nervosa, anorexic voice, hearing voices, eating disorder voice, eating disorders

TITLE: Do eating disorder voice characteristics predict treatment outcomes in anorexia nervosa? A pilot study.

Emma Hormoz

St Ann's Eating Disorder Service, London, UK

Matthew Pugh

Vincent Square Eating Disorders Service, London, UK

Glenn Waller

Department of Psychology, University of Sheffield, UK

Correspondence concerning this article should be addressed to: Emma Hormoz, St Ann's Eating Disorder Service, St Ann's Hospital, St Ann's Road, London, N15 3TH. Email: emma.hormoz1@nhs.net.

Abstract

Individuals with anorexia nervosa often describe experiencing an internal 'voice' of their disorder, which previous research has associated with multiple dimensions of eating pathology. This pilot study examined whether eating disorder measures use invoice characteristics at the outset of outpatient therapy predicted changes in disordered eating over the course of treatment. Participants were 14 individuals meeting ICD-10 criteria for anorexia nervosa. Participants completed measures relating to the severity of disordered eating and voice-related characteristics (perceived voice power and metacognitive appraisals about its nature) at the start and end of therapy. Results indicated that the perceived power of the eating disorder was reduced over the course of outpatient therapy, although its other characteristics remained stable. Greater levels of voice power, omnipotence, and benevolence at the outset of therapy were related to greater improvements in eating attitudes. No voice-related characteristics were associated with changes in weight. These findings suggest that voice-related appraisals do not obstruct the effectiveness of outpatient therapies for anorexia nervosa. Further studies are needed to ratify these preliminary findings.

Key words: Anorexia nervosa; anorexic voice; eating disorders; eating disorder voice; hearing voices.

Key Practitioner Message:

- Experiences of an eating disorder voice may interact with treatment outcome.
- Voices which are appraised as being powerful, omnipotent and benevolent at the outset of treatment appear to be related to better responses to outpatient therapy.
- Whether current treatments for anorexia nervosa might be enhanced by working more directly with the eating disorder voice remains uncertain.

Introduction

Treatment outcomes for anorexia nervosa are limited (McIntosh et al., 2005; Schmidt et al., 2012; Zipfel et al., 2014), suggesting that current models of eating pathology are inadequate. An element that is not yet well integrated with such models is the internal eating disorder 'voice', which appears to be both a common experience and potentially relevant to both how anorexia nervosa is conceptualised and treated (Pugh, 2016). Experiences of hostile internal voices have been reported by a significant number of individuals diagnosed with anorexia nervosa (Noordenbos, Aliakbari, & Campbell, 2014; Wentz, Gillberg, Gillberg, & Råstam, 2001). In contrast to more typical eating disorder cognitions such as self-criticism, this voice is described as a second or third person commentary related to shape, weight and eating. Similar pseudo-hallucinatory voices have been described in a number of other non-psychotic disorders, including obsessive-compulsive and post-traumatic stress disorders (Brewin & Patel, 2010; Hepworth, Ashcroft & Kingdon, 2013).

Previous studies indicate a stage-like progression in how individuals tend to perceive and relate to the eating disorder voice (Pugh, 2018). Typically, the eating disorder voice is described as a benign or supportive companion during the early stages of anorexia nervosa, but is experienced as increasingly antagonistic and controlling over time (Tierney & Fox, 2011; Williams & Reid, 2012). Feelings of entrapment and powerlessness relative to the voice appear to complicate the process of change and may, in some case, provoke relapse (Mountford & Waller, 2006; Tierney & Fox, 2011). In regards to recovery, literature suggests that learning to control the eating disorder voice may also play an important role in overcoming disordered eating (Jenkins & Ogden, 2012).

Cognitive models of auditory hallucinations (Birchwood & Chadwick, 1997; Chadwick & Birchwood, 1994) provide some insight into the eating disorder voice phenomenon. The perceived power of voices and other associated appraisals (i.e., its

benevolence, malevolence and omnipotence) have been shown to exert demonstrable effects upon voice-hearers' experiences. Research suggests that the more powerful and omnipotent a voice is perceived to be, the more likely the person will experience emotional distress (Birchwood & Chadwick, 1997; Gilbert et al., 2001). Higher levels of emotional distress are also reported by individuals who appraise their voices as malevolent (i.e., possessing persecutory intent), whereas voices which are perceived as benevolent (i.e., with benign intent) are associated with lower levels of distress and are more likely to be engaged with. Within the context of disordered eating, the perceived power and malevolence of the eating disorder voice has been associated with more severe symptoms in anorexia nervosa, including more negative eating attitudes and cognitions, lower body mass index, longer duration of illness, and increased use of compensatory behaviours (Pugh & Waller, 2016, 2017). However, it is not yet known whether the eating disorder voice interacts with response to treatment.

This pilot study aimed to examine whether features of the eating disorder voice are related to therapy outcomes. The first hypothesis was that therapy would result in a reduction in both eating pathology and eating disorder voice characteristics. The second hypothesis was that voice characteristics at the outset of therapy would be association with levels of change in eating pathology over the course of evidence-based outpatient therapy for anorexia nervosa.

Method

Ethical approval

This project was granted ethical approval by a UK National Health Service Research Ethics Committee.

Participants

Participants were recruited from a public health service in the UK. All met the ICD-

10 criteria for anorexia nervosa (World Health Organisation, 1992). A total of 14 patients (all female adults) were recruited. Three had a diagnosis of binge-purge subtype of anorexia nervosa and 11 had the restrictive subtype. Ten of the participants were Caucasian, two were South Asian, one was of mixed ethnicity, and one failed to report her ethnic background. Their mean age was 30.4 years (*SD* = 14.7; range = 19-70). Participants had experienced their illness for an average of 69.6 months (*SD* = 62.3; range = 4-180). Their mean BMI at the outset of treatment was 15.6 (*SD* = 1.53; range = 13.0-17.5).

Measures and Procedure

Study measures were completed at the start of outpatient therapy and again at the completion of treatment. Of the sample, 13 patients completed cognitive behavioural therapy (CBT; Waller et al., 2007), over a mean of 26.0 sessions (*SD* = 8.98), and the other participant completed a 28-session course of cognitive analytic therapy (Treasure & Ward, 1997). Diagnosis and body mass index were recorded by an experienced clinician at the start and end of therapy. Participants completed three self-report measures at the beginning and end of therapy.

Eating Disorder Examination Questionnaire (EDE-Q, version 6; Fairburn, 2008)**.** The EDE-Q is a widely used 28-item self-report measure of eating pathology, which has demonstrated acceptable psychometric properties (Berg, Peterson, Frazier & Crow, 2012). The Global score was used as the key measure of eating pathology.

Voice Power Differential Scale (VPDS; Birchwood et al., 2000). The VPDS is a self-report questionnaire measuring the relative power of voices using seven bipolar 5-point scales (scored 1-5). This measure was adapted for this study by replacing the word 'voices' with the terms 'anorexic voice/thoughts' (e.g., "I am much stronger than my anorexic voice/thoughts"; "My anorexic voice/thoughts are much stronger than me"). The questionnaire provides a total score ranging from 7-35, with a lower total score indicating a

voice which is experienced as being less powerful than the self. This measure has demonstrated adequate internal consistency for patients with anorexia nervosa (Pugh & Waller, 2016).

Beliefs about Voices Questionnaire - Revised (BAVQ-R; Chadwick, Lees & Birchwood, 2000). The BAVQ-R is a 35-item self-report measure assessing beliefs about voice across three subscales (perceived benevolence, malevolence, and omnipotence). Benevolence appraisals relate to voices which are perceived to have positive intent, malevolent voices relate to voices which are perceived to have hostile and persecutory intent, and omnipotence appraisals relate to voices which are perceived as dominating and omniscient. Responses are rated on a 4-point scale (scored 0-3), with higher scores indicating greater endorsement of belief. Scores for each subscale are calculated by totalling relevant responses. For the purposes of the study, the measure was adapted by replacing the word 'voices' with the phrase 'anorexic voice' (e.g., "My anorexic voice wants to help me"). This amended version of the BAVQ-R has demonstrated adequate psychometric properties in previous eating disorders research (Pugh & Waller, 2016).

Treatments

Cognitive behavioural therapy (CBT). The CBT delivered in this study is based upon published evidence-based manuals (Fairburn, 2008; Waller et al., 2007). Key interventions include psychoeducation, individualised formulation, self-monitoring (e.g. food diary keeping), meal planning and weight restoration, exposure, surveys, and cognitive restructuring. The therapy aims to normalise eating, restore weight to a healthy BMI, and address maintaining factors such as negative body image, emotional dysregulation, and negative attitudes towards food. All clinicians providing CBT at the clinic received either weekly or fortnightly individual clinical supervision depending upon their clinical experience. Whilst the eating disorder voice is not explicitly addressed in this approach,

interventions such as learning to manage the eating disorder mindset (Fairburn, 2008) and tackling the 'restrictive mode' of information processing (Mountford & Waller, 2006) aim to help individuals recognise, decentre, and respond in healthy ways to maladaptive patterns of eating-related thinking

Cognitive analytic therapy (CAT). CAT combines elements of cognitive therapy and brief, psychodynamic therapy (Ryle, 1990; Treasure & Ward, 1997). Treatment involves the collaborative reformulation of the client's presenting difficulties within the context of their life history, using both written and diagrammatic illustrations (the 'assessment phase'); recognising patterns of maladaptive thinking, feeling, and behaving within both intrapersonal and interpersonal relationships ('recognition phase'); and use of interventions to address these unhelpful patterns ('change phase'). Particular attention is paid to the role of transference and counter-transference within the therapeutic relationship. Supervision was provided on a weekly basis in small groups composed of two or three clinicians. Whilst CAT does not incorporate direct interventions for addressing the internal eating disorder voice, such experiences are usually tend to be conceptualised as a hostile form of self-to-self relating (termed a 'reciprocal role') associated with critical and internal object relationships.

Therapy sessions in both treatments lasted 50 minutes and were provided on a weekly basis. Weekly weight checks were also carried out in both treatments.

Data analysis

All data were analysed using SPSS (v.23). For the first hypothesis, pre-post changes in eating pathology and voice characteristics were tested using paired t-tests. Effect sizes (Cohen's *d*) were calculated for paired samples, and are reported using the conventions of 0.2 = small, 0.5 = medium, and 0.8 = large). For the second hypothesis, Pearson's correlations (*r*) were used to determine the associations between initial voice characteristics and changes in eating pathology.

Results

Changes in eating pathology and eating disorder voice characteristics

Table 1 shows the results of paired t-tests, demonstrating that the patients improved across the course of therapy in their level of eating pathology (increased BMI and reduced EDE-Q scores). However, the only significant change in the characteristics of the eating disorder voice was a significant reduction in its power, rather than its quality. All changes were associated with medium to large effect sizes (Cohen's $d > 0.64$, in all cases), suggesting robust levels of improvement in both domains.

Insert Table 1 about here

Association of initial voice characteristics and subsequent changes in eating pathology

Correlation analyses (one-tailed Pearson's r) were used to determine whether voice characteristics at the outset of therapy were related to changes in eating pathology. In each case, the change scores were calculated so that a positive score reflected a positive outcome (reduction in EDE-Q scores; increase in BMI). Table 2 shows the correlation coefficients. None of the voice characteristics were significantly associated with weight gain (BMI change). However, the voice characteristics were associated with more positive outcomes on different EDE-Q scales. Higher initial levels of voice power were associated with greater reductions in restrictive eating attitudes (restraint) and weight concerns. Similarly, higher initial levels of BAVQ benevolence (voices with positive intent) and omnipotence (dominating/omniscient voices) were associated with greater reductions in weight concerns.

Insert Table 2 about here

Discussion

This pilot study has sought to determine whether characteristics of the eating disorder voice are related to outcomes in outpatient therapy for anorexia nervosa. The therapy had a positive effect on the patients' eating pathology, with a reduction in EDE-Q scores to the normal range, though the change in BMI was not to the level of recovery, as is commonly found in this literature (McIntosh et al., 2005; Schmidt et al., 2012; Zipfel et al., 2014). However, it should also be noted that definitions of 'recovery' remain highly variable across both individuals and the eating disorder literature (Bardone-Cone et al., 2011; Emanuelli, Waller, Jones-Chester, & Ostuzzi, 2012). In terms of voice-related appraisals, the perceived power of the eating disorder voice was reduced during therapy, though its other qualities (i.e., benevolence, omnipotence and malevolence) remained unchanged. Three voice-related characteristics at the outset of therapy (i.e., greater levels of perceived voice power, omnipotence, and benevolence) were shown to predict better treatment outcomes in terms of changes in eating attitudes. However, no voice-related appraisals were related to changes in weight over the course of therapy.

As with previous eating disorder voice research (Pugh & Waller, 2016, 2017), participants described their eating disorder voice as powerful and controlling at the outset of therapy. The fact that treatment resulted in reductions in perceived voice power was interesting, albeit not unexpected. Developing healthy attitudes and behaviours related to food are encouraged in both CBT and CAT, and therefore provide a direct challenge to the perceived power of the eating disorder voice. In addition, interventions such as learning to manage the eating disorder mind-set in CBT (Fairburn, 2008; Mountford & Waller, 2006) and adjusting critical styles of intrapersonal relating in CAT (Ryle, 1990) might also serve to weaken the power of the eating disorder voice indirectly. Given that other studies have

identified an inverse relationship between eating disorder voice power and BMI in anorexia nervosa (Pugh & Waller, 2016), an alternative explanation could be that changes in eating disorder voice power were related to weight restoration and reductions in starvation symptoms (e.g., cognitive narrowing) during the course of therapy.

Regarding the other eating disorder voice-related appraisals examined in this study (perceived omnipotence, benevolence and malevolence), these characteristics remained stable over the course of outpatient therapy. This stability was unsurprising, given that these features of the eating disorder voice do not represent a target for either CBT or CAT. However, longitudinal studies examining voice-hearing in psychosis also suggest that voice-related benevolence, malevolence, and omnipotence often remain remarkably stable over time (Csipke & Kinderman, 2006; Hartigan, McCarthy-Jones, & Hayward, 2014). Whilst the psychosis literature suggests that appraisals of voice-related power and omnipotence are related (Birchwood & Chadwick, 1997; Mawson, Cohen, & Berry, 2010), the outpatient therapies examined in this study appear to exert a differential impact upon these appraisals, insofar as voice power was reduced but voice omnipotence remained unchanged. These findings may that the Voice Power Differential Scale (which measures the power of the eating disorder voice relative to the self) and the omnipotence subscale of the revised Beliefs About Voices Questionnaire (which measures the strength and omniscience of voices) might address somewhat distinct constructs, at least in anorexia nervosa. Larger-scale longitudinal and replication studies are needed to better understand how voice-related appraisals change and interact with eating pathology over the course of illness, treatment, and recovery.

Lastly, a more powerful, omnipotent, and benevolent anorexic voice at the outset of therapy was related to improved attitudes towards eating at the end of outpatient treatment. It is plausible that the more benevolent aspect of the anorexic voice allows the person to contemplate change, given the association of this characteristic with lower levels of distress

(Chadwick & Birchwood, 1994). While it might seem unexpected that greater voice power and omnipotence would be associated with better outcomes, it can be hypothesised that these characteristics drive greater levels of eating pathology at the outset of therapy (Pugh & Waller, 2016, 2017), giving the individual more leeway for positive cognitive change in response to treatment.

Whilst these findings are preliminary, they suggest that the presence of internal eating disorder voices does not preclude the effectiveness of outpatient therapies for anorexia nervosa. Whether other voice-related characteristics also influence treatment outcomes (e.g., frequency, distress, content, and insight) is an area worthy of further investigation. Given that appraisals of voice benevolence, malevolence, and omnipotence were found to remain static over the course of outpatient therapy, and given that outcomes for anorexia nervosa are often lacking (Zipfel et al., 2014), this raises the interesting question of whether addressing these beliefs about eating disorder voices might enhance treatment outcomes for this group. For example, cognitive-behavioural approaches to psychosis have proven to be effective in modifying appraisals of auditory verbal hallucinations (Birchwood et al., 2017; Chadwick et al., 2000), and so might also be relevant to individuals who experience an internal voice of their eating disorder. Alternatively, interventions which aim to reduce self-attacking and foster more compassionate forms of internal dialogue (e.g., Dolhanty & Greenberg, 2009; Goss & Allan, 2010; Kelly et al., 2017) might be a useful adjunct for individuals who experience a powerful, critical and distressing voice.

A pilot study of this sort has a number of limitations that need to be addressed. First, the sample size, diagnosis and design were limited, and should be extended and strengthened in future work. Further research is needed to determine whether experiences of eating disorder voices vary across the subtypes of anorexia nervosa and other eating disorders, and whether other therapies have different impacts on that anorexic voice (especially relative to a

control group, utilising 'treatment as usual'). The voice-related measures used in this study also require fuller validation. However, these findings indicate that such further work is justified to understand the anorexic voice more fully.

References

Bardone-Cone, A. M., Harney, M. B., Maldonado, C. R., Lawson, M. A., Robinson, D. P., Smith, R., & Tosh, A. (2010). Defining recovery from an eating disorder: Conceptualization, validation, and examination of psychosocial functioning and psychiatric comorbidity. *Behaviour Research and Therapy*, *48*, 194-202.

Berg, K. C., Peterson, C. B., Frazier, P., & Crow, S. J. (2012). Psychometric evaluation of the eating disorder examination and eating disorder examination-questionnaire: A systematic review of the literature. *International Journal of Eating Disorders, 45*, 428-438.

Birchwood, M., & Chadwick, P. (1997). The omnipotence of voices: testing the validity of a cognitive model. *Psychological Medicine*, *27,* 1345-1353.

Birchwood, M., Meaden, A., Trower, P., Gilbert, P., & Plaistow, J. (2000). The power and omnipotence of voices: Subordination and entrapment by voices and significant others. *Psychological Medicine*, *30,* 337-344.

Brewin, C. R., & Patel, T. (2010). Auditory pseudohallucinations in United Kingdom war veterans and civilians with posttraumatic stress disorder. *Journal of Clinical Psychiatry*, *71,* 419-425.

Chadwick, P. (2006). *Person-based cognitive therapy for distressing psychosis*. Chichester, UK: Wiley.

Chadwick, P., & Birchwood, M. (1994). The omnipotence of voices. A cognitive approach to auditory hallucinations. *British Journal of Psychiatry*, *164,* 190-201.

Chadwick, P., Lees, S., & Birchwood, M. (2000). The revised beliefs about voices questionnaire (BAVQ-R). *British Journal of Psychiatry*, *177,* 229-232.

Chadwick, P., Sambrooke, S., Rasch, S., & Davies, E. (2000). Challenging the omnipotence of voices: group cognitive behavior therapy for voices. *Behaviour Research and*

Therapy, *38*, 993-1003.

Csipke, E., & Kinderman, P. (2006). A longitudinal investigation of beliefs about voices. *Behavioural and Cognitive Psychotherapy*, *34*, 365-369.

Dolhanty, J., & Greenberg, L. S. (2009). Emotion-focused therapy in a case of anorexia nervosa. *Clinical Psychology and Psychotherapy*, *16,* 336-382.

Emanuelli, F., Waller, G., Jones-Chester, M., & Ostuzzi, R. (2012). Recovery from disordered eating: Sufferers' and clinicians' perspectives. *European Eating Disorders Review*, *20*, 363-372.

Fairburn, C. G. (2008). *Cognitive behaviour therapy and eating disorders*. New York, NY: Guilford.

Gilbert, P. (2009). *The compassionate mind*. London, UK: Constable and Robinson.

Gilbert, P., Birchwood, M., Gilbert, J., Trower, P., Hay, J., Murray, B., ... & Miles, J. N. V. (2001). An exploration of evolved mental mechanisms for dominant and subordinate behaviour in relation to auditory hallucinations in schizophrenia and critical thoughts in depression. *Psychological Medicine*, *31,* 1117-1127.

Goss, K., & Allan, S. (2010). Compassion focused therapy for eating disorders. *International Journal of Cognitive Therapy*, *3*, 141-158.

Hepworth, C. R., Ashcroft, K., & Kingdon, D. (2013). Auditory hallucinations: A comparison of beliefs about voices in individuals with schizophrenia and borderline personality disorder. *Clinical Psychology and Psychotherapy*, *20,* 239-245.

Jenkins, J., & Ogden, J. (2012). Becoming ‘whole’ again: A qualitative study of women's views of recovering from anorexia nervosa. *European Eating Disorders Review*, *20*, e23-e31.

Kelly, A. C., & Carter, J. C. (2013). Why self-critical patients present with more severe eating disorder pathology: The mediating role of shame. *British Journal of Clinical*

Psychology, *52*, 148-161.

Kelly, A. C., Wisniewski, L., Martin-Wagar, C., & Hoffman, E. (2017). Group-based compassion-focused therapy as an adjunct to outpatient treatment for eating disorders: A pilot randomized controlled trial. *Clinical Psychology and Psychotherapy*, *24*, 475-487.

Mawson, A., Cohen, K., & Berry, K. (2010). Reviewing evidence for the cognitive model of auditory hallucinations: The relationship between cognitive voice appraisals and distress during psychosis. *Clinical Psychology Review*, *30*, 248-258.

McIntosh, V. V., Jordan, J., Carter, F. A., Luty, S. E., McKenzie, J. M., Bulik, C. M., ... & Joyce, P. R. (2005). Three psychotherapies for anorexia nervosa: a randomized, controlled trial. *American Journal of Psychiatry*, *162,* 741-747.

Mountford, V., & Waller, G. (2006). Using imagery in cognitive-behavioral treatment for eating disorders: Tackling the restrictive mode. *International Journal of Eating Disorders*, *39,* 533-543.

Noordenbos, G., Aliakbari, N., & Campbell, R. (2014). The relationship among critical inner voices, low self-esteem, and self-criticism in eating disorders. *Eating Disorders*, *22,* 337-351.

Pugh, M. (2016). The internal 'anorexic voice': a feature or fallacy of eating disorders? *Advances in Eating Disorders*, *4,* 75-83.

Pugh, M. (2018). *What do we know about the internal eating disorder 'voice'? A summary of recent findings*. Paper presented at the Eating Disorder International Conference. London, UK: March.

Pugh, M., & Waller, G. (2016). The anorexic voice and severity of eating pathology in anorexia nervosa. *International Journal of Eating Disorders, 49*, 622–625

Pugh, M., & Waller, G. (2017). Understanding the 'anorexic voice' in anorexia nervosa.

Clinical Psychology & Psychotherapy, *24*, 670-676.

Ryle, A. (1990). *Cognitive-analytic therapy: Active participation in change*. London, UK: Wiley.

Schmidt, U., Magill, N., Renwick, B., Keyes, A., Kenyon, M., Dejong, H., ... & Watson, C. (2015). The Maudsley Outpatient Study of Treatments for Anorexia Nervosa and Related Conditions (MOSAIC): Comparison of the Maudsley Model of Anorexia Nervosa Treatment for Adults (MANTRA) with specialist supportive clinical management (SSCM) in outpatients with broadly defined anorexia nervosa: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, *83*, 796-807.

Schmidt, U., Oldershaw, A., Jichi, F., Sternheim, L., Startup, H., McIntosh, V., ...& Landau, S. (2012). Out-patient psychological therapies for adults with anorexia nervosa: randomised controlled trial. *British Journal of Psychiatry*, *201,* 392-399.

Tierney, S., & Fox, J. R. (2011). Trapped in a toxic relationship: Comparing the views of women living with anorexia nervosa to those experiencing domestic violence. *Journal of Gender Studies*, *20,* 31-41.

Treasure, J., & Ward, A. (1997) Cognitive analytic therapy in the treatment of anorexia nervosa. *Clinical Psychology and Psychotherapy*, 4, 62-71.

Waller, G., Cordery, H., Corstorphine, E., Hinricksen, H., Lawson, R., Mountford, V., & Russell, K. (2007). *Cognitive behavioral therapy for eating disorders: A comprehensive treatment guide*. Cambridge, UK: Cambridge University Press.

Wentz, E., Gillberg, C., Gillberg, I. C., & Råstam, M. (2001). Ten-year follow-up of adolescent-onset anorexia nervosa: psychiatric disorders and overall functioning scales. *The Journal of Child Psychology and Psychiatry and Allied Disciplines*, 42(5), 613-622.

Williams, S., & Reid, M. (2012). 'It's like there are two people in my head': A phenomenological exploration of anorexia nervosa and its relationship to the self. *Psychology and Health*, *27*, 798-815.

World Health Organization. (1992). *The ICD-10 classification of mental and behavioural disorders: clinical descriptions and diagnostic guidelines* (Vol. 1). Geneva, Switzerland: World Health Organization.

Zipfel, S., Wild, B., Groß, G., Friederich, H. C., Teufel, M., Schellberg, D.,... & Burgmer, M. (2014). Focal psychodynamic therapy, cognitive behaviour therapy, and optimised treatment as usual in outpatients with anorexia nervosa (ANTOP study): randomised controlled trial. *Lancet*, *383,* 127-137.

Table 1

Changes across the course of therapy for anorexia nervosa ($N = 14$) in body mass index (BMI), eating attitudes and behaviour (EDE-Q), voice power and beliefs about the eating disorder voice (BAVQ)

	Start of therapy		**End of therapy**		**Paired *t*-test**		**Effect size**
Symptom measure	Mean	(SD)	Mean	(SD)	*t*	*P*	*d*
BMI	16.0	(1.43)	17.5	(1.88)	3.72	.001	.827
EDE-Q Global	3.31	(1.36)	2.20	(1.21)	3.22	.01	.902
EDE-Q Restraint	3.26	(1.77)	1.92	(1.20)	2.72	.02	.784
EDE-Q Weight concern	3.03	(1.47)	2.12	(1.33)	2.31	.04	.646
EDE-Q Eating concern	3.09	(1.82)	1.89	(1.26)	2.74	.02	.774
EDE-Q Shape concern	3.86	(1.48)	2.85	(1.28)	2.71	.02	.761
Voice power	23.8	(3.98)	17.2	(6.62)	2.96	.02	.883
BAVQ – Malevolence	8.09	(4.72)	9.27	(4.76)	1.04	*NS*	-
BAVQ – Benevolence	3.36	(4.31)	1.36	(2.46)	1.66	*NS*	-
BAVQ – Omnipotence	10.5	(3.08)	8.63	(3.32)	1.27	*NS*	-

Table 2

Associations (one-tailed Pearson's *r*) of initial eating disorder voice characteristics (voice power and beliefs about the eating disorder voice [BAVQ]) with changes in body mass index (BMI) and eating attitudes and behaviour (EDE-Q) across the course of CBT for eating disorders. N = 14 in all cases.

	Initial voice characteristics			
Change in eating characteristic	Power	BAVQ Malevolent	BAVQ Benevolent	BAVQ Omnipotent
BMI	-.350	.349	-.129	.390
EDE-Q Global	.373	-.148	.217	.393
EDE-Q Restraint	.529 *	.210	.090	.405
EDE-Q Weight concern	.470 *	-.093	.475 *	.482 *
EDE-Q Eating concern	.015	-.349	.139	.294
EDE-Q Shape concern	.362	-.083	.174	.379

* *P* < .05