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CBT for eating disorders: The impact of early changes in eating pathology on later changes in personality pathology, anxiety and depression

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ABSTRACT

Whilst studies have consistently identified early symptom reduction as an important predictor of treatment outcome, the impact of early change on common comorbid features has not been investigated. This study of CBT for eating disorders explored patterns of early change in eating pathology and longer-term change in personality pathology, anxiety and depression. It also explored the impact of early change in eating pathology on overall change in personality pathology, anxiety and depression. Participants were 179 adults diagnosed with eating disorders who were offered a course of CBT in an out-patient community eating disorders service in the UK. Patients completed a measure of eating disorder psychopathology at the start of treatment and following the 6th session. They also completed measures of personality disorder cognitions, anxiety and depression at the start and end of treatment. There were significant changes in eating pathology over the first six sessions of treatment. Significant improvements were also seen in personality disorder pathology, anxiety and depression by the end of therapy. Effect sizes were medium to large for both completer and intention to treat analyses. Early changes in eating pathology were associated with later changes in common comorbid features, with early reduction in restraint being a key predictor. These findings demonstrate that early symptom change can be achieved in CBT for eating disorders when delivered in routine clinical practice. Such change has long-term benefits that go beyond the domain of eating pathology, enhancing change in personality pathology, anxiety and depression.

Studies investigating patterns of change in psychological treatments have consistently identified early symptom reduction as an important predictor of treatment outcome. This effect has been demonstrated across a range of psychiatric disorders, including depression, generalised anxiety disorder and panic disorder (e.g., Lutz et al., 2014; Lutz, Stulz, & Köck, 2009; Tang & DeRubeis, 1999). The impact of early response has been demonstrated across different age groups (e.g., Bradford et al., 2011; Gunlicks-Stoessel & Mufson, 2011) and types of psychological therapy (e.g., Gunlicks-Stoessel & Mufson, 2011; Haas, Hill, Lambert, & Morrell, 2002; Lutz et al., 2009). Preliminary findings suggest that early change is predictive of treatment outcome over and above baseline patient characteristics (Lutz et al., 2014).

A similar pattern of findings has emerged in the eating disorders. For example, early reduction in binge eating and/or purging predict outcome in cognitive-behavioural therapy for bulimia nervosa (e.g., Agras et al., 2000; Wilson et al., 1999). Similarly, in the treatment of anorexia nervosa, early weight gain predicts completion and outcome (Brown, Mountford, & Waller, 2013; Doyle, Le Grange, Loeb, Doyle, & Crosby, 2010; Le Grange, Accurso, Lock, Agras, & Bryson, 2014). In a transdiagnostic sample, Raykos, Watson, Fursland, Byrne, and Nathan (2013) found that those who responded rapidly to enhanced cognitive-behavioural therapy had better treatment outcomes, achieving lower scores on the global EDE-Q post treatment and being twice as likely to achieve full remission compared to slower responders (53% vs.

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23%). Similar findings have been reported by Turner, Bryant-Waugh, and Marshall (2015), who found that early symptom change (but *not* the therapeutic alliance) significantly predicted later change in eating pathology in CBT for eating disorders. However, we do not know whether the impact of early change in eating pathology is confined to predicting later outcome in eating pathology, or whether it has broader effects on axis 1 and axis 2 pathologies.

There is certainly evidence that CBT for eating disorders has positive effects by the end of treatment on comorbid problems that have not been directly addressed by the treatment, including alcohol use (e.g., Karačić et al., 2011) and personality characteristics, such as harm avoidance (e.g., Anderson Joyce, Carter, McIntosh, & Bulik, 2002; Dalle Grave et al., 2007). There is some evidence that those personality-level changes are associated with the level of reduction in eating pathology by the end of CBT (Agüera et al., 2012). However, no studies to date have explored the impact of *early* change in eating on overall change in comorbid features commonly seen in eating disorder patients, such as personality pathology, anxiety and depression. It is also unclear as to whether early eating change is a positive or negative influence on later change in those comorbid conditions. It could be argued that an early focus on eating change detracts from the wider focus needed to address those comorbid pathologies. Alternatively, it is possible that the initial focus on treating the core features of an eating disorder (e.g., moving to regular eating, increasing carbohydrate intake) will help to stabilise mood and reduce emotional distress. In short, does early eating change in therapy for eating disorders predict change in axis 1 and 2 pathology by the end of therapy, and is that association positive or negative?

This effectiveness study, based in a routine clinical setting, had three aims. First, it aimed to determine whether CBT in such a setting can result in a positive change in eating pathology during the early phase of treatment. Second, it assessed the longer term pattern of change in personality disorder pathology, anxiety and depression across the course of the whole therapy. Finally, it explored the impact of early change in eating disorder pathology on overall change in personality disorder pathology, anxiety and depression. The study used a transdiagnostic sample of patients who received a course of out-patient CBT. The treatment delivered has been demonstrated to be effective and has been described in an earlier paper (Turner, Marshall, Stopa, & Waller, 2015), which shares some of the data that are used in the current analyses.

1. Method

1.1. Ethical clearance

This study was approved by the University of Southampton Ethics Committee.

1.2. Participants

The sample consisted of 179 patients (166 women and 13 men) who had been offered a course of out-patient CBT between 2010 and 2013, delivered in a specialist National Health Service eating disorder service in the UK. Each patient was assessed using the Eating Disorders Examination (Fairburn, Cooper, & O'Connor, 2008) and was diagnosed using DSM-IV criteria (American Psychiatric Association, 1994). Of the 179 patients, 52 (29.1%) had a diagnosis of anorexia nervosa, 51 (28.5%) bulimia nervosa, and 76 (42.4%) eating disorder not otherwise specified. The mean age of the sample was 27.7 years ($SD = 9.1$, range = 17–53 years).

1.3. Measures

Patients completed the Eating Disorders Examination (EDE, Fairburn, Cooper & O'Connor, 2008) at initial assessment, and measures of eating disorder pathology at the start of treatment, following the sixth session, and at the end of treatment. Personality disorder cognitions, anxiety and depression were measured at the start and on completion of CBT. These measures are administered routinely at the clinic for all patients receiving out-patient psychological therapy. As is common in routine settings, a small proportion of the data were not collected, and therefore the numbers vary across some analyses (see Tables).

Eating Disorder Examination (EDE, version 16, Fairburn et al., 2008). In this study, the EDE was used to generate DSM-IV diagnoses.

Eating Disorders Examination–Questionnaire (EDE-Q, version 6; Fairburn & Beglin, 2008). The EDE-Q is a self–report questionnaire assessing key cognitive and behavioural aspects of eating disorders. It generates frequency ratings for key eating disorder behaviours (over the past 28 days) as well as the following attitudinal subscales: restraint, weight concerns, shape concerns, and eating concerns. A global attitudinal score can be calculated by averaging the four subscales. The EDE-Q has good psychometric properties and validity (e.g., Mond, Hay, Rodgers, Owen, & Beumont, 2004).

Personality Belief Questionnaire – Short Form (PBQ-SF; Butler, Beck, & Cohen, 2007). The PBQ-SF is a 65-item questionnaire used to identify the cognitions underlying ten elements of axis II personality pathology. Respondents are asked to record the extent to which they believe each statement on a five-point Likert scale (0 = not at all; 4 = totally). A total score for each subscale is then calculated by summing the relevant seven items (ranging 0–28). Higher scores reflect a greater level of beliefs underpinning that specific personality disorder, although the PBQ-SF is not designed to be a diagnostic tool. The short form is based on the earlier 126-item PBQ (Beck & Beck, 1991), and has been used with eating-disordered patients (Connan et al., 2009).

Hospital Anxiety and Depression Scale (HADS, Zigmond & Snaith, 1983). The HADS has two subscales, measuring anxiety and depression. Respondents are required to rate the frequency of emotions experienced over the past week on a four-point Likert scale (0–3). The HADS is suitable for use with eating disorder populations (e.g., Padierna, Quintana, Arostegui, Gonzalez, & Horcajo, 2000; Seed et al., 2004).

1.4. Procedure

The therapy delivered in this study is detailed elsewhere (Turner, Bryant-Waugh, et al., 2015; Turner, Marshall, et al., 2015). Treatment length was typically 20 sessions, but that was shortened in the event of rapid change (to a minimum of 10 sessions) and extended for those patients with more significant comorbidity or a restrictive presentation (up to 40 sessions). Participants completed the EDE-Q, PBQ-SF and HADS at the start and end of therapy. They also completed the EDE-Q after the sixth treatment session. All patients gave consent for data collected as part of routine service evaluation to be used to monitor progress and change in therapy.

1.5. Data analysis

Completer and intention to treat (ITT) analyses are presented, with the latter involving the carrying forward of the last available data point. In 11 cases, the participant completed treatment, but the end of treatment measures were not completed. These individuals were included in the 'Completer' group, carrying forward their last