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Emotion regulation and the process of recovery from anorexia

Section A: Changes in emotion regulation during the process of recovery from anorexia: A systematic review

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Section B: Seeing through the façade of anorexia: A grounded theory of change in emotion processes

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Summary of the MRP Portfolio

Section A: This section provides a systematic review of published literature on changes in emotion regulation (ER) in people with anorexia during the recovery process. It includes research that examines how different aspects of ER change following treatment, and whether such changes coincide with other aspects of recovery. Evidence suggests that improvements in some emotion processes, such managing emotions, and emotion awareness, understanding, acceptance, and expression, do occur alongside weight gain and clinical improvement. This supports the recent emphasis on developing emotion-focussed interventions for anorexia. However, further research is needed around the process of change to enhance the theoretical foundations upon which such interventions are based.

Section B: This section presents a grounded theory study exploring how people with anorexia perceive their experience of emotion regulation and the factors that influence this, including any therapy-related change. The ways that participants related to their emotions changed as they moved between positions of creating a sense of safety in a world of uncertainty, seeing through the façade of anorexia, and recovery and growth. They described developing awareness, and beginning to relate to themselves and others differently, which offered them a way out of the vicious cycles of *coping 'badly'.* Clinical and research implications are discussed.

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Section A

Changes in emotion regulation during the process of recovery from anorexia: A systematic review

Exact word count: 7,999 (-50)

ABSTRACT

Objective: Anorexia is a serious mental health condition with a lack of effective treatments, particularly for adults. Recent theoretical and empirical evidence suggest that difficulties in emotion regulation (ER) may be important in the development and maintenance of difficulties, and new emotion-focussed interventions have begun to emerge. However, greater understanding of how emotion processes change during recovery from anorexia is needed. This literature review examines whether positive changes in ER are reported in people with anorexia following treatment and whether such changes are associated with other aspects of recovery.

Methods: A systematic search of the literature revealed twenty-three studies that met inclusion criteria. Results from both quantitative and qualitative papers were synthesised and critiqued.

Results: The evidence identifies aspects of emotion processes that may be particularly amenable to change during recovery, including the use of adaptive ER strategies, the ability to inhibit impulses and remain goal-directed when distressed, and emotional awareness, acceptance, and expression.

Discussion: The utility of therapy and emotion-focussed interventions in facilitating changes in emotion processes is indicated. More rigorous research is needed in this area and qualitative research exploring aspects of emotion processes that are perceived as important to people in their recovery from anorexia should be a priority.

Key words: Anorexia; emotion regulation; recovery; therapeutic change; systematic review

1.0 INTRODUCTION

1.1 Anorexia

An eating disorder (ED) is a term used to describe a group of serious, potentially life-threatening conditions, characterised by controlling intake of food and avoiding weight gain (British Psychological Society [BPS], n.d). For many, unhealthy patterns in relation to food and eating can negatively impact different areas of their lives. According to the International Classification of Diseases- 10th revision (ICD-10; WHO, 1992), a number of specific disorders are placed within this category, including anorexia nervosa (AN), bulimia nervosa (BN), and eating disorder unspecified. Prevalence is particularly high amongst women, with estimates as high a 1 in 8 (Stice, Marti, & Rohde, 2013). Most commonly diagnosed in adolescence, improving access to services and reducing wait times for young people has made it on to the NHS agenda (NHS England, 2015), however, it could be argued that improvements in service provision for adults continues to get overlooked.

Anorexia is the most serious ED. Characterised by extremely low body weight in the pursuit of thinness, it is associated with serious health complications and amongst the highest levels of mortality of any mental health condition (Arcelus, Mitchell, Wales, & Nielsen, 2011; Zipfel, Löwe, Reas, Deter, & Herzog, 2000). People with anorexia experience high rates of co-occurring mental health difficulties, such as anxiety and depression, and reduced quality of life (Zipfel, Giel, Bulik, Hay, & Schmidt, 2015). Due to the high value often placed on low body weight and ambivalence about recovery, low levels of treatment adherence are commonly reported and outcomes for people are poor (Berkman, Lohr, & Bulik, 2007; Klump, Bulik, Kaye, Treasure, & Tyson, 2009).

1.2 Treatment

Current anorexia service provision in the UK is variable, ranging from generic outpatient treatment to one of the many different models of specialist eating disorder services. NICE guidelines (2004) highlight the importance of psychological interventions which address underlying processes and lead to better long-term outcomes. For children and adolescents, family interventions, which draw on the family as a resource in restoring weight and reinstating adaptive eating behaviours, are the treatment of choice (Herpertz-Dahlmann, van Elburg, Castro-Fornieles & Schmidt, 2015). For adults, a range of psychological treatments are available, including adapted versions of traditional cognitive behavioural approaches, such as Enhanced Cognitive Behaviour Therapy (CBT-E; Fairburn, 2008) and the Maudsley Model of Anorexia Treatment in Adults (MANTRA; Schmidt, Wade, & Treasure, 2014), and focal psychodynamic psychotherapy (Zipfel et al., 2014). However, as yet there is no consensus about which approach is most effective (Watson & Bulik, 2014) and there has been a call for novel interventions.

More recently the field has started focussing more on emotion-focussed interventions. There is longstanding recognition of difficulties with emotion regulation (ER) amongst people with anorexia (Bruch, 1973), supported by more recent empirical evidence. Oldershaw et al. (2015) reviewed the literature and found that those with anorexia report higher levels of alexithymia, characterised by an inability to identify and describe emotions in oneself, poorer awareness of emotions, more negative beliefs about expressing emotions, and a lack of adaptive ER strategies. They also found people with anorexia to have more negative schemata, a term used in CBT to reflect patterns of thought or behaviour that influence how people perceive and organise new information, particularly around shame and disgust. In a second systematic review, Lavender et al. (2015) found that people with anorexia have an increased tendency to

avoid emotion-inducing situations, and an impaired capacity to tolerate negative emotions and control their behaviour when distressed.

The empirical literature has been enhanced by qualitative research exploring the experiences of people with anorexia. For example, Fox (2009) described how difficult early experiences in the absence of adequate skills to manage emotions may negatively impact emotional development in people with anorexia. This was associated with poor meta-emotional skills, which refers to the emotions and cognitions people have in relation to emotions themselves, a lack of confidence in one's ability to manage their emotions, and feeling the need for permission to express emotions.

In a recent systematic review, Sala, Heard, and Black (2016) identified a range of emotion-focussed treatments for anorexia in adults, often targeting mechanisms thought to contribute to the maintenance of anorexia, such as emotion avoidance and emotion dysregulation. These are outlined in Table 1. Although in the early phases of evaluation, evidence suggests that interventions that focus on emotions may be viable treatment options. They have been shown to lead to improvements in eating disorder symptoms, a reduction in maladaptive cognitions, and weight gain, although larger controlled studies are needed (Sala et al., 2016).

Table 1. Summary of emotion-focussed treatments (adapted from Sala et al., 2016)

Therapy	Overview
Cognitive Remediation and Emotional Skills Training (CREST) (Money, Davies, & Tchanturia, 2011)	Involves psychoeducation about emotions and targets thinking styles, emotion awareness and recognition, and acceptance, tolerance and expression of emotions
Dialectical Behaviour Therapy (DBT) (Chen et al., 2015)	Targets ER and distress tolerance, as well as addressing issues around interpersonal effectiveness and body image
Radically Open Dialectical Behaviour Therapy (RO-DBT) (Lynch et al., 2013)	Adapted form of DBT targeting over controlled emotions and behaviour
Acceptance and Commitment Therapy (ACT) (Berman, Boutelle, & Crow, 2009; Juarascio et al., 2013)	Targets emotion avoidance and poor experiential awareness, and seeks to increase willingness to experience negative internal experiences in the pursuit of goals and values
Emotion Acceptance Behaviour Therapy (EABT) (Wildes & Marcus, 2011; Wildes, Marcus, Cheng, McCabe, & Gaskill, 2014)	Aims to increase emotional awareness, decrease emotional avoidance and promote engagement in valued activities and relationships
Emotion-Focussed Therapy (EFT) (Dolhanty & Greenburg, 2009)	Targets maladaptive emotions maintaining dysfunctional behaviour and seeks to increase emotion awareness and understanding of anorexia

1.3 Theories of emotion regulation

Emotion regulation may be conceptualised as the process by which people influence the emotions they experience. Gross (1998) breaks this down further into what he calls antecedent-focussed ER, including situation selection, situation modification, attentional deployment, and cognitive change, and response-focussed ER, otherwise known as response modulation. More recently Gratz and Roemer (2004) proposed a multidimensional model of ER that emphasises the functional role of emotions, the importance of modulating as opposed to simply eliminating emotions, and the importance of using situationally appropriate strategies. This model led to the development of the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004). It has been further defined by Gratz (2007), in which emotion dysregulation is conceptualised as difficulty in one or more of the following areas- ability to flexibly use situationally appropriate strategies to modulate emotions (dimension 1); ability to

inhibit impulses and remain goal directed when distressed (dimension 2); emotional awareness, understanding and acceptance (dimension 3); and willingness to experience emotional distress to pursue meaningful activities (dimension 4).

Building on the empirical literature suggesting ER deficits in anorexia, and general theories of ER, emotion-focussed models of anorexia have begun to emerge. One such model is the functional model of emotional avoidance (Wildes, Ringham, & Marcus, 2010), which emphasises the role of anorexia symptoms in managing anxiety and depression, through avoidance of physical sensations, thoughts, urges, and behaviours associated with intense emotions. It has provided a theoretical foundation for the development of Emotion Acceptance Behaviour Therapy (EABT; Wildes & Marcus, 2011; Wildes, Marcus, Cheng, McCabe, & Gaskill, 2014).

Haynos and Fruzzetti (2011) have proposed another- the transactional model of ER in anorexia, which focusses on the role of emotion dysregulation more generally. Based on the work of Linehan (1993) in relation to borderline personality disorder, this model emphasises the transaction between the individual's emotional experiences and their environment, including the family and socio-cultural context. People with anorexia are thought to experience emotional vulnerabilities, and increased emotional arousal and dysregulation. Difficulties expressing one's internal experience is thought to lead to inaccurate expression of emotions, which may take the form of eating disordered behaviour (restricting, purging etc.). This may invite misunderstanding and invalidating responses from others, which would further heighten levels of dysregulation. In addition, by reducing emotional arousal, for example through numbing of emotions, the ED behaviour may be reinforcing. The effects of starvation heighten emotional vulnerabilities, feeding back into the process and perpetuating emotion dysregulation.

Oldershaw et al. (2015) offer a third model, which, like Haynos and Fruzetti's (2011) model, emphasises the functional role of ED behaviours in helping people avoid and control unpleasant emotions. However, unlike previous models it also seeks to account for the wide range of emotion generation and regulation processes seen in anorexia, including the modification of situations to reduce emotional impact (e.g. behavioural avoidance of emotion-inducing situations), and the suppression of emotions for perceived social gain (e.g. a desire to suppress emotions to avoid perceived conflict). It proposes that once developed, such maladaptive emotion processes both maintain, and are maintained by, anorexia symptoms and behaviours, which despite providing initial relief, ultimately keep the person stuck in a vicious cycle.

1.4 Current gaps

The Medical Research Council have stressed the importance of developing a theoretical understanding of the process of change early on in treatment development (MRC, 2006). Whilst advances have been made in relation to developing models of emotion processes that account for the development and maintenance of anorexia, there continues to be a lack of understanding about how such processes change, for example during recovery. Similarly, the growing empirical evidence relating to ER in anorexia largely concentrates on the 'problem', and whilst difficulties in managing emotions are relatively well researched, little is known about when and how these improve. Existing systematic reviews (Lavender et al., 2015; Oldershaw et al., 2015) have found few studies that look at changes in ER over time or following recovery, and are limited by their narrow inclusions criteria, using only quantitative studies that rely disproportionately on the use of self-report measures. In light of the fact that very few theoretical models for anorexia have led to the development of new interventions (Pennesi & Wade, 2016), and the efficacy of more recent emotion-focussed treatments yet to be proven, perhaps more of a focus on therapeutic change, both theoretically and empirically, is needed.

1.5 Summary and rational

In summary, effective treatments for adults with anorexia are lacking. Recently, emotion-focussed models have begun to emerge, highlighting the role of maladaptive emotion processes in the development and maintenance of anorexia. These are supported by empirical evidence. However, there remains a gap in our understanding of how positive change comes about. If we are to develop more effective interventions for this client group we must seek to understand such process better.

To our knowledge, no review has focussed specifically on change, or attempted to synthesise research using different methodologies. This review therefore seeks to examine ER processes in people with anorexia during the recovery process using a mixed-methods focus. It is of particular interest whether positive changes in ER are reported during or following treatment, and whether positive changes in ER seem to coincide with other aspects of recovery.

2.0 METHODS

2.1 Eligibility criteria

Studies were included in this review if they were published as peer reviewed journal articles in English and met the following criteria-

1) Included participants with a diagnosis of, or who self-identified as having, anorexia. Studies that included participants with a different eating disorder diagnosis, such as bulimia, were required to have reported their findings for the anorexia group separately.

2) Investigated an aspect of ER as defined by Gratz (2007) using self-report measures, experimental measures, or qualitative exploration.

3) Investigated ER during the process of recovery, including studies that utilised measures of recovery, such as weight gain and symptom reduction, and those that examined changes as they occurred over the course of treatment and/or at follow up. Qualitative studies

were considered relevant if they a) explored recovery and developed themes closely linked to the ER construct described above, or b) explored ER and developed themes related to the recovery.

2.2 Search methods and information sources

A scoping exercise was carried out to get a sense of the research area and this, alongside consultation with clinicians experienced in working with ED, informed the development of the search strategy. The electronic databases PsycINFO (1806-present), MEDLINE (1946-present), CINAHL (1981-present), ASSIA (1987-present), and Web of Science (1970-present) were searched for relevant articles published up until October 2016. The search strategy, outlined in Table 2, was developed for use with PsycINFO and adapted for other databases where subject headings differed.

After duplicates were removed papers were scanned by title, abstract, and then by full text. Figure 1 depicts the numbers at each stage of the screening, as well as reasons for exclusion. The reference sections of included papers and other relevant papers were screened for articles meeting the criteria that had not been yielded by the search.

Table 2. Key words and subject headings used in the systematic literature search

Anorexia	AND	Emotion regulation	and	Change/recovery	or	Other combined search terms
ANOREXI* **Anorexia nervosa**		EMOTION* AWARENESS* EMOTION* RECOGNITION EMOTION* EXPRESSION EMOTION* REGULATION AFFECT* REGULATION EMOTION* AVOIDANCE DISTRESS TOLERANCE Emotions (also used for feelings) Emotional states Emotional style Effective valence Emotional adjustment Emotional content Emotional development Emotional intelligence Emotional responses Emotionality Expressed emotion Emotional control Anger control Coping behaviour Emotion regulation		THERAPEUTIC CHANGE THERAPY PSYCHOTHERAPY Treatment outcomes (also used for outcomes and therapeutic outcomes) Psychotherapeutic outcomes Mental health programme evaluation Psychotherapeutic processes Recovery (disorders) Therapeutic processes Treatment effectiveness Attitude change Behaviour change Insight Insight (therapeutic process) Therapy Treatment Psychotherapy		EMOTION*FOCUS*ED THERAPY RATIONAL*EMOTIVE BEHAVIO*R THERAPY EMOTION ACCEPTANCE BEHAVIO*R THERAPY COGNITIVE REMEDIATION AND EMOTIONAL SKILLS TRAINING RADICALLY*OPEN DIALECTICAL BEHAVIOUR THERAPY Rational emotive behaviour therapy

Key words are represented by capitalised font and subject headings by non-capitalised font.

3.0 LITERATURE REVIEW

3.1 Description of studies included

The literature search produced a total of 23 studies. Nineteen of the studies used quantitative methods and 4 used qualitative methods. Table 3 provides details of the quantitative studies, including design and participants[1], study aims, constructs of ER and measures used, and the key findings relevant to this review. Relevant standards from the different evaluation tools outlined by CASP (2017) were selected to create a bespoke evaluation tool (Appendix A) that is applicable to the wide range of methodologies found in the literature. A summary table of the quality evaluation can be found in Appendix B, and an example of the more thorough assessment criteria applied to each of the quantitative studies is provided in Appendix C. Table 4 outlines the qualitative studies. These were evaluated against standards specifically designed to assess validity and relevance of qualitative research (Mays and Pope, 2000; Appendix D).

The definition of ER outlined by Gratz (2007) has been chosen as a framework for synthesising the literature in this review. It has several benefits over other models (i.e. Gross, 1998), outlined by Lavender et al. (2015), including that it is more clinically informed, having been developed in the context of understanding maladaptive behaviours and psychopathology, that it has been applied in studies of ED previously (e.g., Brockmeyer et al., 2012; Harrison, Sullivan, Tchanturia, & Treasure, 2009; Harrison, Sullivan, Tchanturia, & Treasure, 2010; Racine & Wildes, 2013), and that it relates more directly to the emotion-related features of anorexia commonly studied in the literature. The studies included will be discussed and synthesised in relation to the four dimensions outlined in section 1.3.

[1] Where participants are referred to as recovered both weight and symptom reduction have been taken into account, whilst weight-restored refers only to them having experienced weight gain

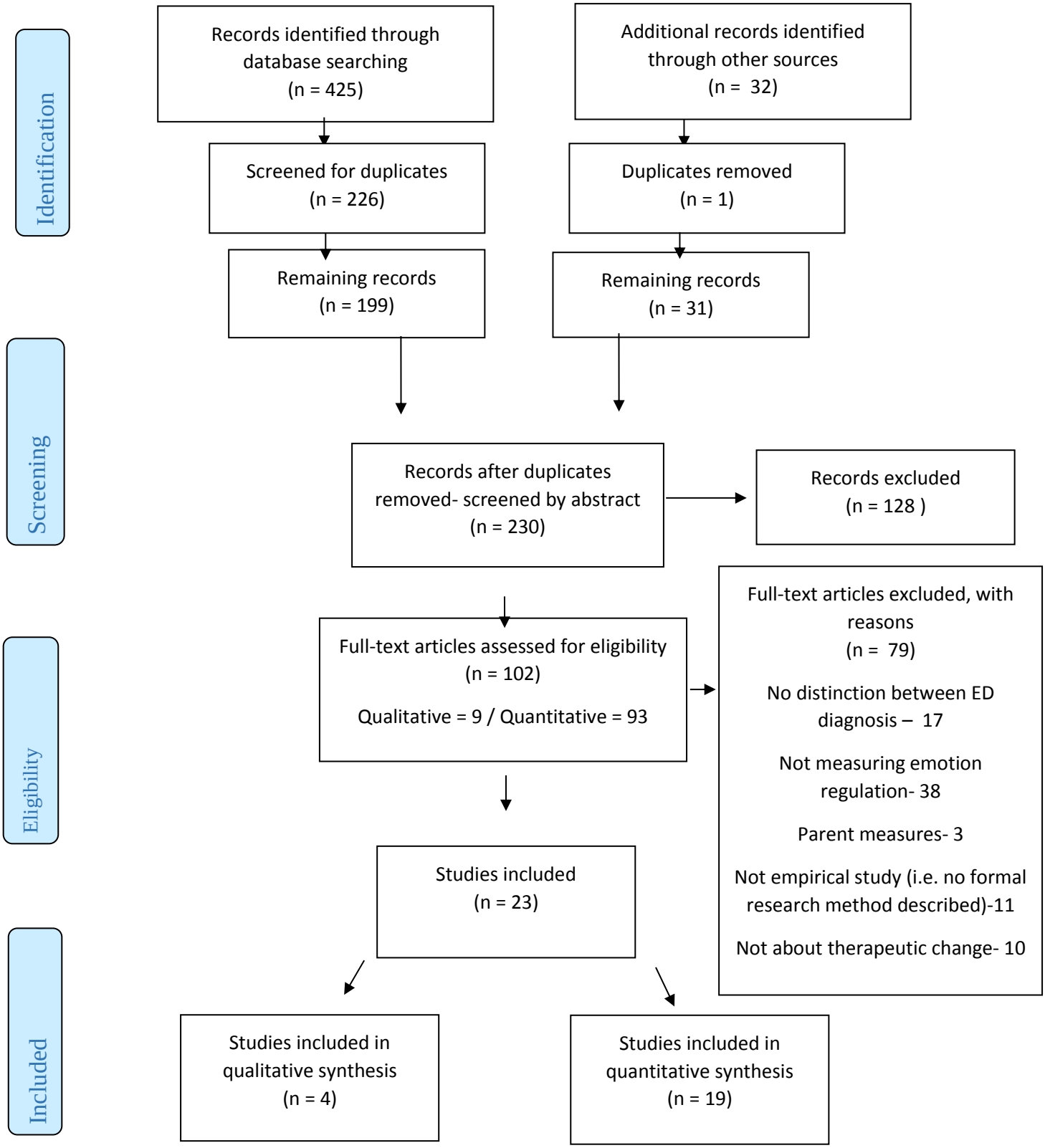

Figure 1. PRISMA flow diagram

Table 3. Summary of quantitative studies

Author	Design / participants	Study summary (relevant aims)	ER constructs measured (inc. dimension and measures)	Relevant findings
Beadle et al. (2013)	Repeated measures Participants with AN considered severely starved hospitalised for weight-restoration completed measures shortly after admission (n=26) and following weight-restoration (n=20)*, compared to HC's (n=16) *Retesting took place shortly after discharge hence not weight-restored for an extended period of time	To measure social empathy in AN investigate how weight affects relationships among alexithymia, empathy and self-regulation	Self-regulation (D1) - Minnesota Multiphasic Personality Inventory 2 (MMPI-2)- self-regulation subset Alexithymia (D3) - Toronto Alexithymia Scale (TAS)	Self-regulation difficulties higher in AN than HC but did not improve with weight restoration AN showed higher alexithymia than HC's and improvement following weight restoration (with no change seen in HC during time period) Effect of weight restoration largely due to the externally oriented thinking factor However, effect not maintained when depression controlled for
Bloks et al. (2001)	Repeated measures Inpatients (n=56) with a primary diagnosis of AN restrictive (n=19) or purging (n=37) subtypes filled in questionnaires within 2 weeks of admission and "a few weeks before discharge", and at 6-month follow-up (n=43) Compared against "two normative control groups" (18-25 years n=219, 25-35 years n=213) but no details provided about the sample, recruitment etc. Also included participants with bulimia but reported separately	To determine the association between changes in coping style and changes in eating disorder symptomology and psychological functioning during treatment	Expression of emotion (D3) - Utrecht Coping List (UCL), including expression of emotion subscale Coping in general not conceptualised here as ER necessarily	Although association found between process of recovery and adaptive coping more generally, no change was seen in expression of emotions subscale over time Also, no difference between AN, BN, HC- hence lack of deficit may explain this

Brockmeyer et al. (2012)	Cross-sectional Recovered group with recovery previously defined, history of AN, BMI>18.5, regular menstruation and normal eating patterns for 1 year (n=18) AN (no inclusion criteria described) (n=23) Clinical control group with diagnosis of depression or anxiety (n=18) HC's (n=32)	To explore the role of self-starvation in attenuating negative affective states in AN by examining the relationship between BMI and ER in people with acute AN, recovered AN, clinical controls and healthy controls	Emotion regulation (D1) - Difficulties in Emotion Regulation Scale (DERS)	ER difficulties similar in AN and REC group, which was significantly higher than HC's, with clinical controls somewhere between and not significantly different from any other group Association between BMI and ER difficulties found only in acute AN group, where lower BMI was associated with less difficulties in ER. Suggests AN functions as a coping strategy in acute phase, which disappears in recovery
Dapelo et al. (2016)	Cross-sectional Women with past diagnosis of AN and absence of symptoms for 1 year (n = 20) Women with AN (n=20) HC's (n=20)	To investigate the expression of positive affect in response to a film in women recovered from anorexia	Emotion expression (D3) - Duchenne and non-Duchenne smiles as measures by the Facial Action Coding System (Ekman, Friesen, & Hager, 2002)	Recovered group exhibited Duchenne and non-Duchenne smiles for longer duration and higher intensity than AN group, with no significant difference between recovered and HCs
Davies et al. (2012)	Quasi-experimental, repeated measures Participants were in-patients with diagnosis of AN, receiving either TAU (n=25) or TAU plus CREST (n=30) completed both pre- and post-intervention measures	To evaluate Cognitive Remediation and Emotional Skills Training (CREST) and report on BMI and neuropsychological measures before and after intervention	Emotion recognition (D3) - Reading the Mind in the Eye (RME) task - Pictorial emotional Stroop task	Neither group improved significantly on emotional processing tasks
Harrison, Tchanturia, & Treasure (2010)	Cross-sectional Recovered group reporting restored menstruation, for at least 1 year, absence of clinically	To examine emotion recognition, ER, and attentional biases to social stimuli following long term recovery from AN	Emotion regulation (D1) - Difficulties in Emotion Regulation Scale (DERS) Subscales of DERS - Goals (2)	Emotion dysregulation (including all 6 subscales) was higher in AN than R and HC (R=HC) This held true for all subscales

	significant EDE-Q scores, and BMI >18.5 for 1 year (n=35) AN group of inpatients, day patients and outpatients with clinician verified diagnosis of AN or meeting criteria following EDE (n=50) HC's (n=90)		- Impulse (D2) - Awareness (D3) - Strategies (D1) - Clarity (D3) - Non-acceptance (D2) Emotion recognition (D3) - Reading the Mind (RM) task - Emotional Stroop task	Emotion recognition and attentional bias for social and angry stimuli are lower in both AN and recovered group then HC = trait?
Haynos, Roberto, Martinez, Attia, & Fruzzetti (2014)	Repeated measures Participants with a diagnosis of AN admitted to inpatient treatment programme completed measures before (n=65) and after (n=51) weight restoration	To examine changes in ER following weight restoration and differences in ER between AN subtypes during acute and weight-restored stages	Emotion regulation (D1) - Difficulties in Emotion Regulation Scale (DERS) Subscales of DERS - Goals (2) - Impulse (D2) - Awareness (D3) - Strategies (D1) - Clarity (D3) - Non-acceptance (D2)	No difference in ER (all subscales) following weight restoration No association between ER and BMI Significant improvement on awareness subscale at .005 level of significance but less than small effect (n^2_Q=0.17) and not reported
Merwin et al. (2013)	Cross-sectional Self-reported current and lifetime ED symptoms and diagnostic interview (with amenorrhea criteria relaxed) Weight recovered group who met diagnostic criteria previously but currently weight restored for at least 6 months (n=15) AN group currently meeting diagnostic criteria (n=20) HC's had no current or past ED symptoms (n=24)	To examine the relationship between sensory sensitivity and ER in adults with AN and weight-restored AN	Emotion regulation (D1) - Difficulties in Emotion Regulation Scale (DERS) Subscales of DERS - Strategies (D1) - Non-acceptance (D2) - Awareness (D3) - Clarity (D3) - Goals (2) - Impulse (D2)	AN group scored higher than HC's on all subscales of DERS AN scored higher than WR group on subscales strategies, non-acceptance, awareness, clarity (large effect sizes) AN did not differ from WR group on impulse control of goals subscales

Money, Davies, & Tchanturia (2011)	Case study 19-year old female meeting diagnostic criteria for AN-R with a BMI of 15.2 completed measures before and after inpatient CREST intervention	To describe the application of Cognitive Remediation and Emotional Skills Training (CREST) and report on clinical and self-report data collected before and after intervention	Emotion regulation strategies (D1) - Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) - reappraisal subtest/subscale? Alexithymia (D3) - Toronto Alexithymia - Scale (TAS) Emotional expression (D3) - The Emotion Expression Questionnaire (EES)	Improvements seen in using healthier ER strategies (ERQ reappraisal), alongside an increase in BMI and a reduction in ED symptoms following intervention Improvements seen in identifying emotions (TAS), alongside an increase in BMI and a reduction in ED symptoms following intervention No improvement seen in Emotional expression (EES) and a deterioration in ER suppression
Morris, Bramham, Smith, & Tchanturia (2014)	Cross-sectional Recovered group with past AN meeting DMS criteria with absence of symptoms for at least 1 year (n=25) AN group attending ED service meeting criteria for AN (n=28) HC's (n=54)	To explore the level of empathy in anorexia in terms of self-reported resonant experience of emotion in other people	Emotion recognition (D3) - Socio-Emotional Questionnaire (SEQ), subscale- 'emotional recognition'	- No difference in emotion recognition (AN=R=HC)
Oldershaw, Hambrook, Tchanturia, Treasure, & Schmidt (2010)	Cross-sectional Recovered from ED meeting criteria for AN or EDNOS with BMI > 19 and absence of ED pathology for 1 year (n=24) AN group attending outpatient service meeting diagnostic criteria for AN or EDNOS (n=40) HC's (n=47)	To examine whether difficulty with emotional theory of mind (eTOM) persists in recovery in adults with anorexia	Emotion recognition (D3) - Reading the Mind (RM) task - Music task - + emotional theory of mind (eTOM) measures- reading the mind in voice and reading the mind in films tasks	Group effect of RME task but no significant post hoc comparisons AN RMV & RMF scores significantly worse than Rec or HC Valence across RM tasks- Deficit in recognising negative emotions in AN relative to HC's and Rec group

				Deficit recognising positive emotions in AN relative to HC's, with Rec group midway Varied results in relation to valence within different RM tasks No group differences in music task eTOM & emotion recognition = deficit in AN but not R or HC
			Emotional awareness (D3) - Level of Emotion Awareness Scale (LEAS)	Current AN group, but not Rec group, significantly poorer than HC's in imagining emotions in themselves (LEAS)
Oldershaw et al. (2012)	Cross-sectional Recovered group- Women recruited via Trust database with BMI > 19 and absence of ED pathology for 1 year (self-reported current and past ED pathology; n=24) AN group- Attending outpatient service meeting diagnostic criteria for AN or EDNOS (n=40) HC'S (n=48)	To examine beliefs about emotions, emotional tolerance, and avoidance and emotion suppression in recovered anorexia patients	Distress tolerance (D2) - Distress Tolerance Scale (DTS) Emotion avoidance (D3) - Avoidance of affect subscale of DTS Self-silencing (D3) - Silencing the Self Scale (STSS)	Only avoidance of affect subscale of DTS was significantly different between groups and deficit here was not maintained in recovered group (AN>R=HC) Avoidance of affect subscale of distress tolerance and externalised self-perception of STSS (medium-large effect sizes) more maladaptive in AN than HC, and not seen in R (similar to HC) On 'externalised self-perceptions' and 'divided self' subscales of the STSS AN group scored significantly higher than REC and HC's, with medium to large effect sizes On 'care as self-sacrifice' and 'silencing the self' subscales AN group scored significantly higher

				than HCs, with Rec group in the middle
			Beliefs about emotions (D3) - Beliefs about Emotions Scale (BES)	Negative beliefs about emotions significantly higher in AN than HC (large effect size), not seen in R (med effect size) (similar to HC)
Racine & Wildes (2015)	Repeated measures BMI < 18.5 and meeting diagnostic criteria for AN Discharged from intensive inpatient or day hospital treatment programme 3-month follow-up (n=162) 6-month follow-up (n=160) 12-month follow-up (n=152) (Total n=187)	To evaluate longitudinal relationships between ER and AN severity over the years following discharge from treatment	Emotion regulation (D1) - Difficulties in Emotion Regulation Scale (DERS)	ER predicted AN symptoms (but not vice versa) ER influenced change cumulatively, low ER predicting decrease in AN symptoms and high ER predicting an increase and maintenance of AN symptoms
Rowsell, MacDonald, & Carter (2016)	Repeated measures/pre-post Inpatient/day treatment service users meeting diagnostic criteria for AN and BMI ≤ 17.5 Completed measures before (n=108) and after treatment and weight restoration (53)	To examines the nature and extent of ER difficulties in AN; to determine whether improvements in ER improved during treatment; to examine whether improvements in ER were associated with ED psychopathology	Emotion regulation (D1) - Difficulties in Emotion Regulation Scale (DERS) Subscales of DERS - Goals (2) - Impulse (D2) - Awareness (D3) - Strategies (D1) - Clarity (D3) - Non-acceptance (D2) Clarity (D3) - Clarity subscale of DERS Goals (D2) - Goals subscale of DERS	-Effect of treatment on DERS, including all 6 subscales but not after controlling for weight gain Improvement in ED pathology over time associated with DERs, particularly goals and emotional clarity after controlling for weight AN binge-purge subtype showed greater improvements on impulse

			Impulse control (D2)	control than restrictive subtype after controlling for weight gain
Schmidt et al. (2015)	RCT Outpatients referred to specialist ED services with a diagnosis of anorexia nervosa or EDNOS and a BMI of 18.5 or less (n= 142) randomly allocated to MANTRA (n=72) or SSCM (n=70) 6 & 12 month follow up	To evaluate efficacy and acceptability of The Maudsley Model of Anorexia Nervosa Treatment for Adults (MANTRA) compared with Specialist Supportive Clinical Management (SSCM)	Emotion recognition (D3) - Reading the Mind (RM) in Film task	Didn't report baseline RME scores or change over time within groups. Does report other significant findings and says "OCI-R and social-cognitive measures changed less consistently or not at all", despite improvements in ED symptomology and other clinical variables
Stroe-Kunold et al. (2012)	Time series/Single case design 25-year-old female with AN-P and recurrent depressive disorder, as measured by the SCID, and a BMI of 17.2 admitted to outpatient service completed electronic diary daily throughout treatment	To investigate the role of emotional avoidance during inpatient treatment	Emotion tolerance (D2) - Electronic diary items including- "today, I could not tolerate unpleasant emotions" (adapted from the Emotional Processing Scale [EPS], subscale avoidance)	Positive changes seen in ability to tolerate negative feelings, also linked to improvements in other psychosocial variables
Timko, Zucker, Herbert, Rodriguez, & Merwin (2015)	Repeated measures Adolescents with AN (although this was not included in inclusion criteria) below 90% of their ideal body weight for height and their families who took part in a ASFT intervention. Adolescent measures were taken at pre-treatment (n=47), mid-treatment (n=35), post-treatment (n=32) and follow-up (n=11)	To conduct a preliminary investigation of an Acceptance-based Separated Family Treatment (ASFT) in treatment of adolescents with anorexia	Acceptance/experiential avoidance (D3) - Acceptance subscale of DERS - Action and Fusion Questionnaire (AFQ)	Significant reduction in experiential avoidance (AFQ) by post-treatment Acceptance, as measured by subscale of the DERS, did not improve over times
Wildes et al. (2014)	Repeated measures	To evaluate preliminary effectiveness of Emotion Acceptance Behaviour Therapy	Acceptance/experiential avoidance (D3)	Reduction in AAQ following treatment, with a slight rise at follow up

	Participants who met diagnostic criteria for AN (with amenorrhea criteria relaxed) and had BMI's between 16.0 – 18.5 EABT completed measures before (n=24) and after (n=16) EABT treatment, and at 3-month (n=19) and 6-month (n=18) follow-up	(EABT) with outpatients with anorexia	- Acceptance and Action Questionnaire (AAQ)	
Wildes & Marcus (2011)	Case series Repeated measures Women (n=4) with a diagnosis of AN-R (n=3) or AN-BP (n=1) engaged in EABT	To describe EABT for older adolescents and adults with anorexia	Acceptance/experiential avoidance (D3) - Acceptance and Action Questionnaire (AAQ)	Three of the four participants showed modest improvement in BMI and other outcomes, including emotional acceptance

Table 4. Summary of qualitative studies

Study	Methodology	Sample	Focus	Key ER Themes
Federici & Kaplan (2008)	Not defined	Women who had completed inpatient treatment and follow-up relapse prevention programme, identified as 'Relapsed' (n=8) or 'recovered' (n=7) according to BMI.	Views of illness following weight restoration- factors contributing to relapse or recovery	Six categories identified with themes relating to both recovery and relapse in each - Internal motivation for change- In contrast to recovered P's who spoke of desire to let go of symptoms, relapsed p's the benefits of ED as coping strategy continued to outweigh the costs. (D1) - Perceived values of treatment- Whilst recovered P's felt treatment has exceeded expectation, relapsed P's felt that focus on behavioural goals overshadowed other important psychological and emotional issues (D2) - Developing supportive relationships- Recovered p's spoke about letting others in whilst relapsed reported little social support (D1/ D4) - -**Awareness and tolerance of negative emotions (specifically)-** recovered p's spoke of learning to identify, tolerate, express and manage emotions and feeling less overwhelmed by them (D1/D3). Spoke about sharing feelings, gaining a sense of self-esteem and a sense of control over negative affect (D1). Relapsed p's reported not experiencing the same learning curve and difficulty tolerating emotions complicating
Jenkins & Ogden (2011)	IPA	Women who have had a diagnosis of AN and received treatment, and identified as 'recovered' or 'in recovery' (n=15)	Qualitative exploration of 'recovery'	- Anorexia as a means of communicating distress/vehicle for coping/controlling distress (bodily expression of distress) (D1) - Treatment and positive relationships led to more connection with emotions (D3) - Recovery involved using language/non-bodily means of expressing and communicating distress (D1) - Advantages of recovery, including greater self-awareness, outweighed negatives (D3)
Money, Genders, Treasure, Schmidt, & Tchanturia (2011)	Content Analysis	Inpatients with a diagnosis of AN who completed CREST intervention (n-28)	Evaluation of CREST intervention- end of therapy reflection forms	- Valued education regarding the function of emotions - Developed emotional awareness/labelling/communicating feelings (D1/D3) - Learnt strategies to manage and express emotions helpful (D1)
Weaver, Wuest & Ciliska (2005)	Feminist Grounded Theory	Women who self-identified as 'recovered' or 'recovering' from AN (n=12)	Self-development model of recovery from descriptions of recovery journey	- Using AN to express in their bodies what cannot express using language (D1) - As part of 'finding me', the turning point for many of participant involved 'encountering self', which in turn involved developing skills in self-expression and managing difficult emotions or social situations (D1). - For some, learning about unmet emotional needs and reparenting was seen as useful (D3) - Recovery phase of 'taking care of myself' involves nurturance and self-compassion, as well as letting others in (D1/D3)

4.0 SYNTHESIS

4.1 Dimension 1: Flexible use of situationally appropriate strategies

Eight of the quantitative studies were found to include outcome measures relating to ability to use appropriate strategies. Measures of ER more generally, as well as specific measures of ER strategies, are considered relevant to this dimension, including the Difficulties in Emotion Regulation Scale (DERS; Brockmeyer et al., 2012; Racine & Wildes, 2015), particularly the access to strategies subscale (Harrison, Tchanturia, & Treasure, 2010; Haynos, Roberto, Martinez, Attia, & Fruzzetti, 2014; Merwin et al., 2013; Rowsell, MacDonald, & Carter, 2016), the Emotion Regulation Questionnaire (ERQ; Money, Davies, & Tchanturia, 2011), and the self-regulation subset of the Minnesota Multiphasic Personality Inventory (MMPI-2; Beadle, Paradiso, Salerno, & McCormick, 2013).

There is some support within the literature that recovery from anorexia is associated with improvements in ER strategies. In one large-scale longitudinal study, high emotion dysregulation was found to predict an increase in and maintenance of anorexia symptoms, whilst low emotion dysregulation predicted a decrease in anorexia symptoms (Racine & Wildes, 2015). Another smaller study found that women recovered from anorexia demonstrated similar levels of ER, including access to strategies, to healthy controls, with the acute anorexia group showing significantly more difficulties (Harrison et al., 2010). In a third study (Merwin et al., 2013), the greater difficulty in ER and access to strategies seen in people with current anorexia relative to healthy controls was not found to be maintained in the weight restored group, although the authors did not report a significant difference between the weight restored group and either the current anorexia or control group. These less conclusive results may be due to the smaller sample size than in the other studies. Rowsell et al. (2016) found overall improvements in ER and access to strategies following intensive treatment for anorexia,

however this was not maintained after controlling for the effects of weight gain. The authors suggest that this could be explained in terms of a positive effect of weight restoration on ER independent of the effects of psychotherapy, or that weight restoration and treatment together may improve ER.

There is also evidence against the relationship between recovery from anorexia and improved ER. In another relatively small-scale study, Brockmeyer et al. (2012) found that greater difficulties in ER relative to a healthy control group were similar amongst participants with current and recovered anorexia. Using correlational analysis, the authors also looked at the relationship between ER difficulties and BMI across the different groups. They found that there was a strong positive correlation between BMI and emotion dysregulation in the current anorexia group only. The authors interpret the finding that lower BMI is associated with fewer ER difficulties in the acute phase of anorexia as suggestive that anorexia functions as a strategy to cope with emotions initially but that this regulatory effect disappears during recovery.

Another study (Haynos et al., 2014) found that despite seeing improvements in a range of clinical variables and a reduction in eating disorder symptoms, ER and access to strategies did not improve with weight restoration in their sample. The authors suggest that either anorexia may be associated with long-standing ER difficulties that are unlikely to change without targeted treatment, or that starvation impacts ability to regulate emotions to the extent that initial weight restoration is insufficient to restore such capacities. Unlike other studies reported earlier, this research did not have a minimum weight restored period and instead appeared to repeat their measures immediately following weight restoration whilst in inpatient care. The improvements seen in long-term recovery (Harrison et al., 2010; Merwin et al., 2013; Racine & Wildes, 2015) support the hypothesis that in contrast to other more immediate changes it may take longer for improvements in ER to appear. Context may also be important in that the inpatient environment may not be conducive to emotional change. Although limited

in terms of rigour, one case study found improvements in using healthier ER strategies, alongside an increase in BMI and a reduction in ED symptoms, following a Cognitive Remediation and Emotional Skills Training (CREST; Money, Davies, et al., 2011). This lends support to the idea that more targeted treatments are required to influence ER in the short-term.

One study (Beadle et al., 2013) found participants with anorexia during the starvation phase to have lower self-regulation, as measured by the MMPI-2, than healthy controls, but that this did not improve following weight restoration. These results, which contrast some of the literature outlined above, may have been influenced by the broader construct of self-regulation utilised in this study, as well as the short interval between retesting. Personality measures, by their definition, may also be less amenable to change.

Three of the four qualitative studies reported on participants' experiences of changes relating to strategies for regulating emotions. In Jenkins and Ogden's (2011) study, participants saw their anorexia as having been a way of coping with and controlling their distress and, like Weaver, Wuest, and Ciliska's (2005) participants, as a physical way of expressing how they felt. Recovery, it seemed, was linked with a desire to let go of ED symptoms as a way of coping, whilst continuing to view ED behaviour as a helpful way of coping that outweighs any costs was linked with relapse (Federici & Kaplan, 2008).

In summary, qualitative research suggests that symptoms of anorexia may function as a way of managing and expressing feelings physically, and that this may be replaced by other more adaptive strategies during recovery. Evidence from the quantitative literature suggests that difficulties in managing emotions and an absence of effective ER strategies seen in acute anorexia improve with recovery, and this may be particularly linked to weight gain. Contradictory findings suggest that it may take time for improvements in ER to occur following weight gain and/or symptom reduction, and that treatments specifically targeting emotions may

be most effective, which is further supported by the qualitative literature. There is some limited evidence to suggest that low weight in acute anorexia is associated with less difficulties regulating emotions, supporting the functional role of anorexia.

4.2 Dimension 2: Ability to inhibit impulses and remain goal directed when distressed

The ability to tolerate difficult emotions or distress, as opposed to, for example, responding with maladaptive strategies, is seen as a construct that sits within this dimension (Lavender et al., 2015). Two quantitative studies and one qualitative study were found pertaining to tolerance of emotions. In addition, four studies reported on changes on relevant subscales of the DERS relating to difficulties in maintaining control over behaviour (impulse) and difficulties concentrating and accomplishing tasks (goals) when experiencing negative emotions.

Oldershaw et al. (2012) found that there were no significant differences between people with current anorexia, those recovered, and healthy controls in relation to two of three distress tolerance subscales of the DTS- 'anticipate and distract', and 'accept and manage'. They did, however, find that people with current anorexia reported significantly higher scores in relation behavioural avoidance of situations that might trigger negative affect ('avoidance of affect' subscale) than both those recovered and healthy controls. These results suggest that the deficit in distress tolerance in people with anorexia is limited to behavioural avoidance and does not involve cognitive avoidance of emotions or an inability to accept or manage emotions, and that this improves in recovery. Despite being a relatively high quality study, these authors included people diagnosed with Eating Disorder Not Otherwise Specified (EDNOS) into their anorexia sample, which may have confounded results.

Temporal relationships between emotional tolerance and other psychosocial variables were seen in a case study carried out by Stroe-Kunold et al. (2012). Using a time series

approach they found that the more the participant was able to tolerate negative feelings on any one day, the less she reported social avoidance, being cognitively confined to thoughts about food and eating, experiencing depressive symptoms, and pro-anorectic beliefs, the following day. Emotional tolerance was measured by the participant's responses to an electronic diary item adapted from the Emotional Processing Scale (EPS; subscale avoidance)- "today, I could not tolerate unpleasant emotions", and is therefore a much less robust measure. However, despite methodological limitations, it does suggest that improvements in subjective ability to tolerate negative emotions may be linked with recovery.

This is supported by one of the qualitative studies (Federici & Kaplan, 2008) in which participants spoke about the importance of learning to tolerate negative emotions as being central to their recovery. One participant explained how she was now able to tolerate negative emotions and not allow them to turn into negative behaviours. Furthermore, relapse appeared to be linked with difficulty tolerating negative affect and struggling to cope with intense feeling of loneliness, depression, and anxiety, often leading to the development of other destructive coping strategies.

Of the studies that looked at the impulse and goals subscales of the DERS, one found no improvements following weight gain (Haynos et al., 2014), and a second found that those currently ill did not differ from those weight-restored (Merwin et al., 2013). Conversely, a third study (Rowsell et al., 2016) found improvement on these scales following treatment, which was associated with weight gain. Improvements on the goals subscale was found to be associated with improvements in ED pathology over time, as measured by the Eating Disorder Examination Questionnaire (EDE-Q; Cooper, & Fairburn, 1987), independent of the effects of weight gain. It should be noted however that all three of these studies relied on a relatively short time lapse (0-6 months) in looking at change. Findings from a more methodologically robust study (Harrison et al., 2010) suggest that people recovered from anorexia in terms of

both weight gain and a reduction in ED symptoms for at least one year perform significantly better than those currently ill in relation to controlling impulses and maintaining goal directed behaviour.

The evidence suggests that changes in ability to tolerate negative emotions are perceived as important for people in their recovery from anorexia, and that this may be particularly important in relation to behaviour, for example not avoiding certain situations and not responding with maladaptive behaviours in response to difficult emotions. The evidence is mixed in relation to improvements in impulse control and pursuing goals when experiencing negative emotions following weight gain. However, the strongest evidence suggests that improvements in goal-directed behaviour be related to a reduction in ED symptoms independent of weight gain, and that recovery, determined by weight gain and a reduction in ED symptoms, over a longer period of time, is associated with improvements in both goal-directed behaviour and impulse control.

4.3 Dimension 3: Emotional awareness, understanding and acceptance

This dimension pertains to perceptions of and reactions to one's emotional experiences (Lavender et al., 2015). This has been broken down further into awareness and understanding, and acceptance. For the purpose of this review awareness, or being attentive to one's emotions, and understanding, referring to the understanding of and ability to differentiate emotional experiences, have been combined. Awareness of one's emotions, as measured by the awareness subscale of the DERS or the Level of Emotional Awareness Scale (LEAS), was reported on in five studies. Four of these studies also reported on knowledge and clarity about emotions, as measured by the clarity subscale of the DERS. A further two studies measured alexithymia, which refers to an inability to identify and describe emotions in oneself, as measured by the Toronto Alexithymia Scale (TAS). Here, as in previous reviews (Lavender et al., 2015),

emotion recognition in self and others is also conceptualised within this domain and five studies were found reporting such measures.

Acceptance, which will be discussed separately, refers to the extent to which emotional experiences are accepted or rejected. Eight studies were identified that explore this concept using measures such as the non-acceptance subscale of the DERS, the avoidance of affect subscale of the Distress Tolerance Scale (DTS), the Acceptance and Action Questionnaire (AAQ), and the Action and Fusion Questionnaire (AFQ). As with previous reviews (Lavender et al., 2015), emotional expression and emotional suppression, and negative beliefs about emotions, are considered closely related to acceptance and avoidance, and will also be discussed here. Measures applied in the four studies found include the expression of emotion subscale of the Utrecht Coping List (UCL), the Emotion Expression Questionnaire (EEQ), behavioural measures of actual smiles, the Silencing of The Self Scale (STSS), and the Beliefs about Emotions Scale (BES).

4.3.1 Awareness and Understanding

Emotional awareness, as measured by the awareness and clarity DERS subscales, has been found to improve in people following weight restoration (Rowsell et al., 2016), which combined with improvements in goal directed behaviour described above, accounted for approximately 36% of improvements in eating pathology, as measured by the EDE-Q, after controlling for weight. It has also been found to be similar in recovered (Harrison et al., 2010) and weight-restored (Merwin et al., 2013) individuals relative to controls and significantly better than in people with current anorexia. Similarly, difficulties in imagining emotions in oneself, as measured by the LEAS, seen in participants with current anorexia relative to controls, have not been found to be maintained in recovered groups (Oldershaw, Hambrook, Tchanturia, Treasure, & Schmidt, 2010). These findings are supported by qualitative accounts

highlighting the value of education regarding the function of emotions and improved emotional awareness following CREST (Money, Genders, Treasure, Schmidt, & Tchanturia, 2011).

Contrasting evidence comes from Haynos et al. (2014) who found that scores on the DERS subscales did not improve with weight restoration, nor was there an association between BMI, and awareness and clarity scores. Closer inspection of their reported findings revealed that there was a significant improvement on the awareness subscale at .005 level of significance but a lower than small effect (n^2 =0.17) and therefore it was not reported. Nevertheless, as discussed in sections 4.1 and 4.2, Haynos et al.'s study has limitations and the contradictory evidence reported above comes from rigorous research reporting medium to large effect sizes (Harrison et al., 2010; Merwin et al., 2013; Oldershaw et al., 2010) and moderate to strong correlations (Rowsell et al., 2016).

Beadle et al. (2013) found higher levels of alexithymia amongst people with current anorexia than healthy controls that reduced following weight restoration, largely due to participants' scores on the 'externally oriented thinking' factor, which reduced to levels seen in the control group. However, the effect of weight gain on alexithymia was not maintained when depression was controlled for. Whilst this study has strengths in that it compared the same participants at two time points and used a control group, and it controlled for extraneous variables such as depression, the sample size was modest and the two time-points were close together, which does not allow for examination of longer term changes. Similar results were found in the CREST case study by Money, Davies, et al. (2011), which saw slight improvements in alexithymia total score, including the externally oriented thinking factor, alongside clinical improvements. Although these results alone cannot be interpreted with any confidence due to methodological limitations, the fact that they reflect a similar pattern to Beadle et al.'s (2013) study in terms of change across the different factors of the TAS may warrant further investigation.

Several studies examined changes in emotion recognition, as measured by emotion-processing tasks, such as the Reading the Mind in the Eyes task (RME; Baron-Cohen, Wheelwright, Hill, Raste, & Plumb, 2001), which requires participants to identify what a person might be thinking or feeling from a photograph of the eye region. Difficulties found in emotion recognition amongst participants with anorexia relative to controls were not found to have improved in recovered participants (Harrison et al., 2010), or in people following an emotion targeted intervention (CREST), despite improvements in BMI and other cognitive measures (Davies et al., 2012). Similarly, emotion recognition was not reported to have improved alongside eating disorder symptomology and other clinical variables following MANTRA or SSCM interventions (Schmidt et al., 2015). Conversely, when self-reported emotion recognition was measured (Morris, Bramham, Smith, & Tchanturia, 2014), using a subscale of the socio-emotional questionnaire (SEQ), there was not found to be a deficit in those with current anorexia relative to healthy controls, hence no improvements in the recovered group were found. These findings that contradict extensive evidence suggesting a deficit in emotion recognition in anorexia (Lavender et al., 2015) may be limited by the measure used. Whilst the LEAS total score has good reliability and had been validated on people with cognitive impairments, reliability of the subscales is more variable.

In contrast to some of the findings outlined above, one study (Oldershaw et al., 2010) found some deficits in emotion recognition and emotional theory of mind (eTOM), which refers to the ability to make inferences about another person's feelings, amongst participants with current anorexia relative to healthy controls that were not maintained in a recovered group. For example, they found that those with current anorexia showed a deficit in recognising negative emotions compared with both healthy controls and those recovered. It is possible that because they examined numerous outcomes in relation to the emotion-processing tasks, in the form of various adaptations of the RME task described above, their study was more sensitive

in detecting specific deficits in emotion recognition, such as recognising emotions from the voice, associated with the illness and recovered states of anorexia. It is also possible that multiple comparisons increased the chances of making a type 1 error (false positive) in this study.

The qualitative literature offers further insights around the role of awareness and understanding in recovery. Participants across the studies spoke about the importance of learning about unmet emotional needs (Weaver, Wuest & Ciliska, 2005), learning to identify emotions (Federici & Kaplan, 2008), and gaining greater self-awareness (Jenkins & Ogden, 2011), as being important in their recovery. They also spoke of treatment, as well as building positive relationships with others, as leading to more connection with their emotional experiences (Jenkins & Ogden, 2011).

In summary, the available evidence is mixed in relation to changes in awareness and understanding that take place in the process of recovery from anorexia. The strongest evidence suggests that improvements in self-reported awareness and clarity do occur following weight gain and recovery, and possibly involve a combined effect of weight increase and symptom reduction over time. This also appears to be a helpful aspect of therapy for people. Improvements in alexithymia alongside weight restoration, particularly in relation to a reduction in tendency to focus attention externally, is indicated, despite evidence being limited. It seems that this may be associated with a reduction in levels of depression.

The quality of the studies on emotion recognition, as measured by emotion-processing tasks, vary and findings are mixed. However, when taken together they do suggest that deficits in emotion recognition may not improve alongside other clinical variables in people with anorexia, or that only specific deficits, for example in recognising negative emotions, improve. In addition, there is evidence to suggest there may not be a deficit in the ill state in relation to

self-reported emotion recognition. The qualitative literature suggests that improvements in emotional awareness and understanding are experienced as an important part of the recovery process.

4.3.2 Acceptance (including expression, suppression, and beliefs about emotions)

The available research indicates that people weight restored (Merwin et al., 2013) and recovered (Harrison et al., 2010) from anorexia show lower levels of non-acceptance, as measured by a subscale of the DERS, than those currently ill, and that improvements occur alongside weight gain in those tested before and after treatment (Rowsell et al., 2016). These results are consistent with the finding reported in section 4.2 that greater distress tolerance seen in recovered people relative to those with current anorexia is due to less avoidance of affect (Oldershaw et al., 2012). Haynos et al.'s (2014) study found no improvement in their sample following weight restoration, as with other subscales of the DERS, and no relationship between non-acceptance and BMI. Again, methodological limitations may not have allowed the researchers to identify changes that occur over time.

A subgroup of studies investigated the impact of acceptance-focussed interventions, including EABT (Wildes et al., 2014; Wildes & Marcus, 2011) and Acceptance-based Separated Family Treatment (ASFT; Timko, Zucker, Herbert, Rodriguez, & Merwin, 2015). In their pilot study Wildes et al. (2014) found that alongside weight gain and a reduction in eating disorder psychopathology, participants reported improvements post treatment and at three-month follow-up in emotional acceptance, as measured by the AAQ, which rose again at six months but not to pre-treatment levels. Their findings support an earlier case series in which three of four participants receiving EABT showed improvements on the AAQ (Wildes & Marcus, 2011), although both studies are limited in terms of sample size. Similarly, Timko et al. (2015) found that adolescents receiving ASFT experienced a significant decrease in experiential avoidance, as measured by the Action and Fusion Questionnaire (AFQ), at post-

treatment. However, in the same study acceptance, as measured by the non-acceptance subscale of the DERS, did not improve. These contradictory findings in relation to the Wildes et al. (2014) study may be due to the younger age of participants and the unique focus of ASFT in supporting parents, which may be less conducive to individual change than adult interventions that focus solely on the person with anorexia. This study also suffered from high attrition and a small sample at follow-up.

Three studies investigated changes in emotional expression. Bloks, Spinhoven, Callewaert, Willemse-Koning, and Turksma (2001) found no difference in self-reported emotional expression between people with different anorexia subtypes, those with bulimia, or healthy controls, prior to treatment. Within the anorexia group, a reduction in eating disorder psychopathology and increased BMI was associated with more adaptive coping styles generally, as measured by the UCL, but not changes in expression of emotions specifically. Due to the lack of information about the control group these findings should be interpreted with caution, however they do seem to suggest an absence of deficit in emotional expression in the ill state, which might explain the absence of improvement in recovery. Using the EEQ, the CREST case study (Money, Davies, et al., 2011), whilst holding in mind its limitations, also found no change following treatment and clinical improvement. However, people recovered from anorexia have been found to express more positive emotions, comparable with healthy controls, than those with current anorexia (Dapelo, Hart, Hale, Morris, & Tchanturia, 2016). This study measured positive facial expressions as opposed to self-reported emotional expression, which may be less vulnerable to bias but possibly less valid as a construct of ER.

Contributions from the qualitative literature portray a more meaningful role for emotional expression in recovery. In contrast to the way people used anorexia to control (Jenkins & Ogden, 2011) and physically express (Weaver, Wuest & Ciliska, 2005) their emotions in the past, they described recovery as involving finding new ways of expressing and

communicating what they were feeling, and developing skills in self-expression and managing difficult emotions or social situations. Supporting this idea is another study (Federici & Kaplan, 2008) which found that people defined as recovered from anorexia spoke of sharing their feelings with others and gaining a sense of control over their negative emotions, whilst those who had relapsed reported having very little social support. Recovery, in addition to being associated with letting others in, also appeared to be linked to developing self-compassion and nurturance (Weaver, Wuest, & Ciliska, 2005). Findings from a fourth study (Money, Genders, et al., 2011) suggest how emotion-focused treatment may facilitate such changes. Following a CREST intervention, participants reported having learnt strategies to help them manage and express their emotions, and having developed their ability to communicate their feelings, which they identified as a helpful aspect of therapy. The findings from the qualitative research in relation to changes in emotional expression, despite studies being of varied quality, are strikingly consistent.

Returning to the quantitative literature, negative schemata around emotional suppression in the context of securing intimate relationships, as measured by the STSS, has been found to improve following recovery from anorexia (Oldershaw et al., 2012). Significantly lower scores on all subscales of the STSS were found in people with current anorexia compared with healthy controls, which were not maintained in the recovered group. On subscales pertaining to having an externalised self-perception and a divided self, people recovered showed significant improvements relative to currently ill participants, similar to the levels of healthy controls. Furthermore, negative beliefs about emotions, as measured by the BES, were found to be significantly reduced in recovered participants, relative to those with current anorexia, with similar levels to those seen in healthy controls.

Taken together this area of research suggests that non-acceptance and avoidance of affect may improve with recovery from anorexia and that interventions specifically targeting

acceptance may lead to more emotional acceptance and less experiential avoidance. Whilst it remains unclear whether improvements in emotional expression occur alongside clinical improvements, qualitative research suggests that this is an important aspect of subjective experiences of recovery. Reductions in schemata around emotional suppression and negative beliefs about emotions also appear to occur.

4.4 Dimension 4: Willingness to experience negative emotions to pursue meaningful activities

As described by Lavender et al. (2015) this dimension involves being willing and able to tolerate emotionally aversive experiences in the context of pursuing meaningful activities. Unlike dimension 2, which focusses on the ability to exercise behavioural control when distressed, dimension 4 focusses on willingness to approach and remain in potentially emotional experiences, and not avoid potentially meaningful activities. Although studies looking at change in outcomes relevant to this criterion, including behavioural inhibition and activation (Harrison, Treasure & Smillie, 2011), novelty seeking, harm avoidance, reward dependence and persistence (Wagner et al., 2006), and punishment and reward sensitivity (Frank et al., 2013), were found, none of these met the inclusion criteria for this review (e.g. reporting anorexia and bulimia participants score separately).

The findings from Oldershaw et al. (2012) in relation to improvements in the avoidance of affect subscale of the DTS in recovered participants outlined in section 4.2 is relevant here. Although discussed in relation to distress tolerance (dimension 2), which was the overarching construct measured, reported changes were in relation to less behavioural avoidance of situations that would trigger emotions, which sits here.

The qualitative literature alluded to the importance of being willing to experience negative emotions in pursuit of meaningful activities. Federici and Kaplan (2008) for example

found that their participants were motivated to let go of anorexia, which they saw as conflicting with their beliefs and life goals, which also involved learning to tolerate emotions.

5.0 DISCUSSION

5.1 Summary of findings

Available evidence suggests that people get better at managing their emotions during the process of recovery from anorexia and indicates that this may be particularly related to gaining weight. It also indicates that such changes are likely to occur, if at all, over time and not immediately following weight gain and/or clinical improvement. It is likely that treatments specifically targeting emotions may be particularly facilitative of such changes. Theories that emphasise the functional role of anorexia in helping people to manage their emotional experiences (Haynos & Fruzzetti, 2011; Oldershaw et al., 2015; Wildes, Ringham & Marcus, 2010) are supported. Quantitative research indicating an association between low weight and fewer ER difficulties in the acute phase of anorexia that disappears with recovery is supported by qualitative accounts of people developing more adaptive strategies over time.

The evidence is mixed in relation to whether weight gain is associated with improvements in controlling impulses and pursuing goals when distressed. However, there does appear to be positive change in this area over time during the process of recovery when clinical improvements are also taken into account. Evidence suggests recovery involves improvements in subjective ability to tolerate negative emotions, and less of a tendency to avoid situations or respond to distress with maladaptive behaviour.

In relation to awareness and understanding of emotions, again the evidence is mixed. However, overall it suggests that a combination of weight gain and symptom reduction is associated with increased emotional awareness and clarity about emotions over time, and that therapy is experienced as facilitative of such changes. Whether people experience

improvements in their ability to recognise emotions in others remains unclear and it may be that people with anorexia do not perceive themselves to have a deficit in this area.

Recovery appears to be associated with an increase in acceptance and a decrease in avoidance of emotions, particularly in response to interventions that specifically target acceptance, such as EABT (Wildes & Marcus, 2011; Wildes, Marcus, Cheng, McCabe, & Gaskill, 2014). Whilst the quantitative literature suggests that negative schemata around emotional suppression reduce following recovery, it is less clear whether this is associated with improvements in emotional expression. Nevertheless, the qualitative literature suggests that beginning to express one's emotions is experienced as an integral part of recovery.

Willingness to experience negative emotions to pursue meaningful activities is difficult to conceptualise and measure, but may be an important part of the change process, particularly in relation to being willing to let go of anorexia, and experience difficult emotions, to pursue goals.

5.2 Limitations of literature

The evidence outlined in this review is mixed and there is little by the way of conclusive evidence for change in any of the areas of emotion processes. There are no quantitative studies directly measuring dimension 4, and indeed this may be a difficult construct to measure. Findings from the qualitative literature do not always fit neatly into the four dimensions, which may also be a limitation of this review. Although the DERS is a commonly applied measure of ER and generally maps on well to the dimensions outlined by Gratz (2007), due to modifications of the original model (Gratz & Roemer, 2004), it does not measure the final dimension.

A general issue is the variability between studies. It is difficult to find any two studies that examine the same construct of ER and the same construct of recovery, for example weight

gain versus reduction in symptoms. There is also variability in the quality of the research, which in general suffers from small sample sizes and other methodological problems. Controlling for potentially confounding variables, including depression and anxiety, and the nature of treatment received, was generally poor, and none of the studies appeared to account for potential sampling biases. In particular, delineating the effect of increasing weight and decreasing ED symptoms, and including long term follow up, or a sample recovered for one year or more, are inconsistent. There are examples of good quality qualitative research, however these have limited transferability and as yet none have focussed primarily on change in ER during the recovery process, instead focussing on either the role of emotions in anorexia or the recovery.

5.3 Clinical implications

In general, the evidence outlined here supports a clinical focus on emotions in the treatment of anorexia. In combination with existing evidence about emotional dysregulation in the acute phase of anorexia, it also provides useful information for clinicians about which aspects of ER may be amenable to change. For example, developing a better understanding of emotions, perhaps through psychoeducation, increasing emotional acceptance and tolerance, and developing more adaptive strategies for managing emotions, may be particularly helpful treatment targets. Cognitive approaches may wish to focus on guiding change in negative schemata around emotional suppression. Having more understanding of the functional role of anorexia in helping people to manage emotions may help inform clinicians, alongside individualised assessment, formulation, and intervention.

5.4 Further research

Further research explicitly investigating changes in ER in the process of recovery from anorexia is needed. It should be clear about what aspects of ER are being examined and use well-established measures, such as the DERS, reporting subscale scores where appropriate.

Such research should also be clear about how it is defining recovery and delineate the effects of weight gain and symptom reduction where possible, as well as examining the mediating role of other clinical variables. Longitudinal research that includes a control comparison group may be particularly helpful, and longer term follow-ups may increase the likelihood of detecting changes over time. Cross-sectional designs may also be appropriate, particularly when illness severity is controlled for between currently ill and recovered groups. In general, larger sample sizes than those seen in the current literature, and consistent reporting of effect sizes and confidence intervals, will improve the confidence with which findings can be interpreted.

Intervention studies would benefit from larger scale randomised controlled trials. Examining ER variables and their relationship to other recovery variables over time may be particularly helpful in examining the direction of the relationship between ER and recovery. Delineating the impact of treatment components on ER, clinical variables, weight gain and symptom reduction, across different emotion-focussed treatments would enhance current understanding of what helps facilitate recovery.

The disparateness of current research reflects the diversity of theoretical models of anorexia and the lack of consensus in the field about how it should be treated. Further qualitative research about the role of emotions, how these change, and what influences such changes, would enhance existing emotion-focussed maintenance models. It may also help to clarify how people with anorexia themselves see emotion processes as related to their anorexia, and their recovery, and narrow down aspects of ER that may be particularly amenable to change for further quantitative exploration.

6.0 CONCLUSION

In synthesising the diverse literature using the Gratz (2007) framework for conceptualising ER, this review has highlighted areas that may be particularly amenable to

change during recovery from anorexia. It suggests that improvements in some emotion processes, such as awareness and understanding of emotions, use of strategies for managing emotions, and acceptance and expression of emotions, do occur alongside weight gain and clinical improvement. This provides some support for emotion-focussed models of anorexia, particularly those emphasising the functional role of anorexia, and emotion-focussed treatments. It has also drawn attention to the gaps in the literature and suggested that a 'back to basics' approach is called for. Research should focus initially on in depth qualitative exploration of the experience of emotions and ER, including the change process, to ensure that the theoretical foundations upon which further research and treatment development is founded is sound.

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Section B

Seeing through the façade of anorexia: A grounded theory of change in emotion processes

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All names and locations have been disguised to preserve anonymity of participants

ABSTRACT

Objective: Difficulties in regulating emotions have been implicated in the development and maintenance of anorexia. However, the empirical and theoretical literature lack explanations about how emotion processes change during the process of recovery. This study seeks to theorise about how people with anorexia perceive their experience of emotion regulation and the factors that influence this, including any therapy-related change.

Method: A constructivist version of grounded theory was used to analyse data collected from semi-structured interviews with nine participants. The sample consisted of nine people attending an eating disorder service who were currently engaged in therapy.

Results: The analysis produced ten categories reflecting different aspects of the emergent grounded theory of change. Participants described moving between positions of creating a sense of safety in a world of uncertainty, seeing through the façade of anorexia, and recovery and growth. A maintenance model of *coping 'badly'* is also suggested by the data.

Discussion: Behaviours associated with anorexia are amongst the maladaptive strategies participants used to subjectively manage emotions and cope more generally. Positive change was experienced through developing awareness around such processes. The findings support an increased focus on emotions in the treatment of anorexia and offer suggestions about what may facilitate change, both in therapy and elsewhere.

Keywords: Anorexia; emotion regulation; recovery; therapy; qualitative research

1.0 INTRODUCTION

1.1 Understanding anorexia

Anorexia is a serious mental health problem, typically developing during adolescence and affecting approximately 0.9-2.2% of women over their lifetime (Hudson, Hiripi, Pope, & Kessler, 2007). People with anorexia engage in dangerous and sometimes life-threatening behaviours, such as extreme dieting, self-induced vomiting (purging), and excessive exercise, with the goal of maintaining a low body weight (British Psychological Society, n.d.). They often perceive themselves as being much bigger than they are and are reluctant to gain weight, making engagement in treatment particularly challenging.

Early accounts of anorexia describe disturbances in perception and recognition of bodily states, such as hunger, inner-doubt and uncertainty, and a lack of emotional awareness (Bruch, 1978). However, in light of the cognitive turn of the 1970's, which saw the rise in popularity of cognitive behaviour therapy (CBT; Beck, Rush, Shaw, & Emery, 1979), such ideas took a back seat, and it was a focus on body image and changing eating disorder (ED) behaviours that began to dominate.

Early models emphasising functional and behavioural aspects of anorexia (Slade, 1982) were built upon in the 1980's leading to cognitive behavioural models that focus on dysfunctional thinking around weight and shape (Fairburn & Cooper, 1989; Garner & Bemis, 1985). More recent theoretical models of anorexia have started to move away from a primary focus on eating, weight, and shape, recognising the need for broader conceptualisations that account for features such as low self-esteem (Fairburn, 2008), perfectionism (Fairburn, 2008; Treasure & Schmidt, 2013), interpersonal issues (Fairburn, 2008; Treasure & Schmidt, 2013), and emotion dysregulation (Fairburn, 2008; Greenberg, 2002; Haynos & Fruzzetti, 2011; Treasure & Schmidt, 2013; Wildes, Ringham & Marcus, 2010).

1.2 From theory to treatment

Recent theoretical developments have led to a range of new interventions for anorexia. These include adapted versions of traditional CBT, in the form of enhanced CBT (CBT-E; Fairburn, 2008) and the Maudsley Model of Anorexia Treatment in Adults (MANTRA; Schmidt, Wade & Treasure, 2014), as well as more emotion-focussed treatments, including Emotion Acceptance Behaviour Therapy (EABT; Wildes & Marcus, 2011; Wildes, Marcus, Cheng, McCabe, & Gaskill, 2014) and Emotion-Focussed Therapy (EFT; Dolhanty & Greenburg, 2009). The main theories of anorexia and related treatment approaches are outlined in Table 1.

Despite these developments, no single approach has proven to be superior in treating anorexia, particularly for adults (Hay, Claudino, Touyz & Elbaky, 2015; NICE, 2004; Watson & Bulik, 2014; Zipfel, Giel, Bulik, Hay & Schmidt, 2015). CBT, and its successors CBT-E and MANTRA, have been found to be associated with clinical improvements, but no more so than other psychotherapies, such as behaviour therapy (Channon, De Silva, Hemsley, & Perkins, 1989), family therapy (Ball & Mitchell, 2004), psychodynamic psychotherapies (Carter et al. 2011; McIntosh et al., 2005; Zipfel et al., 2014), and active control groups (Schmidt et al., 2012; Zipfel et al., 2014). Some research suggests that Specialist Supportive Clinical Management (SSCM), a manualised form of treatment as usual that combines a supportive therapeutic style with provision of information, advice, and encouragement, may lead to more positive outcomes for people than theoretically driven psychotherapies (McIntosh et al., 2005).

Table 1. Summary of theories and related interventions (adapted from Drinkwater, 2017, unpublished manuscript)

Theoretical Model	Key features	Intervention
Transdiagnostic maintenance model of eating disorders (Fairburn, 2008; Fairburn, Cooper & Shafran, 2003)	• Constructs that are common across different ED diagnostic groups • Maintenance factors include- over-evaluation and over-control of eating, shape and weight; clinical perfectionism, interpersonal problems, low self-esteem, and mood intolerance	CBT-E (Fairburn, 2008)
Cognitive interpersonal maintenance model of anorexia (Schmidt & Treasure, 2006; Treasure & Schmidt, 2013)	• Vulnerability factors include- cognitive, socio-emotional, and interpersonal factors (i.e. obsessive-compulsive features and anxious avoidance) • These also maintain problem (i.e. through fostering pro-anorexic beliefs and behaviours and causing problems in relationships)	The Maudsley Model of Anorexia Nervosa Treatment for Adults (MANTRA) (Schmidt, Wade & Treasure, 2014)
The functional model of emotional avoidance in anorexia (Wildes, Ringham & Marcus, 2010)	• Emphasises the functional role of anorexia symptoms in managing anxiety and depression through emotion avoidance	Emotion Acceptance Behaviour Therapy (EABT) (Wildes & Marcus, 2011; Wildes, Marcus, Cheng, McCabe, & Gaskill, 2014)
Transactional model of emotion regulation in anorexia (Haynos & Fruzzetti, 2011)	• Interaction between emotion experience and environment • Functional and maintaining role of AN behaviours in reducing emotional arousal, emotion dysregulation, and difficulty expressing emotions	Radically-Open DBT (RO-DBT) (Lynch et al., 2013)
Emotion-focussed therapy model (Greenberg, 2002; Greenberg & Safran, 1987)	• Maladaptive emotional meaning structures or emotional schemes • Perception of emotions as aversive and overwhelming • Reduced capacity to identify, interpret and be guided by emotional experiences • Avoidance of undesirable feelings	Emotion focussed therapy (Dolhanty & Greenburg, 2009)
A model of emotional experience and regulation as a maintenance factor for anorexia (Oldershaw et al., 2015)	• Functional role of AN behaviours to avoid and control unpleasant emotions • Vicious cycle of AN and maladaptive emotion processes, including heightened emotional experience, situation selection and modification, attentional deployment, response modulation	None as yet

Clearly, better treatment options are needed and there has been a call for more innovation from within the field (Watson & Bulik, 2014). Building on existing theories, emotion-focussed interventions may offer a promising new direction. EABT, EFT, and Radically Open-Dialectical Behaviour Therapy (RO-DBT) have received initial support in small-scale studies (Dolhanty & Greenburg, 2009; Lynch et al., 2013; Wildes et al., 2014; Wildes & Marcus, 2011) but need further research. In addition, it is important to ensure that the theoretical foundations upon which such interventions are developed are indeed sound, supported by empirical evidence that account for the process of change (MRC, 2006; Pennesi & Wade, 2016).

1.3 Treatment models of emotion regulation in anorexia

As can be seen in Table 1, theoretically informed emotion-focussed treatments have begun to emerge. EABT (Wildes & Marcus, 2011; Wildes, Marcus, Cheng, McCabe, & Gaskill, 2014) is based on the functional model of emotional avoidance in anorexia (Wildes, Ringham & Marcus, 2010). It seeks to increase emotional awareness, decrease emotional avoidance, and promote engagement in valued activities and relationships. It uses a combination of behavioural and psychotherapeutic techniques, such as mindfulness and acceptance.

RO-DBT (Lynch et al., 2013), based on the transactional model of emotion regulation in anorexia (Haynos & Fruzzetti, 2011), is an adapted form of standard DBT for treating problems characterised by the over control of emotions, which have been linked to anorexia (Lynch et al., 2013). It emphasises the over control tendency to mask feelings and encourages the experience and expression of emotions. It seeks to strengthen skills in managing feelings of envy, resentment, revenge, and bitterness that stem from high levels of social comparison.

Finally, the emotion-focussed therapy model (Greenberg, 2002; Greenberg & Safran, 1987) proposes that innate emotions interact with environmental influences to create basic emotional meaning structures (schemes). Adaptive responses involve using one's capacity to identify, interpret and be guided by emotional experiences to respond flexibly to novel situations and experiences. It has been proposed that an impaired capacity to respond to emotions in ED leads to a perception of emotions as aversive and overwhelming, with the ED functioning as a way of avoiding undesirable feelings (Dolhanty & Greenburg, 2009). EFT treatment focuses on working through maladaptive emotional schemes and reactivating adaptive innate emotions.

1.4 Empirical literature

Emotion-focussed models are supported by growing empirical evidence suggesting that people with anorexia have increased difficulties in regulating their emotions. In a recent review of the literature, Oldershaw et al. (2015) concluded that relative to control participants, those with anorexia report more negative beliefs about emotions, poorer awareness of emotions, more maladaptive coping strategies, and more emotional suppression. In another recent review, Lavender et al. (2015) concluded that people with anorexia have global difficulties regulating affect, a reduced capacity to tolerate negative emotions, difficulties controlling their behaviour when distressed, reduced ability to identify and describe emotions in oneself (alexithymia), and an elevated tendency to avoid emotion inducing situations. They were also found to have reduced emotional awareness and greater emotional suppression.

Understanding of ER difficulties in anorexia has been enriched and validated by qualitative research. Studies have reported that whilst people initially experience anorexia as giving them a sense of control, they soon come to feel out of control, or that the anorexia has begun controlling them (Dignon, Beardsmore, Spain & Kuan, 2006; Reid, Burr, Williams, & Hammersley, 2008; Serpell, Treasure, Teasdale, & Sullivan, 1999; Williams and Reid, 2010).

Participants in Williams and Reid's (2012) study associated their initial sense of control, achieved through focussing thoughts on food and eating, away from negative emotions, and becoming 'emotionally numb', with a positive sense of identity. However, as in previous research, participants found that anorexia eventually took on a more menacing role and with the negative consequences came feelings of ambivalence.

Fox (2009) explored the experience and management of emotions from a developmental perspective, describing early experiences of overwhelming affect and active suppression of emotions within the family as shaping participants' perceptions of emotions. This was theorised to be associated with inhibiting emotions and using ED behaviours to suppress emotions. Participant's accounts reflected a sense of not knowing how to manage emotions and not feeling they had permission to express certain emotions, which Fox linked to them questioning their sense of themselves as emotional beings.

There is some evidence to suggest that aspects of emotion regulation (ER) change over the course of recovery. In a recent review of the literature, Drinkwater (2017) found that use of adaptive ER strategies, behavioural avoidance of situations that might trigger distress, and emotional awareness and avoidance, have all been seen to improve alongside clinical recovery, or following treatment. Taken together, the existing qualitative studies suggested that recovery from anorexia may involve learning to tolerate difficult emotional experiences and finding new ways of expressing emotions. However, research in this area suffers from methodological limitations, and there is a distinct lack of focus, particularly in the qualitative research, on ER and the change process.

1.5 Rationale for current study

Difficulties in regulating emotions have been implicated in the development and maintenance of anorexia, supported by empirical research. Qualitative studies highlight how anorexia eventually stops functioning as an effective strategy for managing emotions, however,

they do not go as far as to offer a comprehensive explanation of how ER improves. Pennesi and Wade (2016) highlight the importance of developing interventions based on coherent and testable theories, which include the process of change. Existing theories focus on the relationship between an individual's emotional experience and their eating disorder, but not their emotional experience and recovery. If recent advances in the way that anorexia is conceptualised, as relating to the experience and regulation of emotions, are to inform a more comprehensive model of recovery and lead to improvements in treatment, this should be addressed. The current study aims to bridge this gap in the literature by exploring participants' subjective experiences and developing a theoretical account of ER and change in the process of recovery from anorexia.

1.6 Aim of the research

The aim of the current study is to theorise about how people with anorexia nervosa perceive their experience of ER and their understanding of what influences this, including any therapy-related change. Specifically, it asks-

1. What do people say about the way they think or feel about their emotions?
2. What do they say about the way they manage their emotions?
3. What do they see as being helpful or unhelpful in managing their emotions?
4. What role, if any, do they see the symptoms of their anorexia (purging, restricting, excessive exercise etc.) as playing in the way they manage their emotions?
5. What do they see as influencing the above, and what role, if any, do they see therapy as playing?

2.0 METHOD

2.1 Design

A constructivist version of grounded theory was used (Charmaz, 2014). This method aims to facilitate the construction of a new theory, or explanatory framework, for understanding a phenomenon about which little is currently known (Willig, 2001) and was thought to lend itself well to this research topic. In grounded theory, the researcher engages in an iterative process of data collection and analysis. Using comparative methods, they draw on their data to develop conceptual and analytic categories, and pursue theory construction, rather than focussing on a specific empirical topic or applying existing theories (Charmaz, 2014).

2.2 Epistemological stance

In line with the epistemological assumptions underpinning constructivist grounded theory this research took the position that social reality is "multiple, processual, and constructed" (Charmaz, 2014, p13). Veering from more traditional positivist forms of grounded theory (Glaser & Strauss, 1967; Strauss & Corbin, 1990), Charmaz's (2014) approach seeks not to discover but to construct theory, grounded in the data. The role of the researcher, including her position, perspective, biases, and actions, is acknowledged as an intrinsic and inevitable part of the research process.

2.3 Participants

Adult outpatients with a diagnosis of AN, attending an ED service in South East England, were eligible for participation. Participants had received at least some therapeutic intervention, which was thought to increase the likelihood that they would be able to reflect on making or considering change. Clinicians working within this service deliver a range of therapeutic interventions, including individual and group interventions, largely from a CBT or integrative perspective. One referring clinician worked using a Radically-Open Dialectical Behaviour Therapy (RO-DBT) framework and others incorporated emotion-focussed

approaches into their work. Exclusion criteria included having a primary mental health diagnosis other than anorexia, impaired cognitive function, and high levels of anticipated risk associated with involvement, as assessed by the clinician working with the person. Careful consideration was given to physical health and implications of low weight.

2.4 Sampling

Participants were initially recruited using purposive sampling. Clinicians working in the service were informed about the research by the lead researcher. Inclusion and exclusion criteria were discussed so they could consider suitability of people on their caseload, including risk issues, prior to informing service users about the research. Eleven women were informed about the research by their clinician and given a participant information sheet. All agreed to be contacted by the researcher by telephone to discuss participation. Of those contacted, eight agreed to take part, and arrangements were made to meet in person at one of the service sites for the interview. One participant decided not to take part for unknown reasons and two due to reasons relating to their current mental health.

Theoretical sampling was employed following the first eight interviews and initial analysis, with the aim of developing the properties of the emerging categories. Information was sought that would illuminate categories pertaining to later phases of recovery. Existing participants who had consented to be contacted for a second interview, and who were still engaged with the service, were invited back. Clinicians were contacted again to ask whether any more service users were interested in taking part. One new participant was recruited on this basis, and two participants attended a second interview. Eleven interviews were carried out in total.

Initially demographic information was not collected as it was thought this would involve unnecessary categorisation of participants. However, as the analysis progressed it became apparent that certain contextual information would be helpful for the reader, and

participants were contacted to collect this (Table 2). One participant had moved abroad and was unable to provide this information.

2.5 Ethical considerations

Ethical approval was obtained from an NHS research and ethics committee (Appendix E) and local clinical research network (Appendix F). The BPS Code of Human Research Ethics (2010) was referred to and followed throughout. Ethical considerations specific to this research included prioritising the wellbeing of participants in the context of potentially sensitive interview questions, maintaining confidentiality whilst using detailed excerpts of participant interviews, and ensuring transparency regarding participant's right to withdraw.

2.6 Procedure

The information sheet (Appendix G), which included example questions, was given to participants at least twenty-four hours before the interview. Participants were given an opportunity to discuss this information in the first meeting and ask any questions they may have. Signed consent was obtained prior to the interviews commencing.

Semi-structured interviews lasting between 45 minutes and one hour were conducted by the author (see Appendix I & J for interview schedules). This allowed for consistency between interviews whilst offering enough flexibility to pursue each participant's subjective account. Initial warm up questions about participant's day to day lives allowed the researcher to gain a contextual perspective and participants an opportunity to ease into the interview. Participants were then asked about topics pertaining to the research questions outlined and emerging ideas were followed-up and explored.

Participant wellbeing was monitored throughout the interview, with breaks offered intermittently. Participants were routinely given a debrief following the interview and offered the opportunity to speak with someone other than the interviewer. This was an experienced

clinician available on the day within the service. All interviews were audio recorded and transcribed verbatim.

2.7 Data analysis

Data was analysed using procedures outlined by Charmaz (2014) with the aid of the qualitative analysis software NVIVO. Initial line-by-line coding, was carried out with the first eight interviews with the aim of remaining open to the data. This involved defining what was happening in the data and ascribing a code to each line. In line with procedures described by Glaser (1978) and Charmaz, the grammatical use of gerunds, such as "filling time" or "sticking to the rules", helped create a strong sense of action and sequence in the initial codes. Because the focus of interviews was broad in scope it was considered important to be thorough in this initial coding phase, remaining close to the data, and refraining from imputing the researcher's own ideas about relevance too early on. This also helped pave the way for ensuring that codes fit with participants' reported experiences and that subsequent interpretations were relevant (Charmaz).

Initial codes were then reviewed and considered in terms of significance, frequency, and relevance to the research questions. Tentative categories and subcategories were defined, and links between them were explored. Codes were highlighted, renamed, refined, collapsed within other codes, or removed. The resultant focussed codes were used to code data from the three subsequent interviews following theoretical sampling. Existing interview transcripts were revisited as part of the iterative process of constant comparison (Glaser & Strauss, 1967). Methodological journal entries were recorded throughout the analysis (Appendix K), documenting decisions, questions, and hunches. This informed ongoing memo writing (Appendix M), which helped guide the analysis and explicate relationships between codes and categories. In the later stages of analysis, comparisons with existing theory and literature were incorporated into memos. Theoretical sufficiency (Dey, 1999) was considered to have been

achieved when new data was found to be adequately accounted for by the existing categories. Here, categories were seen as suggested, as opposed to saturated, by the data.

2.8 Quality assurance and reflexivity

Quality standards outlined by Mays and Pope (2000) were considered throughout and steps were taken to enhance the validity of findings. Sections of different anonymised interview transcripts were coded by two colleagues and three meetings were held with supervisors to discuss the emerging analysis. Differences across interpretations were considered until a consensus was reached. A summary of the findings, including the table of codes, categories, and excerpts from participants' own interview, was sent out to all participants who had consented to this, inviting them to provide feedback. Two participants returned feedback (Appendix O) and this was incorporated into the analysis.

In line with the constructivist perspective (Charmaz, 2014) and Mays and Pope's (2000) reflexivity criterion, personal reflections were recorded in the author's reflective journal and memos. Conversations between the author and supervisors about their clinical and theoretical knowledge of the subject matter were deliberately avoided until the final stages of analysis to reduce external influences on interpretation of the data. Whilst the author considered herself to be quite distant from participants, having little prior knowledge of anorexia, she acknowledged and reflected upon similarities as the analysis progressed, particularly in relation to gender and certain personality characteristics she could relate to within the sample.

Table 2. Participant information

Participant name*	Age	Gender	Ethnicity	Diagnoses**	BMI	Marital status	Years since anorexia diagnosis	Length of time with service	Treatment phase
1. Rachel	33	Female	White British	Anorexia Nervosa Substance misuse (H)	18.5	Single	19 years	3 years	Close to discharge
2. Nadine	20	Female	White British	Anorexia Nervosa	15	Single	2 years	1 year	Engaged in therapy
3. Grace	21	Female	Other- mixed	Anorexia Nervosa (P) Depression (S) Emotionally Unstable Personality Disorder (S)	20	Single / Living with partner	4 years	1.5 – 2 years	Due to be discharged
4. Sue	61	Female	White British	Anorexia Nervosa (P) Post-traumatic Stress Disorder (S)	Unsure	Single	1 year	7 months	Engaged in therapy
5. Kate	21	Female	White British	Anorexia Nervosa	16.5	Single	8 years	2 years	Due to be discharged
6. Maddie	Missing information	Female	Missing information	Anorexia Nervosa	Missing information	Missing information	Missing information	Missing information	Missing information
7. Claire	19	Female	White British	Anorexia Nervosa (P) Depression (S) OCD (S)	Unsure	Single	4 years	1 Year	Due to be discharged / reengaged by second interview
8. Mo	48	Female	White British	Anorexia Nervosa (P) Anxiety (S) BPD (S) OCD (S) Depression (S)	17	Single	31 years	2 years	Due to be discharged
9. May	22	Female	White British	Anorexia Nervosa	15	Single	3 years	4 months (6 months previously)	Engaged in therapy

*Pseudonyms are given ** P= Primary diagnosis, S= Secondary diagnosis, H= Historical diagnosis

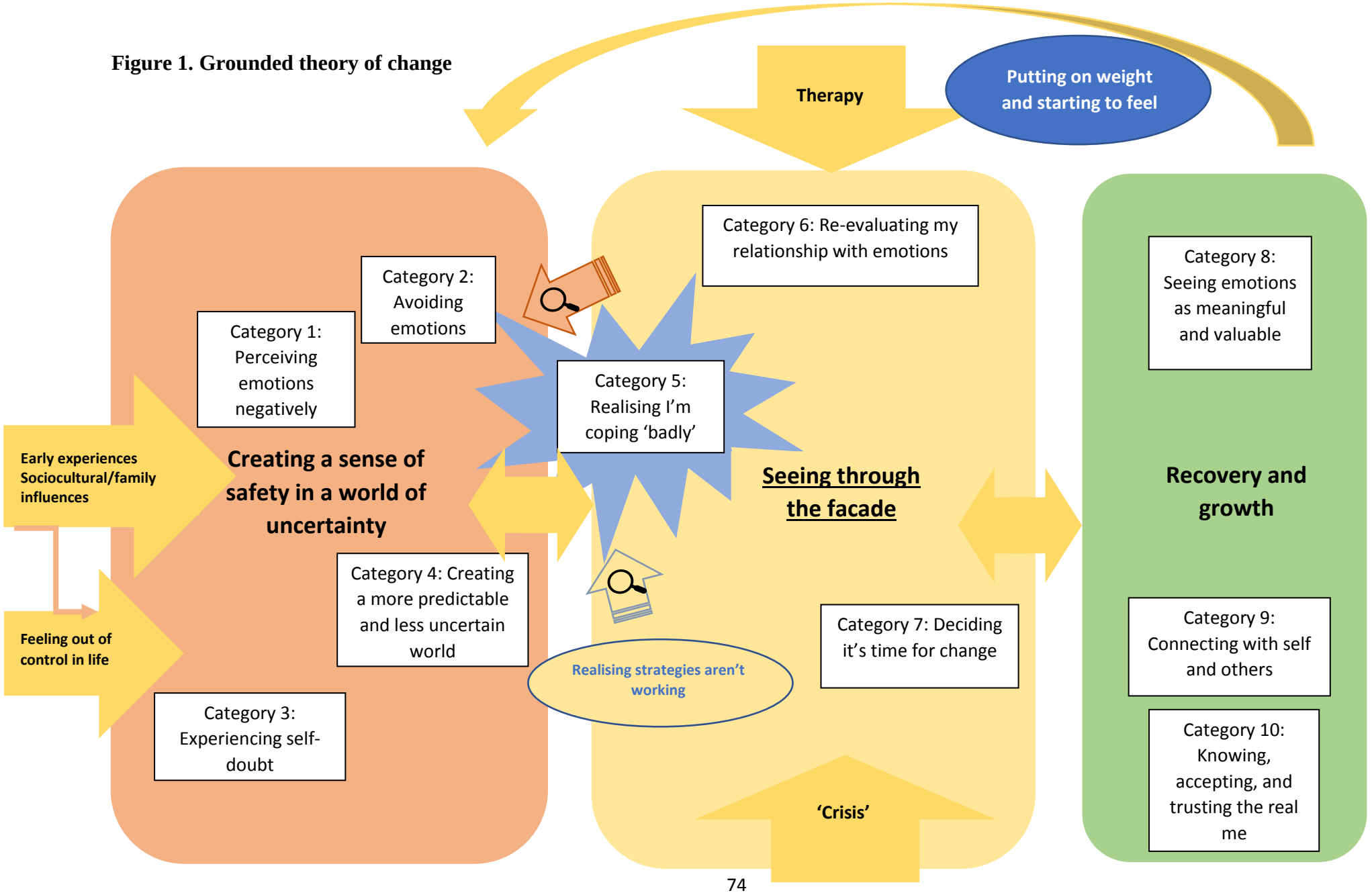
3.0 RESULTS

The analysis produced 10 major categories that fed into the emerging grounded theory. Categories reflect aspects of a dynamic process of change, in which participants described moving between positions of creating a sense of safety in a world of uncertainty, seeing through the façade of anorexia, and recovery and growth. A model of *coping 'badly'*, including maintenance cycles and ways out, is proposed. Categories will be discussed in turn, highlighting links and contrasts between them. A more detailed account of the relationship between categories and codes can be found in Appendix Q.

3.1 Overview of grounded theory

Figure 1 outlines the grounded theory and shows how the different categories are related, centred on the concept of seeing through the façade. Participants, influenced by their engagement with the research process and the questions that it asked of them, were seen to be actively engaging in a process of reflection, in which they came to understand their experiences differently. They talked about family, social, and cultural factors that have influenced their perception of emotions (category 1) and their sense of themselves (category 3). They also described circumstances and life events that led them to feel out of control. In their efforts to avoid emotions (category 2) and reduce uncertainty in their lives (category 4), participants developed a host of maladaptive coping strategies. Though not a conscious process initially, participants were beginning to realise they had been, and in many ways still were, coping 'badly' (category 5). Anorexia, typically characterised by restriction, was seen as one of many 'bad' strategies participants had for creating a sense of safety, including avoiding emotions, which led to a vicious cycle of maladaptive coping.

Figure 1. Grounded theory of change



Preceded by a crisis or major life event, hospitalisation, and finding themselves engaged in therapy, participants were prompted to look at their ways of coping in a new light. Here, the term "crisis" is used to reflect both a time of great difficulty or distress, and a critical turning point set to shape future events. Participants began to see through the "façade" (Maddie) of the seemingly safe and knowable worlds they had built for themselves and started to recognise that their strategies didn't seem to be working. They began to revaluate their relationship with their emotions (category 6) and develop motivation to change (category 7). This new perspective had enabled participants to describe their experiences leading up to anorexia and the process of creating a sense of safety in a world of uncertainty, in a way they would not have been able to before. These new insights coincided with physiological, cognitive, and emotional changes as participants began to gain weight. These perspectives offer new insights into how anorexia and emotion processes feed into a vicious cycle of maladaptive coping, and how participants have found ways out. This is presented in Figure 2 and will be explored in more detail in section 3.3.2.

Once they had begun to see through the façade of anorexia participants described various ways in which they saw emotions as meaningful or valuable (category 8). They described connecting with themselves and with others more (category 9), and appeared to be in a process of getting to know, accept, and trust themselves (category 10). These categories reflect a sense of recovery and growth, and a shift towards a position of openness, connectedness, meaning, authenticity, and autonomy. They reflect times when participants described moving away from their closed off positions so entwined with their illness and conveyed a sense of being an active participant in life, as opposed to a passive recipient of its various inevitabilities, including emotions. This was not an entirely linear process and participants found themselves shifting between positions.

The excerpt below captures the essence of seeing through the façade.

"I guess in the end […] you're sort of choosing safety over the intensity of feeling […] And yeah I guess what happens with the eating diso*rder […] is that I kind of build* a *really safe and knowable little world for myself but there's no one else in it […] you* get none of the kind of the life or the other positive emotions, or the sense of *connection." [Maddie]*

3.2 Creating a sense of safety in a world of uncertainty

3.2.1 Category 1: Perceiving emotions negatively

Participants spoke about their negative perceptions of emotions and thinking that emotions were dangerous. For some, emotions were overwhelming or were associated with negative consequences. Anger, for example, was often associated with violence.

"It [anger] has serious repercussions on the person it's directed at... usually violent in some way". [Sue]

In other cases, emotions were perceived as futile, a weakness, or something that interfered with participants' struggles to survive. For those participants with particularly powerful and aversive beliefs about emotions, this seemed to be linked with adversity. Nadine, who has a long-term physical health problem, explained that she has always just had to 'get on with it'.

"I think if I was to be a really emotional person then I would get nowhere in life." [Nadine]

This appeared to pose a barrier to reaching out and talking about feelings that was part of recovery and growth for other participants.

The expression of emotions was seen as socially unacceptable and participants were conscious of how their emotions might be perceived by others, for example as melodramatic, selfish or attention seeking. Many could relate this to family narratives.

"I think in my family there was a bit of distain for people who were kind of perceived as being melodramatic or attention seeking." [Maddie]

There was a sense that participants felt they just should not be feeling whatever they were feeling. Rachel linked this with being made to feel that she couldn't have emotions from a young age and being very conscious of the impact it might have on others.

"Growing up I felt I couldn't have any emotions […] because she [Mum] even said […] Rachel if you get down while I'm out and can't cope it will make me down. So I feel I can't always be myself." [Rachel]

3.2.2 Category 2: Avoiding emotions

All participants spoke of not wanting to experience emotions and of blocking their emotions. Participants recounted how as anorexia developed and they became emaciated, they became numb to emotions altogether.

"When I was like very thin like emaciated I didn't feel anything" [Mo]

Sue, who has an extensive history of abuse, described how she had become so cut-off that she didn't even know what emotions felt like. For others, it was more of a reactive process, but even here it was experienced as automatic.

"I'm quite good at shutting them [emotions] off quite quickly… you just do it without thinking. So it's like dancing you know. I have movement memory […] So I think part of it is actually habitual for me now". (May)

Participants spoke of using behaviours to avoid emotions, for example distracting themselves from their emotions (i.e. listening to music), displacing emotions (i.e. harming self to cause physical pain), and responding physically (i.e. running off energy). Behaviours associated with anorexia played a significant role in this. For example, they spoke of exercise and restriction distracting them from all other worries, and purging and laxative use leading to a feeling of emptiness.

> *"So I think I linked the feeling full with the feeling of being full with emotion […] And* just getting that *with purging it's just out it's out of my body." (Grace)*

Although anorexia was perceived to be associated with its own anxieties, these somehow seemed preferable to other anxieties.

> *"It (anorexia) like reduces your anxiety and worry to that [numbers on a* scale] instead of like the irreducible complexity of worries about relationships or your place in the *world." [Maddie]*

3.2.3 Category 3: Experiencing self-doubt

There was an overriding sense that participants questioned themselves regularly in multiple ways. They spoke about questioning the legitimacy of their experience and of needing a reason to feel a certain way. They questioned their judgement, particularly in relation to food.

> *"Should I have had that to eat? Should I have not had it? Do I need that to* eat? Do I *not need it? Have I had too much?" [Rachel]*

Self-doubt also occurred in relation to other things.

> *"[..]* constantly needing somebody *[…]* to check that my keys and purse are in my bag *because I worry that I was tricking myself." [Kate]*

Participant's self-doubt appeared to be linked to feeling dependent on, or even subservient to, others. Handing over responsibility to parents, partners and professionals seemed to feel safer or easier than being responsible for oneself.

> *"I mean when I'm in hospital it's very easy to just do the eating part because someone else is taking the responsibility for it. I'm just doing it." [May]*

Participants gave examples of feeling confused about their experiences and their behaviour, and having little confidence in their autonomy or self-control. They also spoke about not understanding their emotions and feeling ill-equipped to manage them.

> *"Yeah when I can't deal with emotions I can't seem to get my head straight to be able* to think a*bout what I'm feeling." [Grace]*

3.2.4 Category 4: Creating a more predictable and less uncertain world

Participants talked about the importance of routine and structure in their lives, which they associated with reducing uncertainty. Anorexia and other things, including shopping, work, and obsessive and compulsive behaviours, gave participants routine and structure. They spoke about the sense of safety and security this provided.

> *"…like having to have the structure and doing exercise continuously. I just felt like it* kept me safe even though *it was incredibly unsafe." [Claire]*

May spoke about the lack of routine in her life after moving to university as being a direct precipitator to her obsessions around eating. Planning and predictability appeared to be important for participants in achieving a sense of control.

> *"I suppose complete and utter control […]* definitely in terms of going out to eat *[…]* I *would have had to have known like at least a week before." [Kate]*

Other aspects of creating more predictability and reducing uncertainty were filling time, particularly to avoid thinking and worrying, keeping things simple, and sticking to the rules.

> *"Suddenly there wasn't anyone to give me any* rules so I had to create my own *[...]* But *now I have my rules and I can stick to them". [Sue]*

In many ways, creating their own rules enabled participants to develop a greater sense of independence from other people. However, in contrast to category 10 described below, this also appeared to stifle the development of a more intrinsic sense of autonomy in which participants would be able to trust their instinct and be more spontaneous.

3.3 Seeing through the façade

3.3.1 Category 5: Realising I'm coping 'badly'

Participants spoke about drawing on a range of maladaptive strategies to cope, and to avoid, block, distract from, or displace emotions. Behaviours associated with anorexia, such as restricting, purging, and excessive exercise, were amongst the main strategies talked about. Participants also described using drugs and alcohol (Rachel; Mo), engaging in obsessive routines or behaviours (Claire; Sue; Maddie), and harming themselves (Grace; Kate; Mo). Kate likened this to playing the game "whack-a-mole".

> *"Do you know that thing 'whack a mole' where you try and hit things and other things pop up? [...] like when I get rid of one bad coping mechanism and another one pops up." [Kate]*

Participants alluded to the way in which their coping strategies helped them achieve a quick fix, but how they came to realise they "don't solve anything" (Rachel).

"After that [missing a meal] it's almost like I made a deal with myself and then I was able to calm down very quickly *[…] it's a very short term solution to things because in* the long run *it made me feel worse." [Kate]*

A crucial aspect of participants' perceptions of coping badly was the negative consequences of their coping strategies. This seemed particularly important when participants used multiple dangerous coping strategies, including drug use. They reported experiencing awful consequences from their behaviour and recognised that their current strategies were unsustainable.

"If I could take it again and it wasn't illegal and it wasn't going to kill me […] it was just something good that would stop those thoughts, *I would take it. But it doesn't do that anymore it just makes me very very ill." [Rachel]*

Participants found that eventually their coping strategies stopped achieving their purpose and instead made them feel worse. Initial numbness gave way to a build-up of emotions which eventually became impossible to hold back.

"I got stuck in a car park and I just completely started crying. I don't even really know what happened but I think I just couldn't cope anymore" [Claire]

Anorexia often brought with it a host of other problems and emotions, which participants then had to find ways of managing, for example taking drugs to stop them thinking about food (Rachel) or harming themselves in response to feeling guilty for having eaten the 'wrong' thing (Grace; Kate). For Grace and Maddie, purging was a way of managing feelings of guilt around eating.

Participants found that their extreme weight loss led to cognitive and psychological consequences that impacted their mood (Sue), their memory and ability to think rationally (Grace), their levels of motivation (Kate), and their willingness to accept help (Rachel).

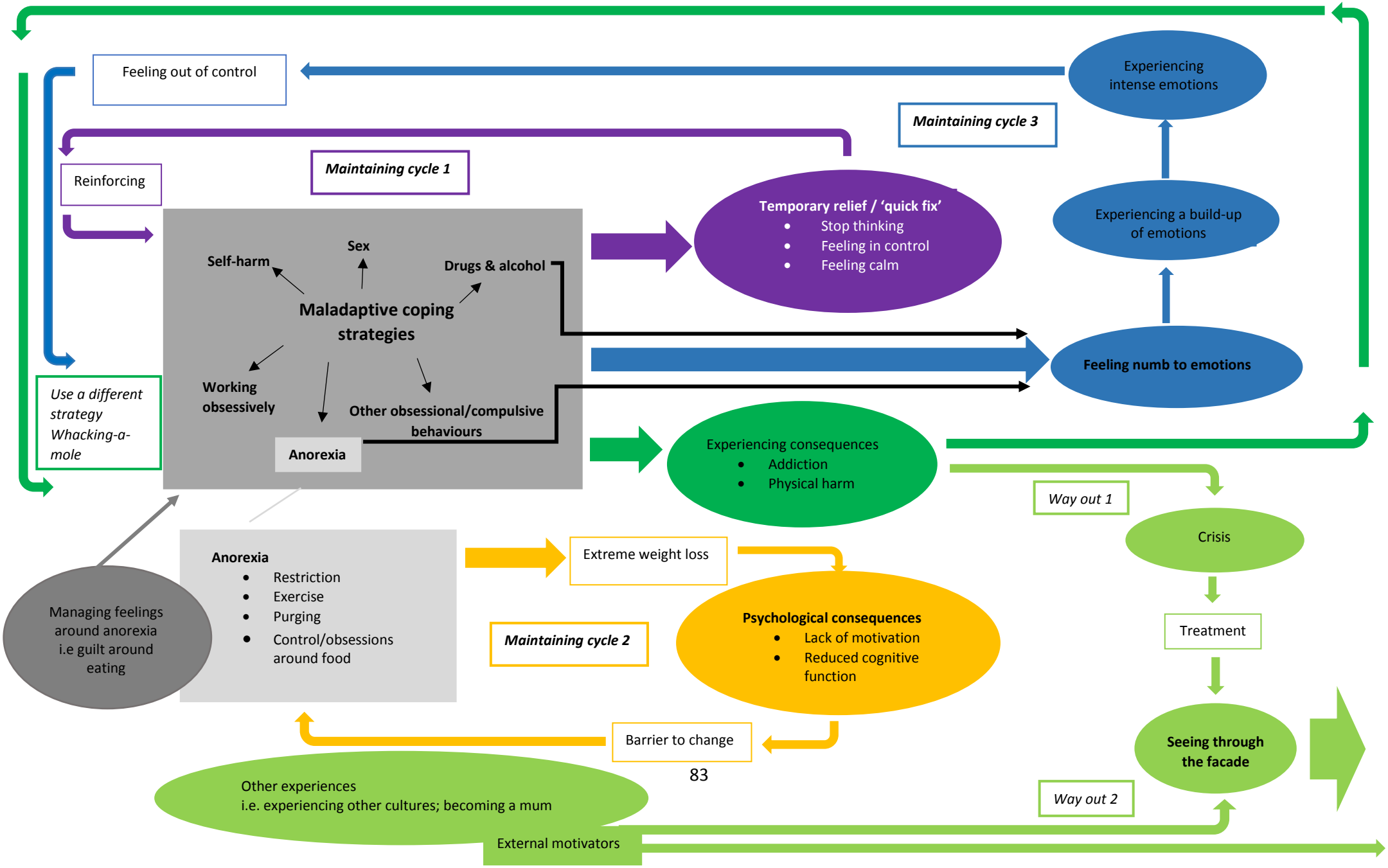
Participants came to see anorexia, with its shifting goal posts, as something that was controlling them, as opposed to something which gave them a sense of control.

3.3.2 A preliminary model of coping 'badly' and seeing through the façade of anorexia

Maintenance cycles and ways out of coping 'badly' are depicted in figure 2. Maladaptive coping strategies, including anorexia, are represented in the grey boxes. The way in which secondary problems associated with anorexia feed back into maladaptive coping is shown in the bottom left hand corner. The potentially reinforcing aspect of achieving a quick-fix is depicted by maintenance cycle 1 (purple). The way that psychological consequences of extreme weight loss served to maintain anorexia is depicted by maintenance cycle 2 (yellow). The effect of coping behaviours on emotions, leading to further perceived loss of control and increased need to 'cope,' is depicted in maintenance cycle 3 (blue). The upper outermost cycle (dark green) shows how experiencing negative consequences of one coping behaviour can lead to the development of another.

However, as can be seen in the bottom right hand corner (light green), such consequences can lead to a crisis and then to the development of a new awareness. Hence it is through the crisis, an event or turning point culminating from the build-up of negative consequences of maladaptive coping, that the façade of anorexia is exposed, sometimes facilitated by treatment, offering a way-out of the vicious cycle. Other external motivators, discussed in the 3.3.4, may also influence change but bypass the process of crisis and seeing through the façade.

Figure 2: Coping 'badly'- A preliminary model of change



3.3.3 Category 6: Re-evaluating my relationship with emotions

Participants conveyed a sense of having begun to reflect on their relationship with emotions, often facilitated by therapy.

> *"So yeah part of this process for me has been […]* becoming aware of that approach *to emotions that I had very much internalised." [Maddie]*

Participants described beginning to "notice what other people do" (Kate) and "becoming aware that other people did things differently" (Maddie). For Maddie, travelling abroad and experiencing other cultures served as a catalyst for later personal change.

> "I met people there who are very *[…] deliberate* and intentional about their feelings *and emotions […] I guess that was the moment of becoming aware that um other people did things differently." [Maddie]*

Participants sought to understand why they did things the way they did. Their strong negative perceptions began to loosen and they spoke about it being okay to have emotions. For some, beginning to think on an intellectual level that emotions were okay had not yet translated into "feeling" differently. They spoke of not wanting to feel too much, or too much of the time.

> *"Yeah there has been some shift […] Sometimes yeah I want to feel nothing… but I don't want to feel like that all the time. Whereas I did want to feel like that all the time."* [Grace]

Participants spoke of feeling safer and more in control of their emotions, and therapy appeared to play an important role in helping them learn to identify their feelings. They spoke of putting on weight and starting to feel emotions, which could be experienced in positive and negative ways.

3.3.4 Category 7: Deciding it's time for change

Participants spoke about it being time to change. Many described having someone else to recover for. Rachel wanted to stay well now that she has a daughter, and Sue so that she could care for her little dog. This generally seemed like a positive shift, towards making more autonomous decisions and seeing oneself in a more positive light relationally. Participants spoke about their charity work (Rachel; Sue), and the importance of their relationships (Claire; Grace). However, there was also a sense that it was easier, at least initially, to change for others than to change for oneself.

> *"It's harder for people on their own to find the motivation … because I don't have anyone to think about. Apart from my dog […] He's kept me alive a couple of times."* [Sue]

Averting any further disruptions to university was a common thread amongst younger participants. May reflected on how this might be another kind of "external" motivator[2]. For Rachel, it was about minimising the impact of her behaviour on her daughter who was becoming more aware, and for Sue, taking advantage of help whilst it was on offer. For Nadine, her physical health, which she described as having been severely impacted by her weight loss, seemed to be her sole motivation for recovery.

In line with May's comments, there appears to be a distinction between "external" and more intrinsic motivators. The dominant narrative was needing a legitimate reason to make positive change, and such changes did not appear to be contingent on a shift in perspective. This was in contrast to the emerging counter-narrative evident in later categories in which participants described beginning to recognise their own (emotional) needs as important and deserving of being expressed and met, and more intrinsic motivations, associated with themes

[2] Taken from participant feedback on findings

such as seeking connectedness and meaning. This seemed to have been shaped by the process of seeing through the façade and shifting away from a focus on creating a sense of safety towards recovery and growth.

3.4 Recovery and growth

3.4.1 Category 8: Seeing emotions as meaningful and valuable

Within participants' talk of emotions was a sense that there was something meaningful about experiencing emotions related to being human. Participants spoke of people needing to feel emotions (Grace; Kate), of emotions being part of one's personality (Nadine), and of reacting with one's heart and not just one's head.

> *"I don't know about other people, but my reactions are my emotions* [...] I *don't think* you can fully react with your head and not your heart *[...] You're human." (May)*

Negative emotions were seen as inevitable when people open themselves up to the world around them.

> *"*I think like the things that generate positive emotions are like also the things that generate negative emotions *[...] in the sense of engaging with the world." [Maddie]*

This was linked with the possibility of having a life and moving on.

> *"I know in order to get better and to improve my life I have to feel emotions. It's [...] part of life and I'm only just beginning to realise that." [Mo]*

Participants were starting to recognise that emotions can be useful, for example anger in helping you to express yourself better (Nadine), and anxiety in alerting you to be more cautious in certain situations (Claire). Expressing emotions, such as anger, was seen as helpful in making you feel better. These shifts in perspective appeared to be contingent upon the

learning that took place in therapy, particularly around identifying emotions, and making links between emotions and anorexia as an unhelpful way of coping.

3.4.2 Category 9: Connecting with self and others

In contrast to the passive acceptance and ambivalence characteristic of re-evaluating my relationship with emotions, participants spoke about actively connecting with their emotions. They described going beyond "intellectualising" (Maddie) about emotions, towards actually feeling them. Therapy played an important role in facilitating this. Maddie spoke about her therapist probing her about how she is feeling and following hunches. She also spoke of other strategies she would use to help her connect with how she was feeling, for example journaling. Grace had developed a strategy of talking to her emotions.

> *"If I'm feeling something so intense and I can't put my finger on it […] I feel it in my body […] I'll talk t*o it and ask it questions like what are you? why are you here?*".* [Grace]

At times, participants appeared to connect with their emotions in the moment, for example when Rachel talked of the happiness her daughter brought to her life. Others could only imagine what such moments would be like but felt that it was something to strive for.

> *"Just if you've got mates, have a laugh. Laughing is an emotion. I don't do that very often." [Mo]*

Participants spoke of connecting more with others as well as themselves, and described having started to talk about how they were feeling to friends and family. They also spoke of the importance of therapy as a safe space to say what is really going on for them, with someone who they felt understood. Despite having initial reservations about opening-up to others in this way and feeling out of their "comfort zone" (Maddie), many were surprised to find this helpful.

> *"I was a bit […] like I don't want to talk about emotions […] but actually I have ended*

up talking about my emotions and it has been really helpful." [Kate].

May described how opening-up more allowed her to see another way to cope, and to realise and move away from unhelpful behaviours[3], thus feeding back into seeing through the façade.

Beyond simply talking to other people, participants also expressed an interest more broadly in getting "back into the world" (Mo). For Sue, there was a link between engaging with those around her and getting to know herself.

*"*O*nce I know who I am that's going to help in all areas […]* in socialising *[…]* with the e*ating […]* coming to t*erms with who I am." [Sue]*

3.4.3 Category 10: Knowing, liking, and trusting the real me

Sue's quote above links to the final category, highlighting the close relationship between relating to others and relating to oneself. It seemed important for participants at this phase in their journey to get to know the perceived 'real' them.

"And the biggest thing for me is I'm beginning to find out a little bit about who I am. *The real me."* [Sue]

Participants spoke about learning to like themselves (Rachel), or at least accepting themselves (May[4]). These descriptions contrast with how participants spoke of their pasts, for example "not really living as yourself" whilst taking drugs (Rachel), and keeping up a façade of everything being fine (Maddie). Part of this was being okay with one's true feelings.

"It's that confidence to be okay with yourself and your reactions to things." [May]

[3]Taken from participant feedback on findings
[4] Taken from participant feedback on findings

It was important for participants, having gone through a process of questioning their ways of coping and their ways of relating to emotions, to learn to trust themselves.

> *"So once you've learnt that the way that you were thinking wasn't okay […]* you just *need to trust yourself." [Claire]*

Participants talked about not having to rely on others (Sue; May), being treated like adults (Kate), and growing up (Mo). Many referred to therapy as the context in which they were starting to develop a greater sense of autonomy, and being able to regulate emotions was seen as an important part of this.

> *"I personally think that's why emotions are SO relevant to my treatment […] it'll definitely help me as a person because I'll be a lot more content […] able to regulate myself. And not rely on other people." [May]*

In contrast to the dependency on others and rigid rules described earlier, participants sought flexibility and spontaneity.

> *"Recovery is freedom from the structure, from the rules, from the times." [Sue]*

Participants described gaining a new sense of identity. Some spoke of resilience (Sue) and the importance of feeling good about oneself (Sue; Maddie). Mo was beginning to explore questions around her sexuality in the hope that she might one day fall in love. For Rachel, it was important to have a fresh start and be seen as something else.

> *"*Before a lot of people a*round me saw me as just [Rachel] with anorexia […]* now *they're seeing me a bit more as something else." [Rachel]*

There is a sense from participants' accounts that facilitating personal growth and nurturing a more integrated sense of self should be a focus of therapy that may serve as a vehicle for more intrinsic change.

"[...] help patients discover what they enjoy/find contentment from *[...]* a hobby, education, travelling, spending time with others *[...]* it highlights to someone with little hope that they have *something worth living for". [Kate*[5]]

4.0 DISCUSSION

4.1 Links to theory and previous research

These findings support much of the existing empirical literature and early theoretical accounts of the role of emotions in anorexia. The earlier categories resonate with the widely-reported idea that anorexia, at least initially, helps people to feel in control (Dignon et al, 2006; Reid et al., 2008; Serpell et al., 1999; Williams & Reid, 2010). They reflect early descriptions of disturbances in perception, inner-doubt and uncertainty, and lack of emotional awareness amongst people who develop anorexia (Bruch, 1978). Empirical evidence on the use of maladaptive strategies and the tendency to suppress emotions (Oldershaw et al., 2015), and reduced distress tolerance and behavioural control (Lavender et al., 2015) in anorexia are also all consistent with these findings.

The grounded theory presented here supports models outlined earlier in Table 1.2 that emphasise the functional role of anorexia in managing emotions (Greenberg, 2002; Oldershaw et al., 2015; Wildes, Ringham & Marcus, 2010). The model of change (Figure 2) particularly supports existing models that suggest a perpetuating relationship between ED behaviours, and other coping strategies, and poor ER in the illness phase of anorexia (e.g. Haynos & Fruzzetti, 2011; Oldershaw et al., 2015). The grounded theory and model of change adds that for people stuck in such a cycle, recognising these unhelpful processes can serve as a catalyst for change.

These findings suggest that during the process of recovery people become less confined by their need for safety, and less dependent on the use of their maladaptive coping strategies.

[5] Taken from participant feedback on findings

Aspects of recovery and growth, such as seeing emotions as meaningful, and being willing to experience them, reaching out to others, and developing a sense of autonomy, reflect a phase of recovery that stands in contrast to existing illness maintenance models. The current theory suggests that the reduced capacity to identify, interpret, and be guided by one's emotional experiences, as described in the EFT model (Greenburg, 2002), is not only amenable to change, but that this is integral to broader shifts in the way people relate to themselves and others as part of their recovery from anorexia.

Participants' accounts of moving from perceiving emotions negatively to re-evaluating their relationship with emotions support the empirical evidence indicating a reduction in negative beliefs about emotions following recovery (Oldershaw et al., 2012). Participants' descriptions of their journeys towards recovery and growth add to existing literature on emotional awareness and emotional suppression (Lavender et al., 2015), suggesting that these are important areas of development in the change process.

4.2 Clinical implications

The findings of this study support the recent shift towards emotion-focussed models and interventions for anorexia. They suggest that supporting people to build awareness about the function of their ED behaviours in relation to emotions, a key component of approaches such as EFT (Dolhanty & Greenburg, 2009) and EABT (Wildes et al., 2014), and providing a safe space in which they can begin to open-up, may be helpful in facilitating positive change. The grounded theory makes links between emotion processes and interpersonal relationships, as well as other aspects of people's experiences, such as developing a positive sense of identity and hope, in relation to recovery from anorexia. Whilst such ideas can be found in existing emotion-focussed approaches, no single approach encapsulates the interconnectedness of these processes in a way that reflects participant's lived experiences. Further details of how aspects

of the current grounded theory relate to existing emotion-focussed treatments can be found in Appendix R.

Theoretically RO-DBT (Lynch, 2013), with its emphasis on the overcontrol of emotions, is well supported by the current study. However, therapeutically, a more experiential focus in working with emotions, in which people are encouraged to connect with their emotions and not just talk about them on an intellectual level, may be particularly facilitative of change. This is in line with Bruch's (1978) ideas and particularly consistent with the EFT approach (Dolhanty & Greenburg, 2009), which encourages clients to attend to their bodily experiences and facilitates the exploration of different emotions using various techniques, including chair work. Combining the RO-DBT focus on addressing overcontrol of emotions and facilitating social connectedness, with the EFT focus on experiential aspects of emotion work, may be particularly helpful.

4.3 Strengths and limitations

This is the first study as far as the author knows to focus on the role of emotions in relation to recovery from anorexia. It begins to address important gaps in the theoretical and empirical literature, and offers suggestions for clinical practice. However, findings from qualitative research such as this requires further exploration and testing using robust methods if they are to be generalised to the wider population. The sample size is relatively small and homogenous, further limiting the transferability of findings. Reflecting the wider literature around emotions in anorexia, it includes only female participants, which may be considered a limitation according to Mays and Pope's (2000) criterion of fair dealing. Whilst everyone in the sample had experienced anorexia, participants were at different stages in their recovery, meaning that for some of the initial codes there was not enough data to pursue all potential analytic directions.

Whilst this grounded theory and model of change offer new insights into how people with anorexia experience and understand the relationship between their ED and their emotions in recovery, they neither confirm nor disconfirm any one existing model. It is possible that certain processes are outside participant's own awareness and that even good quality qualitative research is limited for developing robust theory that informs effective treatments. The theoretical and empirical literature remains disparate and further examination of how different models map on to each other, and how different elements are supported by empirical evidence, is called for.

4.4 Further research

This study demonstrates the utility of using qualitative methods to investigate changes in emotion processes during recovery from anorexia, from the perspective of those with first-hand experience. Further research would benefit from including participants further ahead in their recovery, and from using larger, more heterogeneous samples to elaborate on the differences between individual's experiences. Further exploration of factors that may influence different trajectories and the perceived contribution of different therapy elements would be helpful clinically.

In terms of quantitative research, this study suggests that specific aspects of ER, such as emotional awareness, beliefs about emotions, and emotional expression, may be particularly amenable to change. These findings also indicate that positive change may be experienced subjectively irrespective of symptom reduction, suggesting that broader definitions of recovery, possibly measuring outcomes such as quality of life, may have a place in ED research. Further clarity is needed about the relationship between emotion processes, (broadly defined) recovery, and factors relating to identity. Investigating the potential mediating role of such variables may provide further insight into how positive change comes about.

5.0 CONCLUSION

Behaviours associated with anorexia often coincide with other maladaptive strategies to help people, subjectively, to manage their emotions and cope more generally. Such behaviours are self-maintaining and may be particularly difficult to shift. Ways out of these processes may involve a range of interacting factors, but experiencing the consequences of using maladaptive strategies and engaging in treatment, facilitated by weight gain, appear to be important.

Positive change in emotion processes appear to occur through a process of seeing through the façade of anorexia and developing awareness. This involves realising one is coping badly, re-evaluating one's relationship with emotions, and deciding it's time for change. Beginning to see emotions as meaningful and valuable, connecting with oneself and others, and getting to know, like and trust oneself, may be part of recovery and growth, as well as feeding back into awareness building and realising better ways of coping.

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Section C

Appendices of supporting material

Appendix A- Bespoke evaluation tool

(adapted from Critical Appraisal Skills Programme [CASP] criteria, 2017)

The table below shows how the bespoke appraisal tool was developed from relevant CASP criteria (http://www.casp-uk.net/casp-tools-checklists) to account for the diverse range of methodologies used in studies in the review.

CASP checklist	Quality criteria	Section of bespoke tool
RCT checklist	Did the trial address a clearly focused issue?	Overarching quality evaluation tool- *Clearly focussed aim*
	Was the assignment of patients to treatments randomised?	Quantitative critique standards
	Were all of the patients who entered the trial properly accounted for at its conclusion?	Quantitative critique standards
	Were patients, health workers and study personnel 'blind' to treatment?	Quantitative critique standards-
	Were the groups similar at the start of the trial?	Quantitative critique standards- *Were baseline characteristics similar?*
	Aside from the experimental intervention, were the groups treated equally?	Quantitative critique standards
	How large was the treatment effect?	Quantitative critique standards- How large were the effect sizes?
	How precise was the estimate of the treatment effect?	Quantitative critique standards- *How precise were the results? (CI's*)
	Can the results be applied in your context? (or to the local population?)	Overarching quality evaluation tool- amalgamated into *Believable and valuable results*
	Were all clinically important outcomes considered?	Quantitative critique standards- *Relevance of outcomes looked at?*
	Are the benefits worth the harms and costs?	Overarching quality evaluation tool- *Ethical- did benefits outweigh harm?*
Case control checklist	Did the study address a clearly focused issue?	Overarching quality evaluation tool- *Clearly focussed aim*
	Did the authors use an appropriate method to answer their question?	Overarching quality evaluation tool- amalgamated into A*ppropriate design/method (inc. recruitment)*
	Were the cases recruited in an acceptable way?	Overarching quality evaluation tool- amalgamated into *Appropriate design/method (inc. recruitment)*
	Were the controls selected in an acceptable way?	Quantitative critique standards- Was an appropriate control group used? (N=?)

	Was the exposure accurately measured to minimise bias?	N/A
	What confounding factors have the authors accounted for?	Quantitative critique standards- Were potential confounding variables taking into account?
	Have the authors taken account of the potential confounding factors in the design and/or in their analysis?	Quantitative critique standards- Were potential confounding variables taking into account?
	What are the results of this study?	Reported elsewhere
	How precise are the results? How precise is the estimate of risk?	Quantitative critique standards- How precise were the results? (CI's)
	Do you believe the results?	Overarching quality evaluation tool- amalgamated into *Believable and valuable results*
	Can the results be applied to the local population?	Overarching quality evaluation tool- amalgamated into *Believable and valuable results*
	Do the results of this study fit with other available evidence?	Overarching quality evaluation tool
Cohort study checklist	Did the study address a clearly focused issue?	Overarching quality evaluation tool- *Clearly focussed aim*
	Was the cohort recruited in an acceptable way?	Overarching quality evaluation tool- amalgamated into *Appropriate design/method (inc. recruitment)*
	Was the exposure accurately measured to minimise bias?	N/A
	Was the outcome accurately measured to minimise bias?	Quantitative critique standards- *Were the measures used appropriate, reliable and valid? (inc. blinding)*
	Have the authors identified all important confounding factors?	Quantitative critique standards- Covered within *Were potential confounding variables taken into account?*
	Have they taken account of the confounding factors in the design and/or analysis?	Quantitative critique standards- Covered within *Were potential confounding variables taken into account?*
	Was the follow up of subjects complete enough?	Quantitative critique standards- *Was the follow up long enough?*
	Was the follow up of subjects long enough?	Quantitative critique standards
	What are the results of this study?	Reported elsewhere
	How precise are the results?	Quantitative critique standards- How precise were the results? (CI's)
	Do you believe the results?	Overarching quality evaluation tool- amalgamated into *Believable and valuable results*

	Can the results be applied to the local population?	Overarching quality evaluation tool- amalgamated into *Believable and valuable results*
	Do the results of this study fit with other available evidence?	Overarching quality evaluation tool
	What are the implications of this study for practice?	Overarching quality evaluation tool- amalgamated into *Believable and valuable results*
Qualitative checklist	Was there a clear statement of the aims of the research?	Overarching quality evaluation tool- *Clearly focussed aim*
	Is a qualitative methodology appropriate?	Overarching quality evaluation tool- amalgamated into A*ppropriate design/method (inc. recruitment)*
	Was the research design appropriate to address the aims of the research?	Overarching quality evaluation tool- amalgamated into A*ppropriate design/method (inc. recruitment)*
	Was the recruitment strategy appropriate to the aims of the research?	Overarching quality evaluation tool- amalgamated into A*ppropriate design/method (inc. recruitment)*
	Was the data collected in a way that addressed the research issue?	Overarching quality evaluation tool- amalgamated into A*ppropriate design/method (inc. recruitment)*
	Has the relationship between researcher and participants been adequately considered?	Covered within Mayes & Pope (2008) criteria
	Have ethical issues been taken into consideration?	Overarching quality evaluation tool- *Ethical- did benefits outweigh harm?*
	Was the data analysis sufficiently rigorous?	Covered within Mayes & Pope (2008) criteria
	Is there a clear statement of findings?	Reported elsewhere
	How valuable is the research?	Overarching quality evaluation tool- amalgamated into *Believable and valuable results*

Appendix B- Quality critique summary table

Study	Clearly focussed aim that also addressed the review question?	Appropriate design/method (inc. recruitment)	Believable and valuable results? (incl. relevance to this review)	Ethical- did benefits outweigh harm?	Do findings fit with other evidence?	Limitations/comments
Racine & Wildes (2015)	Yes	Yes	Yes	Yes	Yes	
Harrison et al. (2010)	Yes	Yes	Yes	Yes	Yes	
Merwin et al. (2013)	Partially	Yes	Yes	Yes	Yes	Research aim clear but less relevant to review question Weight restored group not determined according to current clinical symptoms Moderate sample size Weight restored = 6 months (doesn't account for long term change)
Rowsell et al. (2016)	Yes	Yes	Partially	Yes	Yes	Data not included for non-completers No control comparison group
Brockmeyer et al. (2012)	Yes	Yes	Yes	Yes	Mixed	Moderate sample size Inpatient sample generalizable to community setting
Haynos et al. (2014)	Yes	Yes	Yes	Yes.	Contrasts with other findings	No control comparison group Short time lapse between measures may limit findings.
Money, Davies, et al. (2011)	Partially	Very limited	Very limited	Yes	Mostly	Research aim clear but less relevant to review question Case study = appropriate for describing new intervention and providing preliminary evidence for acceptability and feasibility only
Beadle et al. (2013)	Yes	Yes	Yes	Yes	Mixed	Limited in terms of other recovery variables (i.e. reduction in symptoms) not looked at and short time between pre- post testing Repeated measures w control group= good but non-weight restored not compared Moderate sample size Use of personality measures
Oldershaw et al. (2012).	Yes	Yes	Yes	Yes	Yes	
Stroe-Kunold et al. (2012)	Yes	Very limited	Very limited	Unsure	Not comparable	Single participant Very narrow focus Quite intrusive for single participant (completed daily electronic diaries) and very limited results so questionable ethical rational

Oldershaw et al. (2010)	Yes	Yes	Yes	Yes	Partially	Potential confounders but discussed Finds a change in emotion recognition where other studies have not. Possibly due to measures used (RMV) or methodological issues, but is one of the more robust studies
Davies et al. (2012)	Partially	Yes	Partially	Unsure	Yes	Research aim clear but less relevant to review question Within group analysis lacked long term follow up Questions around validity of emotion processing tasks in measuring ER Questionable ethical rationale- neuropsychological test battery and findings generally of limited value Issues with generalisability of specific inpatients
Schmidt et al.(2015)	Partially	Partially (for this review question)	Limited (for this review question)	Yes	Unsure	Research aim clear but less relevant to review question Not enough analysis and reporting of within group ER change in relation to recovery variables Methodological limitations in within group analysis of change in ER (ie. didn't account for recovered v non-recovered, or report baseline/change scores in RM task)
Morris et al. (2014)	Yes	Yes	Partially	Partially (due to limited conclusions)	No	Reliability of subscales of SEQ questionable No difference in emotion recognition (AN=R=HC), contradicting evidence around deficit in AN
Bloks et al. (2001)	Yes	Partially (for this review question)	Partially .	Yes	No	Not enough analysis and reporting of within group ER change in relation to recovery variables (BMI/EDE) Questions around suitability of 'normative control group'. UCL less established measure of ER Contradicts research indicating a deficit of emotional expression, but different measure used.
Dapelo et al. (2016)	Yes	Yes	Partially	Yes	Yes	Main issue is question around validity and relevance of smiles as measure of emotional expression.
Timko et al. (2015)	Yes	Partially (for this review question)	Partially	Yes	Mixed	Not enough analysis and reporting of within group ER change in relation to recovery variables (BMI/EDE) Limitations re small sample size at follow up, and adolescent sample, limit findings
Wildes et al. (2014)	Yes	Partially (for this review question)	Partially	Partially	Yes	Not enough analysis and reporting of within group ER change in relation to recovery variables (BMI/EDE) Limitations re small sample size a post-treatment f/up High number of non-completers
Wildes & Marcus (2011)	Yes	Limited	Limited	Partially	Yes	Case study=limited methodological rigour Unclear whether P's would have received treatment otherwise and limited usefulness of findings, although 3 / 4 showed positive response.

Appendix C- Example quantitative critique table

Morris et al. (2014)

Was an appropriate control group used? (N=?)	Yes. Standard HC and recovered group criteria. (AN=28, Rec=25, HC=54)
Was assignment randomised?	N/A (non-experimental design)
Was treatment delivery blinded?	N/A (no treatment)
Were baseline characteristics similar?	No. Differences in terms of illness severity. Acute AN had sig. longer duration of illness (AN>Rec). Lowest ever BMI not measured.
Were groups treated equally other than the experimental treatment?	N/A (non-experimental design)
Were the measures used appropriate, reliable and valid? (inc. blinding)	Partially. SEQ = measure of emotion recognition (and 4 other subscales) with reliability. Validated on children and adults with neuropsychological impairments. Reliability for subscales more variable, ranging from .38 - .67
Were potential confounding variables taking into account?	Matched groups on IQ and years of education. Group differences in BMI and general functioning (GAF; AN<AN), and depression (BDI; AN>Rec>HC) not controlled for.
Were all participants who entered the study accounted for at the end?	Yes (single time point [cross-sectional design])
How large were the effect sizes?	Effect sizes not reported
Was the follow up long enough?	Standard 'recovered' criteria, inc. healthy BMI and absence of ED symptoms for >1 year
How precise were the results? (CI's)	CI's not reported
Relevance of outcomes looked at?	Good. SEQ.

Appendix D - Evaluation of qualitative studies against Mays & Pope (2000) criteria

Study	Triangulation	Respondent validation	Exposition of methods	Reflexivity	Attention to negative cases	Fair dealing	Relevance
Jenkins & Ogden (2011)	Some in that they interview people at different stages of recovery	None	Good detail But no indication of how themes developed	Mentions reflexivity but does not give examples or actual reflections	No discussion of neg cases	Does incorporate P's at different stages of recovery and makes explicit focus is on perspectives of SU's	Focused and limited sample may contribute to lack of generalizability to other setting but clear description of methods makes interpretation possible. Offers something new in a limited research arena.
Federici & Kaplan (2008)	Recovered v relapsed offers some (limited) triangulation	None	Clear description of steps although unclear whether specific methodological approach used	Good. Talked about bracketing assumptions with brief description of these. Reflected on homogeneity of sample etc.	None- although somewhat covered by attending to both recovered/relapsed	Not great but reflexivity allowed interpretation of limits to study	Good. Only study to look at both recovered and relapsed. Also, re emotions, it covers specific MR process in recovery and relapse but also links this in with other processes **Other** -Lack of specific methodological approach -Splitting P's into two discrete groups, despite having recognised that recovery is a process
Weaver, Wuest & Ciliska (2005)	Data- interviews, filed notes and memos Theoretical sampling -included spectrum of ages of P's and treatment types	None	Very thorough description of data analysis but little about data collection/ nothing on interview schedule	Lack of reflexivity although do situate their position well	None	Not limited to diagnosis- included self-identification for breadth	New insights. Useful clinically and in terms of future research. **Other** Strong theoretical and philosophical stance leading to useful insights.
Money, Genders, et al. (2011)	None	None	Good level of detail	Not reflexive	None	Recognises limitations and lack of generalisability. Acceptability and feasibility study.	Some useful insights but limitations acknowledged.

Appendix E- Research and Ethics favourable opinion

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Appendix F- Trust R&D Approval

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Appendix G- Participant information sheet

Information about the research: Anorexia nervosa and emotions

Hello. My name is Danielle Drinkwater and I am a trainee clinical psychologist. I would like to invite you to take part in a research study, which I am undertaking as part of my doctorate course in clinical psychology at Canterbury Christ Church University. Before you decide it is important that you understand why the research is being done and what it would involve for you.

Part 1

What is the purpose of the study?

The purpose of this research is to describe how people with anorexia nervosa understand and manage their experience of emotions, and what influences this. Some treatments of anorexia nervosa focus on helping people to manage their emotions better. This is something I would like to explore further in the hope of informing psychological interventions.

Why have I been invited?

You have been invited to take part because it is our understanding that you experience, or have experienced, anorexia. I am interested in how you experience emotions and how you cope with them. You should have found out about the study through your local eating disorder service and I will only contact you if you have expressed an interest in taking part. I am hoping to recruit approximately fourteen participants in total.

What will happen to me if I take part?

If you decide to take part I will contact you to make arrangements for us to meet. Ideally this will be at a [redacted] Trust service base. There is some flexibility about the location if you have a preference regarding this. I will ask you some open ended questions in an interview, which should take between 60-90 minutes. The kinds of questions I would like to explore with you include- What do you think about emotions? How do you manage your emotions? Does anything influence this? What is helpful or unhelpful in managing your emotions? What role does anorexia play in the way you manage your emotions? What role, if any, does therapy play?

I will ask you for your consent to audio-tape record the interview using a Dictaphone and this will be transcribed (typed up) word for word. During this process any identifying information will be removed. The transcript of your interview, along with transcripts of the other participants' interviews, will then be analysed in an attempt to answer my research questions.

You have the option to be sent a copy of your interview transcript and or interpretations drawn, and/ or a summary of the research findings. If you opt for this you will be invited to give your feedback. If you disagree

with anything that was said in the recording I will be happy to go back to the original recording and if necessary listen to the section together to make sure it is as accurate as possible. If you disagree with any of my interpretations or are unhappy with the research findings in any way I will try to incorporate your views into the report. You can opt out of this part of the process if you wish.

You may be contacted again at a later date and invited to attend a second interview. The purpose of this would be to cover anything that may have been missed in the first interview. You can also opt out of this part of the process if you wish.

You will be given the opportunity to review the extracts from your interview that have been selected to appear in any public domain document if you so wish.

Do I have to take part?

It is up to you whether or not you decide to take part in the study. If you agree to take part, I will ask you to sign a consent form. You are free to stop the interview at any time and you can skip any of the questions, without giving a reason. This would not affect the standard of care you receive. This means that you will not be treated differently by the members of the research team or staff at the eating disorders service as a result of not taking part in this study.

Unfortunately, after the interview has been transcribed it will not be possible to remove your data from the research. This is because conclusions drawn from your interview will be combined with what other participants have said and it will not be possible to pull out sections of the data in later stages of the analysis. However, the recording of the interview will be destroyed as soon as possible after it has been transcribed and you may request for us not to contact you again. As mentioned above you can choose to only take part in the first interview and have no further involvement afterwards if you wish. This can be requested at the outset by leaving the appropriate box blank on the consent form, or by letting me know if you change your mind at a later date.

Expenses and payments

You will be reimbursed for up to £10 in travel costs incurred during your participation. Pre-paid envelopes will be provided so that you can send me your feedback about the research findings.

What are the possible disadvantages and risks of taking part?

It is possible that taking part in the research may bring up some difficult emotions. I will be able to offer you support before, during and after the interview, and you will have access to further support from my supervisor Dr Anna Oldershaw should you request this. You can also contact BEAT by visiting www.b-eat.co.uk or calling their specialist helpline on 0845 634 1414.

What are the possible benefits of taking part?

Taking part in this research is not intended to provide any clinical benefit in itself, however it is possible that having a space to talk about your experiences may be helpful in some way. We hope that the information we get from this study will help inform the development of effective interventions for people with anorexia nervosa and will benefit people in the future.

Will my taking part in the study be kept confidential?

We will follow ethical and legal practice and all information about you will be handled in confidence. However, an anonymised transcript of your interview will be submitted to the university and extracts will appear in a report and a publication. Further details are included in Part 2.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

Part 2:

What will happen if I do not want to carry on with the study?

If you decide to withdraw before or during the interview you will be supported in doing so but this will not be possible after the interview has been transcribed. However, you may request not to be contacted again at any point. Please see section 1 for further details.

What if there is a problem?

If you have any concerns about your participation in this research you can speak with me by leaving a message on the contact details at the bottom of the page and I will do my best to answer your questions. You can also contact my supervisor for further advice or support:

[redacted]

If you are unhappy with the research for any reason or if you wish to make a complaint, you can do so by contacting:

Professor Paul Camic- Research Director
Salomons Centre
Canterbury Christ Church University
Runcie Court
Broomhill Road
Tunbridge Wells
Kent TN3 0TF
Tel: 03330 117114

W**ill I remain anonymous throughout my participation?**

Your consent form will be kept separate from your data and you will only be identifiable to the research team. The audio-taped recording of the interview will be transferred to a password protected memory stick within 48 hours and this will only be available to the research team. During transcription any identifying information will be removed and you will be referred to using only a pseudonym (a different name). If you have any concerns about being identifiable despite these precautions you can speak to me about this. As mentioned above, you will have the opportunity to review any extracts from the interview that will appear in any public document if

you wish. Copies of the full anonymous transcripts will be retained in password protected files and will only be made available to the research team or for my assessment purposes. This may mean that a member of staff from Canterbury Christ Church University or one of the examiners will need to see the transcript.

I would only share information about you with a third party if I was concerned about risk to you or to someone else. If possible I would always try to speak to you about this first.

What will happen to the results of the research study?

As mentioned above, you will be sent a summary of the research findings and invited to give your feedback. The final report will be submitted for publication in an academic journal and if you wish a copy of this will be sent to you following publication. A copy will also be submitted to the [redacted] and development, and ethics departments. A copy of the report will be made available in the Canterbury Christchurch university library.

Who is organising and funding the research?

Canterbury Christ Church University.

Who has reviewed the study?

All research in the NHS is looked at by independent group of people, known as the Research Ethics Committee. South East Coast - Brighton & Sussex Research Ethics Committee have approved this study. It has also been reviewed and given favourable opinion by [redacted] Trust research and development department. An independent review panel at Canterbury Christ Church University have also approved the research.

You will be given a copy of this information sheet and your signed consent form for your own records.

Further information and contact details

If you would like further information about research in general or this research in particular please do not hesitate to contact me and I will do my best to answer your questions or signpost you elsewhere.

If you are interested in taking part in this research or you have any questions you can leave a message for me on our 24-hour voicemail phone line- **0333 011 7070**. Please say that the message is for me (Danielle Drinkwater) and leave a contact number so that I can get back to you.

Appendix H- Participant consent form

Centre Number:
Study Number:
Participant Identification Number for this study:

CONSENT FORM

Anorexia nervosa and emotions

Danielle Drinkwater

Please initial box

1. I confirm that I have read and understand the information sheet dated 26th November 2016 (version 5) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

2. I understand that my participation is voluntary and that I am free to withdraw prior to completion of the interview, without my medical care or legal rights being affected. ☐

3. I agree to the use of audio-taping, with possible use of verbatim quotation ☐

4. I understand that relevant sections of my data collected during the study may be looked at by the lead supervisor Dr Anna Oldershaw and the research supervisor Dr Sue Holttum. I give permission for these individuals to have access to my data. ☐

5. I agree that anonymous quotes from my interview may be used in published reports of the study findings. ☐

6. I agree to take part in the above study. ☐

7. I understand that I may be contacted and invited for a second interview. At such time I can decline to attend a second interview if I wish. If I decide to take part I am free to withdraw prior to the completion of the interview, as with the first interview. I agree to be contacted about a second interview if necessary. ☐

8. I understand that I may be sent a copy of the transcript of my interview and interpretations drawn, and/or a summary of the research findings. I would like to be sent a copy of-

- My interview transcript and interpretations drawn ☐

- A summary of the research findings ☐

Name of Participant_____ Date_____

Signature _____

Name of Person taking consent _____ Date_____

Signature _____

Appendix I- Interview schedule- Grounded Theory

Situating Q's-

- As this is the first time we have met, I wonder if we could begin by you telling me a bit about yourself and your life? *(Descriptive)*
    - Prompts:
        - Living circumstances
        - Relationships
        - Work

Topic 1- Anorexia

- As you know, this interview is partly about your experience of anorexia. Can you tell me about the role of anorexia in your life at the moment *(Descriptive)*
    - Prompts:
        - How does it affect you on a day to day basis?
        - How long has it been?
        - How does it impact on your life- living circumstance, relationships, work, health etc.
            - Now?
            - In the past?

Topic 2- Experiencing emotions / emotion generation

- Thank you. Now, hopefully you will know from the information sheet about the research that another area I would like to talk about is emotions. Would that be okay? Emotions are something that we all experience and they are part of all of our lives. Some people may think that this is a good thing whilst others may think it is a bad thing. Do you have any thoughts about that? *(Evaluative)*
    - Prompts:
        - How do you feel when you experience intense emotions?
        - What thoughts go through your mind?
        - What does that mean?
        - Can you tell me more about that?

- Do you think other people have the same thoughts or feelings about emotions as you do, or different ones? *(Circular)*

- Has anything changed in the way you think about, or feel about, your emotions? *(Comparative)*
    - Prompts:
        - Have your views changed over time?
        - In what ways?
        - What do you think about that?
        - Is it more helpful or unhelpful to view your emotions in different ways?
        - What has influenced the way you view your emotions?

Topic 3- Emotion regulation

- What helps you cope with your emotions?
    - Prompts:
        - (Likely to say something about eating disorder)
        - Can you tell me a bit more about that? How does it help?
        - What else is helpful?
        - Do you ever tell people how you are feeling? Is this helpful/unhelpful?
        - Are there some emotions you feel you can share with others and some you feel you can't?

    Once elicited a few strategies…

        - Under what circumstances (social) / with you (relational) would you do this?
        - When would you not do this?
        - Are there certain types of emotions, or levels of intensity, where you are more/less likely to do this?

    If nothing said about anorexia…

        - Do you think your anorexia has played a role in helping you to manage your emotions, or not?
        - In what way?
        - Have your views changed on this over time?
        - In what ways?

- Is there anything you've tried in your past that you've found unhelpful to cope with emotions?
    - Why do you think this was unhelpful?
    - In what ways?

- Have you developed different strategies at different times? (Comparative)
    - Prompts:
        - Why?
        - What do you think might have influenced this change?
            - Experiences/therapy etc.
        - Have you found it is more helpful or unhelpful to manage your emotions in different ways?

- Again, different people have different ways of coping with their emotions. Do you think other people have the same thoughts or feelings managing their emotions as you do, or different ones?
- Do you think that other people use the same strategies to manage their emotions as you do, or different ones? *(Circular)*
    - Prompts:
        - Do you have any thoughts about this?
        - What does that mean to you?

Debrief

- So that's all of the questions that I have for you today. Thank you for taking the time to talk to me. I am aware that we may have covered some sensitive topics. How are you feeling now?
- How have you found speaking with me about your anorexia? And what about speaking about your emotions?
    - Would you like to speak with someone other than me?
- Sometimes people find that they have an emotional reaction to their experience of talking about sensitive topics a little while after the interview. Do you have any support at home or anyone to talk to if this is the case?
- There is additional support you can access through BEAT by visiting www.b-eat.co.uk or calling their helpline on 0845 634 1414 between 2-4 pm Monday -Friday.

- Do you have any questions about the research?
- Do you agree to take part in the research? As explained in the information sheet, after today you will not be able to withdraw from the study. However, if you have any concerns please contact me and I will explain further what will happen with your information. The recording will be destroyed once I have transcribed the interview and any identifying information will be removed.
- We would like to send you a summary of the research findings and invite you to give your feedback. Would this be okay?
- My contact details are on the information sheet that I gave to you. Please leave a message for me if you have any questions or concerns and I will get back to you as soon as possible.

Thank you again for your participation.

Appendix J- Theoretical sampling questions

2nd interviews

- Last time you said…
- Has anything changed?
- What have you been working on in therapy? How has it helped/not helped?
- Pick up on aspects from first interview

1st interviews (additional questions)

- What do you think has influenced any shifts or changes in the way you view your emotions?
- What work have you done in therapy around emotions? What impact has this had?
- What would it mean to be more open/accepting of emotions? How do you think it would impact other areas of your life? Relationships?
- Where would you want to be in a years time? Would your relationship with emotions be any different? How would this impact other areas of your life do you think- you're AN? Your relationships with others?
- Is there a relationship between connecting with yourself (emotions) and connecting with other people?
- What do you think about this idea of moving from a position of seeking safety (by shifting focus or shutting self away) to seeking connectedness (with self, what's meaningful you, and with others)?

Appendix K- Abridged reflective diary

November 2014: Thinking about the upcoming research fair. Ideally, I'd like to find an existing project, with a supervisor who is interested in the topic and will be invested. I think this will make life easier later on. It is also really important for me to do something that is closely related to clinical psychology practice- ideally psychological interventions. I also would like something using qualitative methods. I have a bit of experience with this and it fits with my personal philosophy. I'd really like to reflect the experiences of SU's somehow. Will have to wait and see what options there are.

November 2014: Attended the research fair. I am really interested in the project about the role of emotions in anorexia. It ticks all of the boxes for me. I don't know much about eating disorders but I'm thinking that me be a benefit in that I won't have too much knowledge to have to 'bracket off'. Have emailed the potential supervisor.

January 2015: I'm so pleased- I have secured my involvement with the eating disorders project. Just need to find an internal supervisor now. Hopefully I can find someone with experience in qualitative research methods as my external supervisor is not as familiar with this as the quantitative methods.

April 2015: Working on my proposal. Currently, aims are- a. What do participants experience as helpful or unhelpful in therapy? b. How do accounts of what is helpful and unhelpful in therapy relate to affective and cognitive-affective models of anorexia? I'm thinking IPA would be a good method to use to really explore participant's subjective experiences.

May 2015: Emailed to supervisor about-
Recruitment- I am thinking that there might be a lot to think about re recruitment. Would it be possible to look into recruiting from outside the Trust- i.e. BEAT, in the hope of finding some p's who are in recovery (I'm starting to think it is likely we will get a very different perspective from those further ahead in their recovery-

On a similar note, should I address in the proposal issues/debate around how well P's (especially those not yet in recovery) will be able to reflect on what is /helpful, or is this more something for the proposal review, if it should come up?

June 2015: Thinking about the research proposal review panel meeting and a few points raised, that I totally agree with, are about the methodology and the focus. We're thinking that a more focussed research question around the role of emotions would be more appropriate and address the gap in the literature (although I need to consider the ethical position regarding discussing such a sensitive topic), and that perhaps grounded theory would be a more suitable approach to explore the role of emotions within a social context, and less of a focus on the 'experience'. This seems like it will fit more with my external supervisor's hopes and expectations for the project and will feed into her wider research endeavours better. On a side note- my grounded theory will need to be the constructivist version, think it might be Charmaz, as I want to remain true to my epistemological stance and I don't feel the traditional GT approach reflects this. Will look into more.

February 2016: Today I had my meeting with the NHS ethics panel. I thought I would just copy in a section from an email to my supervisor-

I'm not quite sure how the meeting went. The panel had quite a few concerns, which I hope I addressed well, however I'm unsure whether it was enough to reassure them. Issues raised included-

- *BEAT participants being an 'unknown quantity' and [Trust b] clients potentially being more complex- they suggested limiting recruitment to [Trust a], which I expect may be a stipulation from them.*
- *They asked me to talk them through the 'scientific rational'. I really just summarised what I had put in the proposal.*
- *We spoke about refining the inclusion/exclusion criteria to exclude co-morbid presentations (they raised this anyway), although they did have some concerns about reducing the participant pool, and using clinical judgement instead of BMI to assess risk, which they thought was a good idea.*
- *They asked me to reassure them that I am skilled in assessing capacity, which I hope I did, referring to my clinical work as a trainee.*
- *They asked about previous experience using grounded theory and I spoke about [internal supervisor]'s experience in this area.*
- *One person asked what I would do if a participant disagreed with my analysis in the validation process. I said that my hope would be to incorporate their views into the analysis and take on board their views.*

I hope this gives you an idea of what was spoken about. In general I felt they were very responsive to my answers and am hoping they will make some recommendations as opposed to outright rejecting the proposal. They said they would write to me (I think this can take up to 60 days).

March 2016: I attended the BEAT conference today. It was so interesting to hear about the latest research in eating disorders. I feel like my research on the role of emotions is so current. I don't want to hold onto to any of the ideas that I've heard today as I am conscious that it might influence my data collection and analysis. I have made notes and I think I will wait until after the analysis to revisit them. As I am learning more about eating disorders in general I will need to take extra measures to try to notice how my existing knowledge and biases may be impacting on the research.

April 2016: Having heard back from REC my supervisor and I have been trying to contest the decision to only allow us to proceed with recruitment from one of the Trust's, and not from the second Trust or the BEAT website. This will significantly reduce the participant pool and will make the sample more homogenous. We will lose the perspective of those further ahead in recovery that we were hoping to recruit via BEAT. I feel we have considered the ethical dilemmas carefully and the decision doesn't seem fair or logical to me, however it seems that we will have to accept it at this stage. Very disappointing.

July 2016: I carried out my first interview today and it went really well! The interview schedule seemed relevant and provoked lots of interesting discussions. I felt comfortable and I suppose I was really trying to focus on listening and following up interesting leads, as well as monitoring the participant's level of emotions/distress and trying to make her feel as much at ease as possible. I think we achieved this. I am less sure if I managed to stick to the interview schedule or cover the important points. I really wanted to be flexible and not too rigid. I will listen back to the recording later and revise my approach for the next interview if necessary.

August 2016: Interviews are going well. I am really finding them interesting. The transcribing is slow progress but again very interesting and definitely worthwhile doing myself. I am noticing lots of similarities across participant's interviews. On the other hand there is a lot of variation and the topic is suddenly feeling very broad. I have no idea where I will begin to make sense of this in the analysis.

November 2016: I now have eight participants. It doesn't feel like enough but I have been liaising regularly with staff at the eating disorder service and I am pretty confident that they are telling

anyone who may be appropriate about the research. What's more I think most of them have taken part. The issue seems to be that there are not that many people who meet the inclusion criteria from this one service. I want to be proactive but feel a bit stuck! I think I might consider going back and re-interviewing participants who are willing as this will provide more data and allow me to explore in more depth some of the codes and categories from the analysis once I get going with this. Also, I've spoken to the university ethics committee representative and seems to think that I could have gotten university ethics approval for the BEAT side of the research. I might see if I can still do this.

December 2016: Having succeeded in getting authorisation from the university to pursue getting university ethical approval to recruit from BEAT- the BEAT representative has informed me that there is a waiting list for advertising research and this falls outside my time scales. I really did try to pursue all avenues with this but I will just have to accept the current situation and do my best with the data I have unfortunately.

December 2016: I have now started line by line coding. I think I will continue with the line by line coding for a few more transcripts as there appears to be a lot of variation in participants' experiences and I don't want to lose too much too soon by only coding latter transcripts using focussed codes derived from earlier ones. I'm not sure if this is conventional but I feel it is the right thing for my analysis to capture enough of each participants' experience before going on to focussed coding.

January 2016: There's so much data! I need to start making sense of this. I don't feel like NVivo is helping me manage all the data really. I'm going to try writing some memo's and hope this allows me to organise my thoughts and find a way forward.

January 2017: I'm finding the memo writing really helpful. I have been writing memos about more research/procedural aspects, as well as the codes and categories. I have also written memos for particular participants. It is helping me to start picking out key ideas and explore differences between participants. I have also been writing memos about reflections on my own biases, for example when I think I might be being swayed in a particular direction in my interpretations. This does feel helpful in achieving a sense of perspective and being able to consider, perhaps more objectively, if I am staying true to the data.

February 2017: I am starting to develop tentative categories and subcategories, and links between them. I'm also trying to ask questions of the data, identified by Charmaz, such as who produces what action, who does not, and under what conditions. It feels a bit disjointed but as long as I keep writing memo's and follow my instincts I think the process will lead somewhere. I hope it does!

Also, I am grappling with this idea of trying to stay true to the data and individual accounts, whilst also reflecting a sense of the data as a whole and reading between the lines a bit. The line by line coding doesn't seem to always capture the broader sense. Again, I think I will just keep writing memos about the broader sense and come back to them.

February 2017: Meeting with supervisors re: analysis. They both seemed really interested in my emerging analysis and gave me some useful ideas to work on. External supervisor wanted to give me some thoughts about how these finding relate to her experience and the empirical literature however, we decided to save these conversations for a bit later as to not influence the analysis too much at this stage. I think I am managing to capture the broader sense and similarities across accounts but I want to go back to the codes and just check that I am staying true to my data.

March 2017: Today I attended a meeting with the research team involved in my supervisors' wider research project and gave feedback about my findings. It was very helpful. They thought that some of the labels didn't quite fit the data (I read them some quotes to demonstrate the

codes/categories). Having reflected on the meeting I think that the overarching concept around *'Closing down but letting the outside in'*- through *'seeing through the façade'*- towards '*opening up and letting the inside out'* doesn't really reflect the data. The middle phase seems to be the important bit! I'm thinking about changing the labels on the other to 'phases' to reflect the data better. It might be that they are less abstract. I think I liked the idea of people transitioning through these three phases, and they sounded very catchy (as bad as that sounds). But I'm asking myself "are the participants really saying this?" and I'm not convinced that they are. Anyway, these are my thoughts. I'm going revisit the analysis over the next week or so.

April 2017: I have made some changes to the analysis in light of the feedback from the meeting. I am a bit worried about whether P's would like/agree with the results/analysis. I really want to stay true to them and their experiences. I have been finding it useful to think about what they might say to keep me true to the data and not go off on things I think are interesting. It seems there is always a balance to be gained between attending to the specific so of each P's account and giving equal weighting to different P's, and trying to reflect some more overarching, without losing the nuances. I have sent some feedback requests out to P's that agreed to be contacted so I'm hoping some will come back.

April 2017: Today I received some feedback from two participants on the analysis/emerging theory. I feel so relieved and excited. The feedback was really positive, generally supporting my interpretation of the data and also gave me some useful ideas about how I might refine the analysis/theory and reflect some of the nuances a bit better. One participant commented on the table of excerpts and noted particular codes that she could relate to, as well as indicating those codes where I haven't necessarily cited her interview but saying how she also has such experiences. I feel that this gives the analysis additional validity (that codes evolved from other participant's interviews also apply to this participant). The other participant gave some helpful feedback about how the second two phases of the theory should perhaps not reflect a linear process but more of a circular one. For example, she said that she felt some of the *opening up* aspects helped her to *see through the façade.* I will try to revisit the analysis and incorporate this feedback. I think I have just about enough time before the deadline!

April 2017: So today I'm going to revisit my analysis and try to incorporate the participant feedback. Having read back over it a few things stand out. Firstly, both participants' feedback highlight the emphasis on the circularity or dynamic relationship between phases. One, in the sense that she feels she needed to 'look in' in order to see that there were better ways of coping; and the other in the sense that she might be able to talk through things with a therapist but may still struggle opening up to her family.

The feedback also emphasises the 'internal dialogue' involved with *experiencing self-doubt.* This resonates with many of the interviews but I always struggled to incorporate the thoughts into the analysis around emotions. P9's feedback also highlighted the role of social comparison in *avoiding emotions,* particularly pertinent to the code *seeing emotions as socially undesirable.* I think perhaps there was not enough data for this to make it as a focussed code, but with this feedback I think I can certainly reflect on it as a dimension of the category.

Perhaps the biggest thing to have come from this feedback is how *seeing through the façade* seems to be the overriding concept. It is very much reflective of participant's current position, both influencing and being influenced by the other two phases in a circular way. I have adapted the labels since sending the summary to participants so I will have to see how it all fits together today.

Appendix L- Coded interview transcripts (anonymised)

THIS HAS BEEN REMOVED FROM THE ELECTRONIC COPY

Appendix M- Selected memos

Pre-analysis memos- Thoughts prior to starting the analysis

Initial thoughts and reflections

What am I hoping to achieve?
Would like to explore links between 'the problem of emotion dysregulation' and the process of recovery. Does anything change? How does it change? What helps/doesn't help? Is therapy helpful, and if so, what aspects of therapy? Are some people more likely to experience positive change in relation to ER than others? Are there examples of recovery where ER doesn't seem to have played a role? Are there examples where emotion dysregulation does not appear to be related to AN in the first place? Can we specify particular aspects of ER, ie. awareness, expression, specific strategies, that are more problematic/amenable to change/tied in with recovery than others?

Ultimately- is there anything that can be done to facilitate recovery? If so, what? How might this inform therapeutic interventions?

Assumptions and biases-

Assumption that ER improves with recovery as both a cause and consequence of weight gain and reduction in ER symptoms. Also, that those who do not experience a shift in their relationship with emotions are likely to experience less of a shift in terms of their recovery from AN. Expectation that therapy can facilitate process but that other perhaps naturally occurring factors will also influence this.

Some background reading suggests that AN can be a way of coping with emotions and recovery involves finding more adaptive ways of managing emotions, particularly building relationships and learning to communicate feelings. Mindful not to let this influence interpretation of data.

USP of this research is the focus on process of change in ER. However, must include aspects of 'the problem' as this is integral to a theoretical account of how things then change.

Thoughts and feelings-

Feels like a big task ahead of me. Unsure if interview questions have been focussed enough on research questions, however conscious not to lead participants too much. Unsure how to incorporate social constructivist perspective. Possibly stay focussed on participant's accounts of what they experience as opposed to seeking 'the truth' of what happens in any way.

Early memo's- thoughts on interviews and initial codes/coding

Legitimacy
Possibly also linked to something around authenticity (also closely linked with connectedness and not seeking safety)

Link= feeling able to be who one really feels they are, warts and all.

Just thinking about authenticity. Perhaps early phases of ED characterised by secrecy (from self and others) and not acknowledging one's private experiences (thoughts, feelings) or behaviour. Whilst the recovery process involves first acknowledging to oneself and later opening up to others about both AN/ED, function of AN and private experiences?

Talking
Talking to others. Currently put under connectedness-relationships-opening up to others. Also, it is essentially another way of relating to emotional experiences.

Participant 1
Being busy linked to structure. Initially described in negative way or way to justify occupation but later seems to link more with structure and routine, and as part of distracting from the thoughts.

Is 'allowing' herself to eat. Reminds me of P4 who wants to get to that point. Maybe this is the point of recovery- being willing to listen to your body and your desire for food and let this control your eating rather than ED

Participant 6
Note: Very drawn to this participant's descriptions. Very articulate and poetic. Seems to make explicit some of the implicit themes emerging from other interviews but be careful not impose them on other data.
Denying emotional needs kind of brings together the emotion bit and the relationship bit, as well as general connectedness. Similar descriptions of emotional hunger and starvation to another P, and cleansing through emptiness. Also, distraction of ED and other things filling up time, or substances/routine etc. but distraction from what? Perhaps it is this emotional need?

Advanced memos- category development

Perceiving emotions negatively
Perceiving emotions negatively reflects the sense that emotions are bad in some way. For many of the participants, emotions were viewed as dangerous. For example, Grace said "I mean I know that I know that emotions are okay and I know they're okay to feel however when I personally feel them some of them they do feel dangerous yeah". Others spoke of experiencing emotions as "scary" and "frightening" (Rachel), or as simply "bad" (Sue). For Sue, her days were consumed by controlling an overwhelming sense of fear, which she felt had the capacity to kill her- "If I didn't control the fear it would kill me".

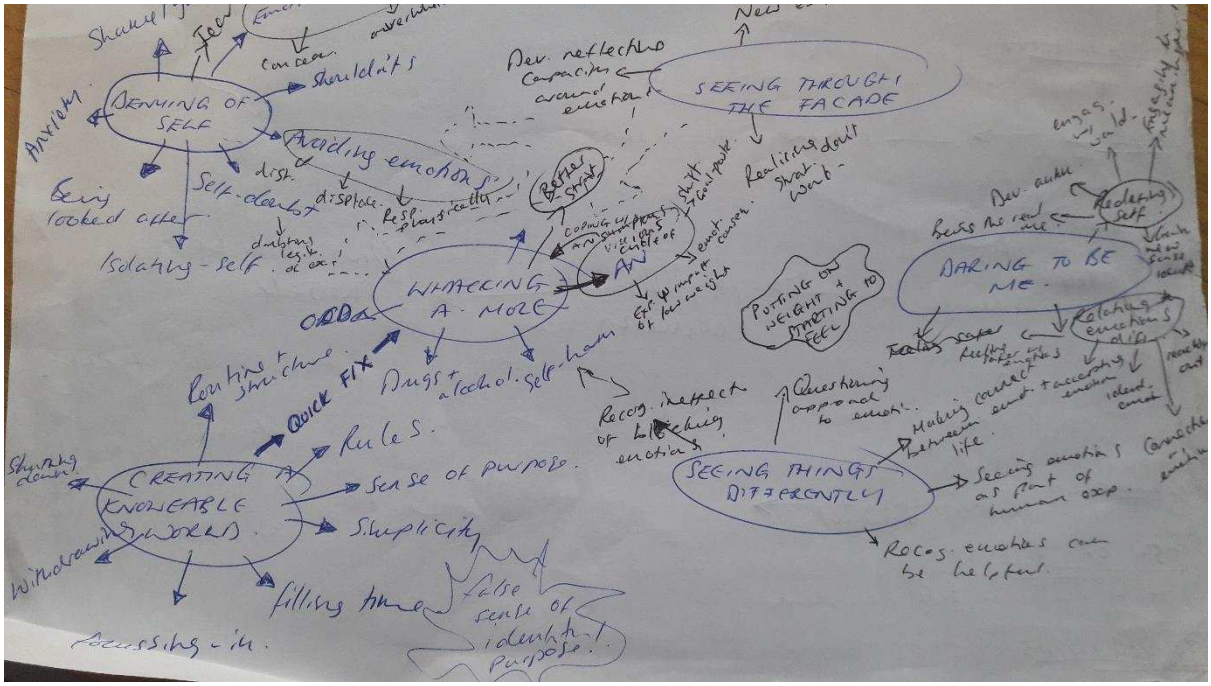
[…]

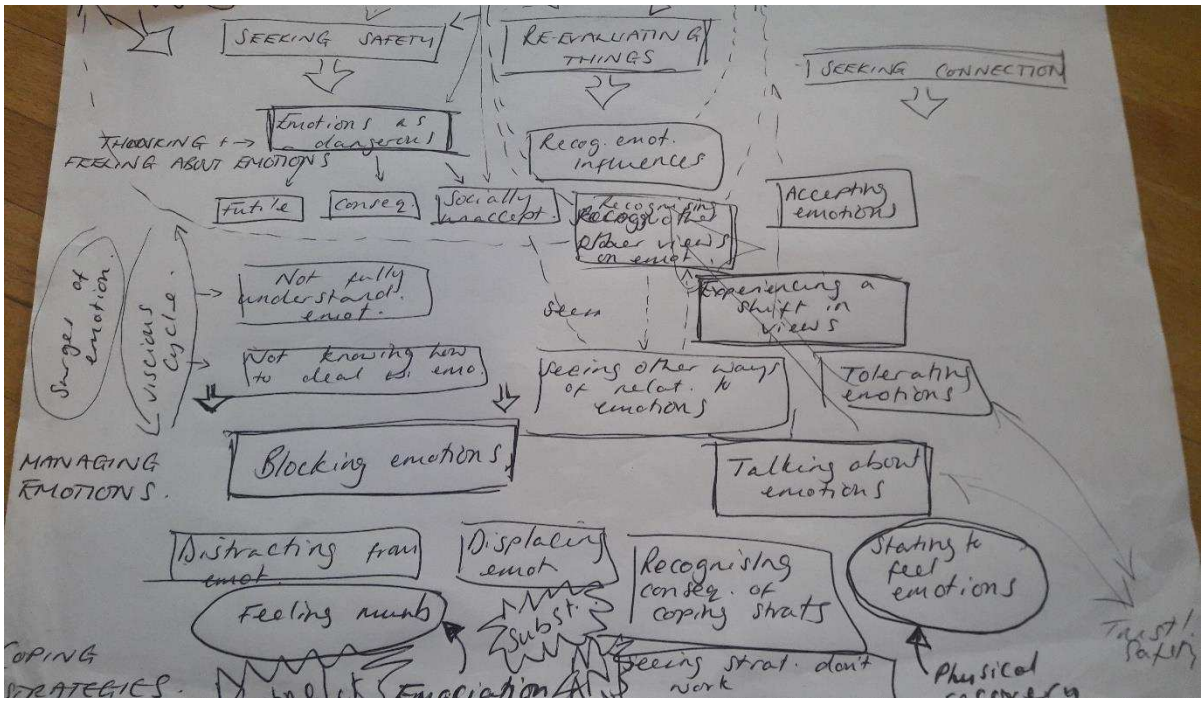
For many of the interviews, there was this strong sense of emotions being dangerous and omnipotent, but this was not always the case. Another way in which emotions were seen as negative was believing that emotions were futile. Nadine said "I think if I was to be a really emotional person then I would get nowhere in life", whilst both Sue and Claire spoke about emotions 'just getting in the way'. Such accounts of the futility of emotions were underscored by a sense of importance in just getting on with things.

For some participants, emotions were mostly described as futile (Claire), or dangerous (Rachel; Grace), whilst for others they were both futile and dangerous (Sue; Nadine; Kate). I'm wondering if danger and futility are all that different… in the sense of not having time for emotions and needing to keep safe.

Coping 'badly' (following meeting with research team)
The team drew attention to the importance of emphasising that category 5- 'coping badly'- was actually more about 'realising I'm coping badly'. What participants were saying is that *now I see this was ultimately an unhelpful approach*, which wasn't clear from the label I had used. They also felt that this was a particularly important part of the emerging theory that should be drawn out a bit more, perhaps with another separate diagram to help the reader understand how different aspects of this relate.

Appendix N- Audit trail (examples of early code and category development)





Appendix O- Participant feedback (respondent validation of codes and categories)

Participant feedback request, including a summary of findings as they were in March 2017, and participant feedback

Participant feedback

Dear participant,

Thank you for taking part in this research. I have now completed 11 interviews with 9 participants. I have analysed the data and am currently in the process of writing the final report. I am writing to give you the opportunity to give your feedback on my interpretations. It is important to hold in mind that these interpretations reflect a combination of different participants' experiences. I hope to have taken into account similarities and differences between participants but also reflected overarching ideas.

On pages 2 and 3 you will find a summary of the research findings. Page 4 contains a diagram of the main categories, organised into three phases of anorexia and recovery. There is a list of specific questions on pages 5 and 6 to help guide you if that is helpful. Please feel free to leave any comments and/or attach more pages if necessary. A table of categories and focussed codes (sub-categories that relate more directly to the interviews and feed into the main categories), alongside example quotes from **your** interview is also included. This is intended to give you an idea of how your interview has been interpreted. You may make notes on the table if you wish.

I have enclosed a stamped addressed envelope. If possible, could I please ask that you post your comments, if you wish to provide them, back to me within 7 days of receipt of this letter? This is because I would really like to incorporate your comments into the report for my university assessment. Alternatively, if you post them back within 1 month I will be able to incorporate them for the final publication.

The transcript of your interview, if you requested it, is also included. You will notice that I have given the people spoken about in the interview different names and removed other identifiable information. The transcript is for your own records and you do not need to read it in order to provide feedback on the analysis, however you are welcome to do so if you wish. Please **do not** return the transcript as there will not be enough postage.

Summary of research findings

Participant copy

The diagram attached outlines the main categories that were produced by the analysis. More information about the different codes (or sub-categories) under each category can be found in your personalised category table attached. I have included key quotes from your interview that have been interpreted as relating to that theme or category.

Categories have been organised into three main phases of participants' experiences-

- Closing down but letting the outside in
- Seeing through the façade
- Opening up and letting the inside out

The diagram will show you which of these three phases each of the 10 categories have been organised into.

'Closing down but letting the outside in'

This 'closing down bit' reflects the way participants spoke about perceiving their emotions negatively (i.e. as dangerous or bad in some way) and subsequently avoided them, using a range of strategies (i.e. distraction). It also reflects how they described experiencing self-doubt and sought to create a predictable world for themselves, characterised by rules, routine and structure.

The 'letting the outside in' bit reflects the external messages that participants received, for example that they should not show their emotions.

'Seeing through the façade'*[6]

[6] The word façade refers to something with a deceptive outward appearance

This phase represents the way in which participants spoke about behaviours associated with anorexia, and other maladaptive coping strategies, as ultimately unhelpful. It seemed that there came a point where participants saw things for what they were, unhelpful, in contrast to feeling like anorexia was the solution to everything, for example.

During this phase, many participants also seemed to reflect on the things that led up to the development of these coping strategies, and began to question their relationship with their emotions. They developed motivation to change, for example wanting to get better or to relate to their emotions differently.

For lots of people it seemed that they had experienced a low point and ended up in hospital or receiving treatment for anorexia. Once engaged in therapy, many people said they found this helpful, even if the circumstances leading up to this were very difficult.

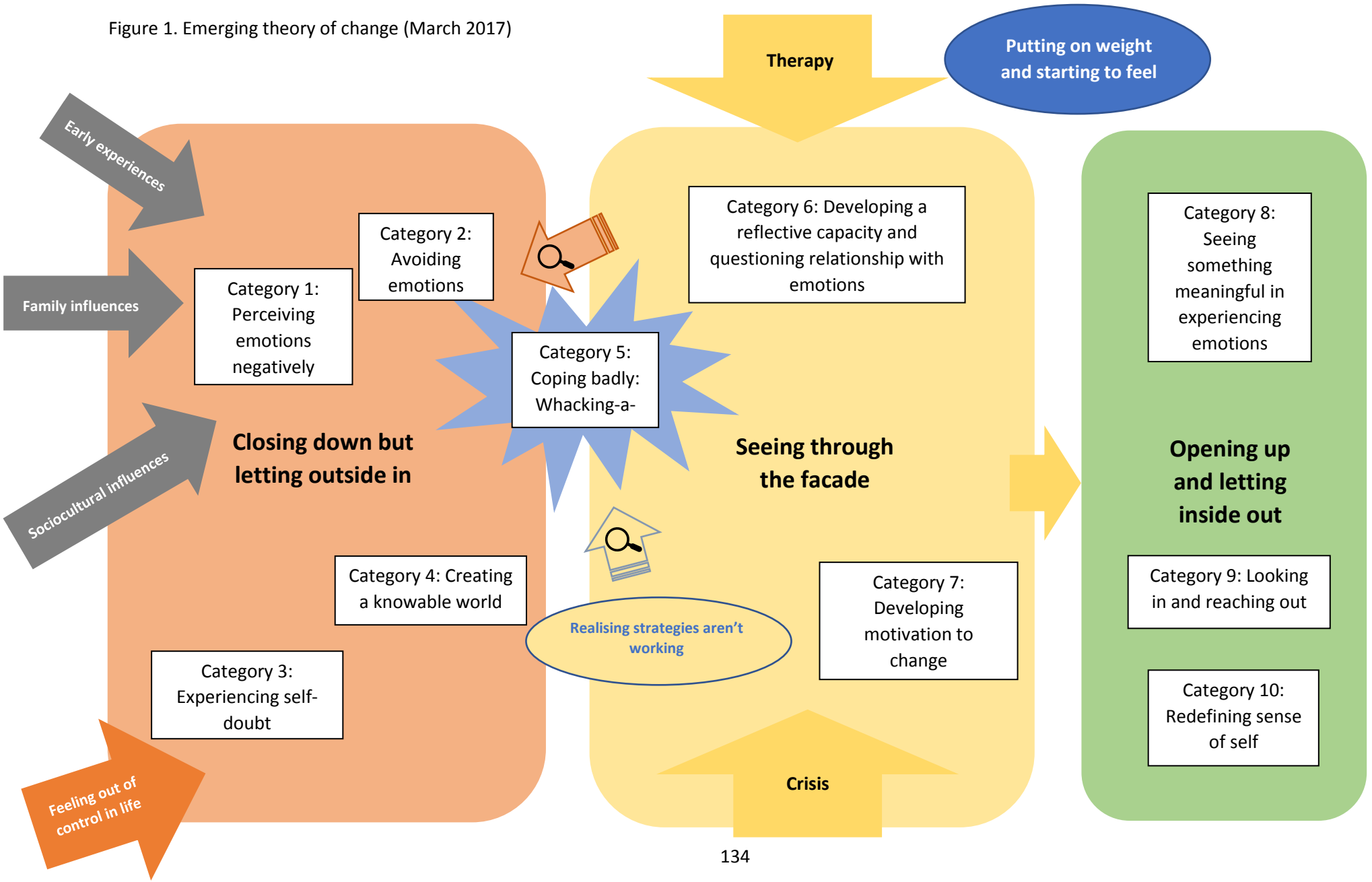
For some participants, putting on weight had an impact on their thinking, their motivation, and the way they experienced emotions. This in turn had an impact on the way they started to re-evaluate things.

'Opening up and letting the inside out'

This phase reflects where participants seemed to be heading in terms of their recovery. The 'opening up' part represents talk of seeing their internal experiences and emotions as something meaningful, for example something that makes us who we are. Participants also spoke of things like learning to identify their emotions, becoming the 'real' them, and developing independence and autonomy, or of trusting themselves and being more spontaneous. Some spoke of gaining a new sense of identity.

The 'letting the inside out' bit refers to the way participants spoke of talking or opening up to others. It also refers to the way some participants spoke of engaging with the world around them.

Figure 1. Emerging theory of change (March 2017)



Questions

What thoughts do you have on the overall model?

(i.e closing down but letting the inside out, seeing through the façade, and opening up but letting the inside out)

While I agree with the ideas that you present, for me the second + third stages were actually more mixed, + if anything I needed the third before the second to help me see through the façade in other words, trying to open up more allowed me to see another way to be + thus feel able to move (rather unhelpful behaviours / move away from them

What thoughts do you have on specific categories?

(Listed in the second column of the table. i.e. "emotions seen as dangerous")

On the whole the 20 codes are well divided + cover all I could think of to code up, apart from category 6 (I think some of these codes should be redistributed later as they can only come after having begun to open up if anything they could all be moved to one of the later categories) Also category 5 in my experience was never conscious experiences / decisions and so personally I would try to convey that more.

What aspects do you think apply to you / do not apply to you? Why?

The first 4 aspects I really relate to as I know how much I have had almost an aversion to emotions in the past (feeling / showing my own rather than others as I am hyper sensitive to others), yet categories 5/6 I did not feel applied and were perhaps a little confused in terms of order + perspective. (as above + on table)

Table of categories- Participant 9

Categories	Focussed codes	Example excerpts
Category 1: Perceiving emotions negatively	Emotions seen as dangerous	
	Emotions seen as overwhelming	
	Emotions seen as having negative consequences	certainly by showing emotions I perceive they allow people to see me as vulnerable + easier to attack / undermine
	Emotions seen as futile	I think that for me they [emotions] get in the way (P. 9)
	Emotions as socially unacceptable	It's not very easy to hide your emotions. We all do it I think from a social respectability point of view. (P. 9
	Feeling like I shouldn't experience emotions	when others don't expect you to, they find it strange for you to show it + shy away
Category 2: Avoiding emotions	Wanting to avoid emotions at all costs	But I think also partly because I just don't want to experience it [emotions] as well. (P. 9)
	Denying emotional needs	
	Blocking emotions	I'm quite good at shutting them off quite quickly... you just do it without thinking (P. 9)
	Distracting from emotions	Um you know just putting up a front to it. Not discussing it. Not playing attention to it. Watching a film instead. P. 9)
	Displacing emotions	
	Responding physically	
Category 3: Experiencing self-doubt	Questioning the perceived legitimacy of experience	I have to check in with other people to check that what I'm feeling or thinking is right or legitimate or you know (P. 9)
	Questioning judgement	= CONSTANT internal dialogue
	Doubting ability to manage emotions	

	Not fully understanding emotions	But that has led me to not make the distinction necessarily between knowing when it's [the emotion] right and when it's not (P. 9)
	Having little confidence in own autonomy	
	Feeling confused	
	Being dependent on others	If I mean I'm in hospital it's very easy to just do the eating part because someone else is taking the responsibility for it. I'm just doing it. (P. 9)
	Being subservient	
Category 4: Creating a knowable world for myself	Having routine and structure	But I am very controlled in being organisec. I like to know what I'm doing. When I'm doing it. I'll plan. (P. 9) - I think this contributed to getting ill (ie not coping with lack of structure as ~~normal day~~ a new student @ university)
	Sticking to the rules	
	Keeping things simple	
	Avoiding uncertainty	I hate not knowing. I hate not knowing anything. If I don't know what's expected of me I don't like it. If I don't know how I feel I don't like it. If I don't know what someone's thinking I don't like it ... So I try to avoid all of these things. (P. 9)
	Filling time	Ever since I was a little girl I I hate being or having time to myself (P. 9) If I've planned to do something, I want to be doing something. So I'll fill that time with something else if someone cancels on me. I don't. I can't just be like "oh okay I'll just spend the night in" (P. 9)
	Focussing in on something	It doesn't make me feel better but it must have somehow given me. Perhaps something to put my energy into that was constructive. That had a clear result. (P. 9)
	Withdrawing	**Negative cases** I like being social. You know I don't like being on my own. I like to be out with friends. (P. 9) That when you're not around people I lost sight of what was normal. So I spent quite a lot of time on my own. (P. 9)
	Shutting down	- easier to shut down than be overwhelmed by emotions
	Striving for a sense of control	Um I can't stress enough that mine was purely control based. Um I've come to realise that over the whole time I've been in treatment. I've felt out of control in so many other things that that was the only thing that I could control. (P. 9)
Category 5: Coping badly- 'whacking a mole'	Turning to maladaptive strategies	
	Achieving a 'quick fix'	

	Experiencing consequences of coping strategy	
	Feeling numb	
	Experiencing a build-up of emotions	You know there's also been this suggestion that not turning my attention to the emotions it's kind of built up built up built up and it's come out like this instead of me just crying when I was upset. (P. 9)
	Experiencing Psychological consequence of low weight	
	Using other maladaptive strategies to manage anorexia	
	Losing control to AN/shifting goal posts	... but it was that it would play an impact in other things in my life and. Yeah it became very controlling of me in that way. (P. 9) Because it was always push yourself push yourself push yourself. More and more. Twenty-four hours forty-eight hours without eating. (P. 9)
Category 6: Developing a reflective capacity and questioning relationship with emotions	Reflecting on relationship with emotions	
	Noticing other ways of relating to emotions	
	Understanding behaviour	
	Thinking that emotions are okay	← this too would be better later (more like category 8)
	Becoming more ambivalent about experiencing emotions	

	Feeling in control of emotions Move to category 9? ←	I think this should come much later too
	Knowing but not feeling	
Category 7: Developing motivation to change	Being motivated by others	→ not necessarily others, but other external influences (for me this came in recovery knowing I had to put on weight to be at university + move to Italy last year)
	Stopping before it's too late	So it meant that I was out [of hospital] by the time that university restarted and I could get back to life and you know carry on with my day to day things. P9
	Moving forward	And then it will be going forward, getting a job, and moving out and. I like to you know build and progress. P9
	Developing hope	This is something I'm trying and it seems to actually be getting there and there seems to be that glimmer of hope P9
	Engaging in meaningful activities	
Putting on weight and starting to feel		
Category 8: Seeing something meaningful in experiencing emotions	Seeing emotions as part of human experience	I don't think you can fully react with your head and not your heart. It just doesn't happen. You're human. P9
	Emotions as something that needs to be experienced	
	Making a connection between emotions and life	
	Recognising that emotions can be helpful	
Category 9: Looking in and reaching out	Feeling safer with emotions	

	Identifying emotions	I'm really working on identifying my emotions. P9
	Being willing to experience emotions	Actually letting myself feel them rather than just quell them (P9)
	Connecting with emotions /Experiencing emotions	
	Experiencing joy	
	Reaching out/talking about feelings	But it has helped me because it's made me feel I can say what I want P9
	Engaging with the world	
Category 10: Redefining sense of self	Being a more real me	I'm in a place where if I feel sad I clearly feel sad for a reason otherwise I wouldn't feel it. It's that confidence to be okay with yourself and your reactions to things. P9
	Liking me	← perhaps 'accepting' > 'living'
	Developing autonomy	And a lot more able to regulate myself. And not rely on other people. And be conf- I don't have self-confidence. I have to check in with other people to check that what I'm feeling or thinking is right or legitimate or you know. P9
	Gaining a new sense of identity	It's like if we're going out "oh May can sort it". Because. And I do enjoy it. You know. That's something that I might actually go into at the end of university. Event planning and production P9
	Being flexible and spontaneous	

NB. Negative cases refers to quotes that contradict, or say the opposite, to the general theme.

Questions

What thoughts do you have on the overall model?

(i.e closing down but letting the inside out, seeing through the façade, and opening up but letting the inside out)

I definitely agree that these three phases of experience are/ah over the development of my ED illness and subsequent recovery. The only thing that I would add is that I believe the lines are quite blurred between them, particularly the seeing through the façade & opening up stage, e.g. talking through things with a therapist and developing my reflective skills, but still struggling with thoughts/behaviours, and not being able to open up to my family.

What thoughts do you have on specific categories?

(Listed in the second column of the table. i.e. "emotions seen as dangerous")

The category that I believe myself (and other people I know afflicted with an eating disorder) to have been affected by the most during the time of getting ill/ was the 2nd category of avoiding emotions. I think that there needs to be far more emphasis in treatment on re-discovering emotions and sitting with uncomfortable feelings rather than acting upon them, as during recovery, especially the initial stages, you often feel a barrage of uncomfortable emotions.

What aspects do you think apply to you / do not apply to you? Why?

I have experienced all of the categories, to varying degrees. My capacity to self-reflect has been something that has been noticed by quite a few people, including therapists, interviewers, university tutors & family. It is a skill that I believe to have honed over the years in an attempt to understand myself, and my deeper understanding of feelings/actions/consequences has been imperative

Any other comments

P.S

to my progression

One of the most difficult stages in my opinion is developing/ rediscovering my sense of self i.e who am I. Having been ill since I was 13 (I'm nearly 22), it is hard to imagine my life any other way, I still often feel scared about filling the HUGE void that would be left when I am completely rid of Anorexia. ~~It's scary~~

Facilitating ways to help patients discover what they enjoy/ find enjoyment from, be it a hobby, education, travelling, spending time with others is ~~vital~~ vital as it highlights to someone with little hope that they have something worth living for

Are there any quotes from your interview that you do **not** want to be included in the report?

(Please list here or mark on the table of categories and quotes)

—

Pseudonyms (a different name) will be used in the report to protect your anonymity. If you would like me to use a particular name to refer to you, please specify-

—

Table of categories- Participant 5

* – represents the categories I have perhaps experienced the most.

Categories	Focussed codes	Example excerpts
Category 1: Perceiving emotions negatively	Emotions seen as dangerous	
	Emotions seen as overwhelming *	Um I definitely think they're very powerful (P. 5)
	Emotions seen as having negative consequences	
	Emotions seen as futile	
	Emotions as socially unacceptable	I mean he doesn't actually call me a cry baby or anything but it's sort of one stop short of calling me that sometimes. Um I mean I guess it's a generalisation but I think like several males that I know um I definitely think they're less inclined to show emotions. (P. 5)
	Feeling like I shouldn't experience emotions	
Category 2: Avoiding emotions	Wanting to avoid emotions at all costs	
	Denying emotional needs	I get so angry because of the argument and then I sort of decide, I put all of that energy into deciding not to eat and mostly like trying to annoy my parents or something. Um or like self-sabotage because that's what it is P. 5
	Blocking emotions	
	Distracting from emotions *	Or like I'll, sometimes if like I felt upset I'd go on an obsessive clean on like my bedroom or something P. 5
	Displacing emotions *	I put all of that (emotional) energy into deciding not to eat and P. 5
	Responding physically	... but I always think there is something that you physically do that helps. P. 5 and I would want to like physically, not hit somebody, but like hit something, or I would just like sometimes hit my head. Not like punch but I don't know just like, I don't know just to like get the anger out, or scream or something P. 5

Category 3: Experiencing self-doubt	Questioning the perceived legitimacy of experience	
	Questioning judgement ✳	Or constantly needing somebody when I got home to check that my keys and purse are in my bad because I worry that I was tricking myself um (P. 5)
	Doubting ability to manage emotions	
	Not fully understanding emotions	
	Having little confidence in own autonomy	
	Feeling confused	
	Being dependent on others	sort of you revert into the parent child relationship a bit. (P. 5
	Being subservient	... the only thing is I wish I could, it's not that I can't do it, but my parent's and I have agreed that I'm not quite ready to like live away. (P. 5
Category 4: Creating a knowable world for myself	Having routine and structure	
	Sticking to the rules ✳	
	Keeping things simple	I don't really do much (P. 5)
	Avoiding uncertainty ✳	Um (..) I'd say I suppose complete and utter control. Um I definitely in terms of going out to eat that would not have happened. Or if it did I would have had to have known like at least a week before (P. 5)
	Filling time ✳	
	Focussing in on something	
	Withdrawing ✳	would say "oh come along for the ride" just to you know get something from the shops and I wouldn't even want to do that. (P. 5) Um I sort of didn't socialise. But that wasn't really because of thinking about what to eat it was more I I just didn't want to socialise and I didn't have the energy to do it (P. 5)
	Shutting down	
	Striving for a sense of control	

Category 5: Coping badly- 'whacking a mole'	Turning to maladaptive strategies	I guess I've always felt like I've just got a bad coping method um. I sort of personally see a lot of similarities with um you know people with like alcohol or drug addictions things like that. I just see all of that as a way of coping with emotions. ... (P. 5) Yeah. I often I've often found, I almost think do you know that thing 'whack a mole' where you try and hit things and other things pop up? I almost feel like I have things bad, like when I get rid of one bad coping mechanism and another one pops up like. (P. 5)
	Achieving a 'quick fix'	Um I guess I kind of, after that it's almost like I made a deal with myself and then I was able to calm down very quickly. So I guess it's a very short term solution to things because in the long run it made me feel worse (P. 5)
	Experiencing consequences of coping strategy	
	Feeling numb	... like again when I was ill-er I would say I was very numb to emotions um. Didn't really feel anything (P. 5)
	Experiencing a build-up of emotions	But then like I could, all of a sudden, like the flip of a switch, just feel like real intense emotions. (P. 5)
	Experiencing Psychological consequence of low weight	Yeah motivation is definitely another thing. I I struggle to get out for bed and things if I and thinking about my weight when I'm at a far lower weight it's a struggle to motivate myself to do things. (P. 5)
	Using other maladaptive strategies to manage anorexia	I would say I'd do that (scratch) more if there were certain situations where I wasn't able to like skip a meal or whatever, like I still had to have dinner with my parents or my family (P. 5)
	Losing control to AN/shifting goal posts	
Category 6: Developing a reflective capacity and questioning relationship with emotions	Reflecting on relationship with emotions	I guess particularly in the last year um where I've found my therapy quite effective. I've become um thoughtful and reflective. I suppose I look quite in depth at things now P5
	Noticing other ways of relating to emotions	I don't know I just try and notice what other people do [to manage emotions]. I suppose partly out of curiosity and partly I suppose maybe subconsciously I'm trying to find ways that might help me and I see everyone else I live at home with... P5
	Understanding behaviour	And then it's only really been in the last sort of year where I've really tried to help myself and talking about, discovering why I repeat doing things and stuff P5 Yeah um. I mean I've done quite a few things. I've done a bit of CBT. That's really helped in terms of thinking about why I feel a certain way or act a certain way. P5

	Thinking that emotions are okay	
	Becoming more ambivalent about experiencing emotions	
	Feeling in control of emotions	Sometimes if I do feel bad about myself but then remembering that I do feel a lot better and feel more in control of my emotions P5
	Knowing but not feeling	
Category 7: Developing motivation to change	Being motivated by others	
	Stopping before it's too late	but I actually managed to, I convinced my university to let me carry on studying. I'm quite sort of determined in that way. Because I didn't want to have to drop out again um and I had to like prove to them that I was like understanding things and stuff. (P5)
	Moving forward	Because like I'm quite ambitious like with things I want to do. Um I felt like there was becoming this quite wide gap between myself and some of my friends and um what they'd managed to do with their lives and um yeah I guess I was just quite determined to try and lead a relatively normal life. (P5)
	Developing hope	
	Engaging in meaningful activities	
Putting on weight and starting to feel		
Category 8: Seeing something meaningful in experiencing emotions	Seeing emotions as part of human experience	
	Emotions as something that needs to be experienced	I think it's yeah I think you need to experience emotions P5
	Making a connection between emotions and life	

	Recognising that emotions can be helpful	
Category 9: Looking in and reaching out	Feeling safer with emotions	
	Identifying emotions	
	Being willing to experience emotions	I mean in terms of being like angry or upset I'll often ruminate over things and like can't stop thinking about it so I guess once I've accepted it, it just sort of allows more space in my head to think about other things P5 I mean I think it is. I think it's, as well because I've spoken about this before, I think at home I do feel that I am able to show anger. I don't feel like I have to hold that in as much um. Yeah no I think it's okay. P5
	Connecting with emotions /Experiencing emotions	
	Experiencing joy	
	Reaching out/talking about feelings	I was a bit sceptical about starting with a new therapist, like I don't want to talk about emotions and things... but actually [laughs] I have ended up talking about my emotions and it has been really helpful. Um yeah so I see the benefit in doing so now P5 Um I felt like I've been able to say things that like I wouldn't have even said to my parents and like actually saying them out loud it's quite scary. (p5
	Engaging with the world	
Category 10: Redefining sense of self	Being a more real me	
	Liking me	
	Developing autonomy	But even though I don't want to be in adult services I I am appreciative of the fact that I have been treated like one. P5
	Gaining a new sense of identity	
	Being flexible and spontaneous	

NB. Negative cases refers to quotes that contradict, or say the opposite, to the general theme.

Appendix P- Tables of final codes, categories, and excerpts

Categories	Focussed codes	Example excerpts
Category 1: Perceiving emotions negatively	Emotions seen as dangerous	A bit scary really. (Pause). Yeah just a bit frightening sometimes (P.1) I mean I know that I know that emotions are okay and I know they're okay to feel however when I personally feel them some of them they do feel dangerous yeah. (P. 3) If I didn't control the fear it would kill me. (P. 4) Anger meant possible death to me. And that was it. P4
	Emotions seen as overwhelming	I Don't know it's just sort of an overwhelming sense of (.) It's almost like a dread and the guilt. (P. 3) But sometimes it just sort of has this overwhelming take on my body (P. 3) Um I definitely think they're very powerful (P. 5) I think overwhelming. I think it's just easier to avoid them because it's just too much to cope with. (Laughs) **P7**
	Emotions seen as having negative consequences	I guess that's my safety isn't it. Because I feel that if I start talking about them [emotions] I'll go back to old behaviours. (P.1) Sometimes you let it [anger] out too much. A bit too brutal (P. 2) It [anger] has serious repercussions on the person it's directed at... usually violent in some way (P. 4) I think it it can be dangerous in a way that I might do things that I shouldn't be doing because I feel those emotions. **P7**
	Emotions seen as futile	I think if I was to be a really emotional person then I would get nowhere in life (P. 2) Haven't got time. There's no space. You know for positive emotions (P. 4) Yeah anger's a wasted emotion. It serves no purpose. Um in fact I can't think of any emotions that are good… I don't have time to have emotions. (P. 4) They [feelings] just get in the way P. 7 I think that for me they [emotions] get in the way (P. 9)
	Emotions as socially unacceptable	So I felt all my life showing emotion wasn't very good. And I remember my mum saying "oh you're so dramatic". (P. 1) And I'm sure a lot of people think you shouldn't show emotion. Or some cultures they show more than others don't they? (P. 1) We're not ones to sit down and discuss. Have heartfelt chats (P. 2) I mean he doesn't actually call me a cry baby or anything but it's sort of one stop short of calling me that sometimes. Um I mean I guess it's a generalisation but I think like several males that I know um I definitely think they're less inclined to show emotions. (P. 5) I think in my family there was a bit of distain for people who were kind of perceived as being melodramatic or attention seeking (P. 6) I just feel like people will think like think like think I'm looking for attention of something, I don't really know. That worries me a lot because I'm not, I don't really know (P. 7) It's not very easy to hide your emotions. We all do it I think from a social respectability point of view. (P. 9

	Feeling like I shouldn't experience emotions	Oh I think because if you're told that they're bad. That you shouldn't do them, You're more likely I think to use something to help you cope (P. 1) So I shouldn't really be feeling that way because I don't have a reason (P. 7) If I get angry then I feel like I shouldn't be angry at all (P. 7)
Category 2: Avoiding emotions	Wanting to avoid emotions at all costs	I wish they weren't I wish life could just turn them off. (P. 1) I hate it [shame and guilt]. I wish it didn't exist. I don't ever want to feel it ever again but I know I will. (P.3) I didn't want to feel anything at all. (P.3) Yeah because certain emotions I will not have (P.4) Um and (pause) yeah that we should make the bad ones [emotions] go away. Like that was that was if you made the bad ones go away that was sort of you'd done a good thing (P. 6) And it's yeah that whole thing is has been driven by wanting to deny emotions. (P. 6) I've experienced that happening before so I just felt it's easier to just not feel them at all (**P. 7)** …and I part of me wishes that I could not have any emotion (P. 8) But I think also partly because I just don't want to experience it [emotions] as well. (P. 9)
	Denying emotional needs	There are some that I just won't talk about. I don't. P. 1 I get so angry because of the argument and then I sort of decide, I put all of that energy into deciding not to eat and mostly like trying to annoy my parents or something. Um or like self-sabotage because that's what it is P. 5 Yeah um but yeah I think it's about trying trying on some level trying to deny that you need or want anything or anyone (P. 6) Well I didn't allow myself to feel so (P8)
	Blocking emotions	Where I just used everything to block everything out. P. 1 Or if I do [feel emotion] I just block it (P. 2) Yeah when I can't deal with emotions I can't seem to get my head straight to be able to think about what I'm feeling it is supressing them (P.3) I don't think I ever with my life I've never allowed, I learnt very early not to experience emotion. Not show emotion for sure. Um so I think again it's second nature to me (P. 4). It's just such second nature to detach myself from my emotions (P. 6) I think in some ways it's more that it just stops and I just feel numb. . **(P. 7)** When I was like very thing like emaciated I didn't feel anything. And then drinking you don't feel anything. (P. 8) I have to walk out because it makes me so emotional. (P. 8) I'm quite good at shutting them off quite quickly… you just do it without thinkingP. 9)
	Distracting from emotions	And with the anorexia I'm preoccupied with all the stuff that goes along with it that I don't think about what is really upsetting me or bothering me or going on in my life P. 1 And um I either with shame and guilt I either just distract myself with something um or I will just go and sleep (P.3) They just never come up. Because (.) my whole day is filled with controlling fear and time. Doing things at certain times. P. 4). Or like I'll, sometimes if like I felt upset I'd go on an obsessive clean on like my bedroom or something P. 5 I think it is a distraction. Sometimes like your just kind of running from certain feelings or certain questions and I think working

		very hard can be another way of running P. 6) Um I sort of just try to distract myself… Yeah like just listening to music or just seeing people I don't know, things like that (P. 7) Um you know just putting up a front to it. Not discussing it. Not playing attention to it. Watching a film instead. P. 9)
	Displacing emotions	I put all of that {emotional] energy into deciding not to eat and P. 5 Um and I think the worry and anxiety it [AN] can generate can just displace all other worries and anxieties P. 6 Or like you might be super anxious and worried but this is about a number on a scale. It like reduces your anxiety and worry to that instead of like the irreducible complexity of worries about relationships or your place in the world. anxieties P. 6 Um if I hit my hand and feel the pain then all I'm think feeling is pain. I don't think about anything else except the pain. P. 8)
	Responding physically	What do I need to do to get rid of that excitement? Do I need to run around like telling people why I'm excited (P.3) So I think I linked the feeling full with the feeling of being full with emotion… And just getting that with purging it's just out it's out of my body (P.3) I've got strategies and techniques, tapping techniques um distraction techniques um all kinds (P. 4). … but I always think there is something that you physically do that helps. P. 5 and I would want to like physically, not hit somebody, but like hit something, or I would just like sometimes hit my head. Not like punch but I don't know just like, I don't know just to like get the anger out, or scream or something P. 5 I think while I walked I would worry about food, but I guess that sense of like movement made it feel somehow less anxious (P 6) If I'm feeling low and things exercise does help but at the same time I'm sort of doing it for other reasons as well which doesn't really help (P. 7) I just have this constant feeling that I need to drink, and it was um analysed as psychogenic polydipsia, which means you have an anxiety thirst. And therefore because you're anxious you're drinking more and more and more (P. 8)
Category 3: Experiencing self-doubt	Questioning the perceived legitimacy of experience	I have to check in with other people to check that what I'm feeling or thinking is right or legitimate or you know (P. 9)
	Having an invisible problem	But people can't see inside your head. They just see that I'm not on deaths door physically (P. 1) …but then I sit there and I think if I can do that then why am I still struggling so much on the inside of things (P. 3) Um and I it it's like it I worry that I was worried that you might think "oh she looks alright, she hasn't got an eating disorder" (P. 8)
	Questioning judgement	Should I have had that to eat? Should I have not had it? Do I need that to eat? Do I not need it? Have I had too much? (P. 1) Well everybody else is right… That's how it's always been. So I must be wrong. But trying to get my head around that is just it's like one huge muddle. I can't work out what's. Because they they must be right but it doesn't feel right. P. 4) Or constantly needing somebody when I got home to check that my keys and purse are in my bad because I worry that I was tricking myself um (P. 5) yea I I spend a certain amount of energy worrying about "am I eating the right thing?", "Should I eat this?" or "should I eat that?", "when should I eat it?". (P. 6) I put skimmed milk in it and I'm thinking to myself "am I having too much milk?". (P. 8)

	Doubting ability to manage emotions	I can't cope with my own emotions. (P. 3) Um shame and guilt um I don't really necessarily know what to do with that sometimes (P. 3) Um I think I just, I've never really known how to cope with things. (P. 7)
	Not fully understanding emotions	Yeah because I wasn't very good at pinpointing which one [emotion] it's like (P. 2) Um Yeah when I can't deal with emotions I can't seem to get my head straight to be able to think about what I'm feeling (P.3) I don't know what emotion is (P.4) I think it's always been the case but before I went to hospital I got very confused of what emotions were. (P. 7) But that has led me to not make the distinction necessarily between knowing when it's [the emotion] right and when it's not (P. 9)
	Having little confidence in own autonomy	I guess ones that I've dealt with more of I feel that if I talk about them I'm not going to go and do something silly that I'm going to regret (P. 1) And I just think that if I did go back to uni that (AN) would come back. I would get so scared that that would come back… (P.3) But I have no confidence about, I don't know if without my mum and dad if I would eat or not P. 8
	Feeling confused	Why did I I wasn't trying to commit suicide I just. I don't know why I did it (P. 1) That's just what I I try to make sense of it even though there isn't any sense to it (P.3) What's going on in my head right now?". (P.3) But trying to get my head around that is just it's like one huge muddle (P. 4). "is it bad that I'm not having that emotion?" P7
	Being dependent on others	It's actually not the first time I've moved back home kind of as an adult (P6) Because if we would go out you know Brian kept me safe... . So he was with me twenty four hours a day. (P. 4). sort of you revert into the parent child relationship a bit. (P. 5 So I was living out there full time and then kind of moved back here [with parents] when I wasn't very well (P. 6) If I mean I'm in hospital it's very easy to just do the eating part because someone else is taking the responsibility for it. I'm just doing it. (P. 9)
	Being subservient	Because I know my parents are worried about me going anyway because they know I've got food issues and I don't think they'd let me go if I started to get really unwell again. (P. 7) So and I was brought up in a household that you ate what was put in front of you no questions. (P4) … the only thing is I wish I could, it's not that I can't do it, but my parent's and I have agreed that I'm not quite ready to like live away. (P. 5 But at home there's no compromise. My mum thinks for me basically. But I have no confidence about, I don't know if without my mum and dad if I would eat or not (P. 8)
Category 4: Creating a more predictable and less uncertain world	Having routine and structure	It's important for me to have structure. I prefer my week days to my weekends. (P. 1) It [AN] sort of lets me have a bit of a routine so things I am allowed to eat things I'm not allowed to eat um. (P3) Just stick to that [routine] and then you don't have to think. (P. 4). And I got into the routine and that really helped. (P. 4). I guess what happens with the eating disorder and other sorts of, you know there can be other sorts of routines and rituals, is that I kind of built a really safe and knowable little world for myself (P. 6)

		like having to have the structure and doing exercise continuously. I just felt like it kept me safe even though it was incredibly unsafe **(P7)** But I am very controlled in being organised. I like to know what I'm doing. When I'm doing it. I'll plan. (P. 9)
	Sticking to the rules	Um sort of at the moment I've sort of got what in my head I'm allowed to eat in quotation marks. (P3) Yeah it's all about control. My life has always been about rules and sticking to rules… (P. 4) ..now it's just eating exactly the same food every day because I know that my weight will stay the same if I also don't vary that (P. 4). That's why I don't even think about it. I'm just "that's it I'm going to stick with that" you know. Just go with that. (P. 4).
	Keeping things simple	Yeah not over busy but busy enough to not have too much time to think (P. 1) I'm not doing a lot at the moment (P. 2) ah no that's it really I'm not very interesting. I don't really have any hobbies at the minute.P3 It's a bit of a boring life but you know. To other people it's boring … It feels safe . (P. 4). I don't really do much (P. 5) Yeah obviously I mean it's pretty deadly boring… We're in our routine and we just sort of make the best of it (P. 6) Um at the moment I'm not doing a lot (P. 7)
	Avoiding uncertainty	Um (..) I'd say I suppose complete and utter control. Um I definitely in terms of going out to eat that would not have happened. Or if it did I would have had to have known like at least a week before (P. 5) Yeah I guess it just felt easier to put all this energy into food and eating because that was somehow, uh it's so black and white it (P. 6) I don't know what the future holds and I'm really scared about the future. Um. (Pause). Really scared. So I think me holding on to my eating disorder um is part of that. (P. 8) I hate not knowing. I hate not knowing anything. If I don't know what's expected of me I don't like it. If I don't know how I feel I don't like it. If I don't know what someone's thinking I don't like it … So I try to avoid all of these things. (P. 9)
	Filling time	Well I guess I try and keep structure so I don't think so much about everything because it's when I have time to think (P. 1) I did used to um so I would walk to work and back… I think it was also just about having something to do. Um, I just didn't know what I'd do with that extra hour and a half um. (P. 6) And a lot of my rituals and routines about eating and food are about like filling the hours in the days um you know so I don't have to sit there worrying about what's going on with my life. (P. 6) Ever since I was a little girl I I hate being or having time to myself (P. 9) If I've planned to do something, I want to be doing something. So I'll fill that time with something else if someone cancels on me. I don't. I can't just be like "oh okay I'll just spend the night in" (P. 9)
	Focussing in on something	Because my life is about keeping safe and focussed. (P. 4). It (AN) like reduces your anxiety and worry to that (numbers on a scale) instead of like the irreducible complexity of worries about relationships or your place in the world. (P. 6) … food and eating just came to be like most of what I thought about (P. 6) … in the same sense that just like working obsessively and very long hours um yeah can give you a kind of sense of purpose. That

		you know at the beginning of the day what you're going to do and you don't have to worry about that. Um yeah you can just kind of pour yourself into it. (P. 6) It doesn't make me feel better but it must have somehow given me. Perhaps something to put my energy into that was constructive. That had a clear result. (P. 9)
	Withdrawing	Well I didn't really have any relationships. Erm (pause) arguing with my mum. Disassociated from my own child. It was a bit of postnatal depression as well. Um (long pause). Yeah I didn't really see many friends. (P. 1) I isolate myself a bit. A lot (P. 2) And uh I don't go out very much. In fact I don't go out at all really. I stay at home. But um so um I have uh problems going out so I spend a lot of time at home (P. 4). I suppose when I'm ill-er I kind of wallow in that and yeah I just don't want to leave the house at all. Like evening my parents would say "oh come along for the ride" just to you know get something from the shops and I wouldn't even want to do that. (P. 5) Um I sort of didn't socialise. But that wasn't really because of thinking about what to eat it was more I I just didn't want to socialise and I didn't have the energy to do it (P. 5) … it can then be very difficult to integrate other people sometimes into my life because I find it difficult to let go of these routines for other people um So like in the sense of engaging with the world. So um yeah I think my detachment from other people and from the world in a sense of course it protected me from negative emotions but it also left me a little bit unable to feel a lot of sort of positive ones as well (P. 6) And (pause) um yeah I don't know I tend to, yeah can be very detached in my personal relationships. And if something, I just sort of play dead (P. 6) Because I've isolated myself for such a long time (P. 8) Um because when I had the anorexia I didn't really have any relationships with anyone because I just isolated myself. **P7** **Negative cases** I like being social. You know I don't like being on my own. I like to be out with friends. (P. 9) That when you're not around people I lost sight of what was normal. So I spent quite a lot of time on my own. (P. 9)
	Shutting down	Then there was times when life just didn't seem worth living so it was easier to starve (P. 4). Just to fold up and just not wake up in the morning. (P. 4).
	Striving for a sense of control	If I'm really stressed at work um (pause) I will fall back onto it to make me feel a bit safer. And so I feel like I'm doing something right (P.3) But the eating is something that I can keep control of. It's the one thing that I've learnt working with Mary the one thing in my life that I can control is what I eat and my weight (P. 4). And it's so frustrating because then it makes me feel like I'm out of control because I I've put on weight but can't understand why because I'm doing everything exactly the same. (P. 8) Um I can't stress enough that mine was purely control based. Um I've come to realise that over the whole time I've been in treatment. I've felt out of control in so many other things that that was the only thing that I could control. (P. 9)

Category 5: Realising I'm coping 'badly'	Having turned to maladaptive strategies	It's about like any other addiction it's about coping (.) with life and other things. Whether you use food sex drugs alcohol money gambling. It's the same as anything. But people seem to think it's different but it's not. It's just an addiction (P. 1) I guess I've always felt like I've just got a bad coping method um. I sort of personally see a lot of similarities with um you know people with like alcohol or drug addictions things like that. I just see all of that as a way of coping with emotions. ... (P. 5) Yeah. I often I've often found, I almost think do you know that thing 'whack a mole' where you try and hit things and other things pop up? I almost feel like I have things bad, like when I get rid of one bad coping mechanism and another one pops up like. (P. 5) Yeah a distraction. And like a project almost. It was a project um (pause) and of course there are reasons why that was this project and not like needle work because why choose such a destructive project? I mean that's the question right? (P. 6) And I think I just couldn't cope with it anymore and for some odd reason that's the way I decided to go. I didn't choose because I didn't even know what anorexia was at that point so (P. 7)
	Wanting a 'quick fix'	I wouldn't say it's helped it's just a way but I guess with the bulimia it stops me thinking even though it makes me feel worse. But at the time it stops me thinking… But still they (AN and BN) don't solve anything. (P.1 Um I guess I kind of, after that it's almost like I made a deal with myself and then I was able to calm down very quickly. So I guess it's a very short term solution to things because in the long run it made me feel worse (P. 5)
	Experiencing consequences of coping strategy	Well when the drugs and alcohol stopped I was so ill I jumped out of my bedroom window … Didn't break anything. But got sectioned. And got arrested because I had class A drugs on me. Nearly lost my family because of it all. Ended up in hospital for nearly a year. Because it was my eating as well as the drug and alcohol use. So life was pretty bad. (P.1) I'm on a lot of medication, and I'm now addicted to Diazepam…. So that is another problem for me. .... But part of me wishes they would just give me a drug to take the emotions away so I don't feel anything (P. 8) All my arms are scarred. Um I've got a great big scar on my leg where they took the skin from. So I can't, I can't show my body anymore. (P. 8)
	Recognising feeling numb	… like again when I was ill-er I would say I was very numb to emotions um. Didn't really feel anything (P. 5) …it protected me from negative emotions but it also left me a little bit unable to feel a lot of sort of positive ones as well. (P. 6) I think in some ways it's more that it [AN] just stops [emotions] and I just feel numb. P. 7 When I was like very thin like emaciated I didn't feel anything. (P. 8) … years and years of not feeling anything (P. 8)
	Realising that emotions build-up come out eventually	But I think it's better to feel something than shut it all away because it doesn't help to shut it all away. It just gets worse and worse and worse and worse until you burst (P.1) And the longer I hold it back for the worse it will be when it does come out. (P. 3) But then like I could, all of a sudden, like the flip of a switch, just feel like real intense emotions. (P. 5) But yeah because I don't show my emotions and I just bottle everything up, then it will just get to the point where I can't cope anymore so. (P. 7) You know there's also been this suggestion that not turning my attention to the emotions it's kind of built up built up built up and it's come out like this instead of me just crying when I was upset. (P. 9)
	Recognising Psychological	And it's (..) actually no I think I was so unwell my brain wasn't working properly. It wasn't. I had no capacity. I couldn't even remember what I did the day before. (P. 3)

	consequence of low weight	.. once I came here (.) and started eating and started to feel better, because I think that was probably part of it, the sort of physical changes that were going on probably weren't helping, you know from what I learnt over there the changes in brain function, um (P. 4) Yeah motivation is definitely another thing. I I struggle to get out for bed and things if I and thinking about my weight when I'm at a far lower weight it's a struggle to motivate myself to do things. (P. 5)
	Noticing I was having to use more maladaptive strategies to manage feelings around anorexia	I knew that I was taking it (drugs) to stop me thinking about food. And whatever. And stop me feeling hungry. Stop me obsessing about my weight. (P.1) But if I sat there and was just like yeah I've eaten sort of what I've allowed myself to eat and then I thought "ooh I really want some ice cream" and had some ice cream I would probably do something to hurt myself. Whether it be just like hitting my wrist on something for a period of time or cutting or even purging yeah (P. 3) I would say I'd do that (scratch) more if there were certain situations where I wasn't able to like skip a meal or whatever, like I still had to have dinner with my parents or my family (P. 5) … but then there were like binges as well yeah. And so the more I starved the more I binged, the more I starved the more I binged um and yeah and then my weight just got really catastrophically low . (P. 6) I mean partly because like if I was working it was kind of a distraction from being really really hungry (P. 6)
	Seeing AN as controlling me (shifting goal posts)	… but it was that it would play an impact in other things in my life and. Yeah it became very controlling of me in that way. (P. 9) Because it was always push yourself push yourself push yourself. More and more. Twenty-four hours forty-eight hours without eating. (P. 9)
Category 6: Re-evaluating relationship with emotions	Reflecting on relationship with emotions	I guess particularly in the last year um where I've found my therapy quite effective. I've become um thoughtful and reflective. I suppose I look quite in depth at things now P5 So yeah I think I pay more attention to yeah like what I kind of do emotionally. I'm a bit more aware of how I manage my emotions um. P6 So yeah part of this process for me has been kind of, in a sense becoming aware of that approach to emotions that I has very much internalised, and how that's impacted yeah on the ways I think and feel and act today and um yeah I guess I've kind of unlearnt that. P6
	Noticing other ways of relating to emotions	I don't know I just try and notice what other people do [to manage emotions]. I suppose partly out of curiosity and partly I suppose maybe subconsciously I'm trying to find ways that might help me and I see everyone else I live at home with... P5 And I think it wasn't until, yeah so at one point I went to, I lived in Central America for a bit and I, yeah I guess met people there who are very different from the people I had grown up with and, yeah were very kind of deliberate and intentional about their feelings and emotions … But I guess that was the moment of becoming aware that um other people did things differently. P6
	Understanding behaviour	And then it's only really been in the last sort of year where I've really tried to help myself and talking about, discovering why I repeat doing things and stuff P5 Yeah um. I mean I've done quite a few things. I've done a bit of CBT. That's really helped in terms of thinking about why I feel a certain way or act a certain way. P5

		… and also when I was in hospital as well I kind of realised why I probably coped that way and things, so I think because of that that's sort of helped me a bit to understand. P7
	Thinking that emotions are okay	But now I feel it's okay to have emotions. P1 I mean I know that I know that emotions are okay and I know they're okay to feel P3 So I'm now learning [in therapy] to recognise that it's okay to A.) feel a little bit angry. It's okay to feel scared. It's okay to feel emotional and upset. I haven't quite got there yet (laughs) but I'm getting there. Um **P4** I became very good at like knocking them away, and so just because I intellectualise them now and be like "no emotions, we need to feel our emotions", it it's quite difficult to actually unlock the box P6 **Negative cases** I don't know I think she [therapist] just, like other people, think it's okay to have emotions and you should think about them so. But that still doesn't really change the way that I feel about it so [laughs] P7 No. I don't. I think I'm, now I'm a bit more accepting about it but still not really so P7 Well I think my emotions are really high. Um (pause) I've, my two years with Jeanette I've never sat down with a person and been so emotional and P8
	Becoming more ambivalent about experiencing emotions	But I don't want to feel like that [feeling nothing] all the time. Whereas I did want to feel like that all the time. I did feel like that all the time. I didn't want to feel anything at all. P3 …part of me wishes that I could not have any emotion. But I'm filled with emotion emotions…. and dealing with those emotions is quite difficult. But I have to try to learn to be able to sit with my emotions. P8 **Negative cases** I can recognise they're there but I don't want to feel them. P4
	Knowing but not feeling	I mean I know that I know that emotions are okay and I know they're okay to feel however when I personally feel them some of them they do feel dangerous yeah P3 I need personally for me I have to understand it in my head, in my logical brain, it has to understand it, before I can feel it. P4
	Identifying emotions	Um I, I , because I spoke to my therapist and we did a whole section on like emotions, she sort of helped be to understand that I can have more than one emotion at a time so that was really helpful P7 I'm really working on identifying my emotions. P9
	Being willing to experience emotions	But I think it's better to feel something than shut it all away P1 I mean in terms of being like angry or upset I'll often ruminate over things and like can't stop thinking about it so I guess once I've accepted it, it just sort of allows more space in my head to think about other things P5 I mean I think it is. I think it's, as well because I've spoken about this before, I think at home I do feel that I am able to show anger. I don't feel like I have to hold that in as much um. Yeah no I think it's okay. P5 But I have to try to learn to be able to sit with my emotions P8 Actually letting myself feel them rather than just quell them (P9)

	Feeling in control of emotions	Yeah I mean it has been and it's sort of like thinking about it in that positive way makes you think "actually I can deal with a lot of stuff a lot better than I could before" P3 Sometimes if I do feel bad about myself but then remembering that I do feel a lot better and feel more in control of my emotions P5
	Feeling safer with emotions	And I can open up with them because I know I'll be okay. P1 I guess on some level because (pause) yeah I guess to the extent that you kind of feel safer acknowledging yourself as a person with feelings um (pause). If you feel a bit more comfortable with, sort of feeling a bit more comfortable with mess and complexity, resist that kind of drive to deny all of that P6
	Putting on weight and starting to feel	… and then suddenly all these emotions are running towards me and smacking me in the face. (P. 8) And I have the energy to feel stuff. P.3)
Category 7: Deciding it's time for change	Being motivated by others	Because I know (..) I can't just think about myself anymore. I used to not care but now I've got a child. P1 I just think sometimes it's harder for people on their own to find the motivation because it's so easy say "oh I'm not going to bother… Because I don't have anyone to think about. Apart from my dog [laughs]. ..I mean he is a big factor. He's kept me alive a couple of times. P4 Um I think it's [getting better] also about my relationships with people and what I actually want to do with my life **P7**
	Stopping before it's too late	And plus the older she gets the more aware- she wasn't aware… she looks at what I eat [now] erm you know I don't want her picking up on it so I can't bear to go backwards. P1 Oh yeah definitely. You know it's it's there the service is there and it would be wrong not to take the opportunity. You know that in itself would be wrong. (P4) but I actually managed to, I convinced my university to let me carry on studying. I'm quite sort of determined in that way. Because I didn't want to have to drop out again um and I had to like prove to them that I was like understanding things and stuff. (P5) Um I think it's also about my relationships with people and what I actually want to do with my life **P7** But yeah I haven't had to to give that [job in academia] up so. (P6) So it meant that I was out [of hospital] by the time that university restarted and I could get back to life and you know carry on with my day to day things. P9 **Negative cases** Um yeah it's it's pretty much ruined most of what I wanted to do. The plans I had. Everything. P3
	Moving forward	I want to just do what I want to do. It's about time. P3 Because like I'm quite ambitious like with things I want to do. Um I felt like there was becoming this quite wide gap between myself and some of my friends and um what they'd managed to do with their lives and um yeah I guess I was just quite determined to try and lead a relatively normal life. (P5) And then it will be going forward, getting a job, and moving out and. I like to you know build and progress. P9
	Developing hope	Um and once I know who I am I hope I like myself but once I know who I am I'm hoping that everything else will just fade away. P4

		I guess it it remains to be seen whether things will improve yeah or get worse I guess. There's always possibilities P6 Um they're trying I'm trying OT in the New Year so hopefully things will get a little bit better P8 This is something I'm trying and it seems to actually be getting there and there seems to be that glimmer of hope P9
Category 8: Seeing emotions as meaningful and valuable	Seeing emotions as part of human experience	It basically makes you who you are basically. It's part of your personality P2 Um and yeah I'm not even trying to say that there are negative emotions and positive emotions but just that there are emotions um P6 I don't think you can fully react with your head and not your heart. It just doesn't happen. You're human. P9
	Emotions as something that needs to be experienced	Yeah sometimes. You have to let go. You have to P2 Because it's part of. People need to feel it [anger]. It's just something people needs to feel P3 I think it's [anger] something that needs to be FELT [P3] I think it's yeah I think you need to experience emotions P5
	Making a connection between emotions and life	Um (pause) yeah I mean I guess, but also because I think like the things that generate positive emotions are like also the things that generate negative emotions often. So like in the sense of engaging with the world. P6 It would be easier yeah. But I know in order to get better and to improve my life I have to feel emotions. It's it's it's part of life and I'm only just beginning to realise that. P8 So basically I have to feel them in order to move on P8
	Recognising that emotions can be helpful	I think sometimes when you're angry you can get your point across better P2 And I think that anger is something that if people are able to express anger then I think I don't know I think it can make you feel better. P3 Yeah I think, I mean with like anxiety to an extent I think It can be helpful because it can make you be more cautious about things, just things like that P7
Category 9: Connecting with self and others	Connecting with emotions	… if I'm feeling something so intense and I can't put my finger on it and it frustrates me I feel it in my body and I know where it is in my body. It's usually in my stomach. And I talk to it [laughs] it sounds really weird but I'll talk to it and ask it questions like "what are you?" Why are you here?" "what's the situation I'm in?". P3 Yeah it is quite difficult and yeah I guess it's like my therapist will try to help me to stay with difficult feelings. Kind of supporting me and encouraging me to yeah to stay with difficult feelings. Or sometimes it's really just paying attention to how I've withdrawn from them P6 Um and yeah I sometimes go through phases of doing a bit of journaling and drawing to see if there are better ways to get in touch P6
	Experiencing joy	Really just makes me happy. (P.1) Just if you've got mates, have a laugh. Laughing is an emotion. I don't do that very often (P8)
	Talking about feelings	it helps to be able to talk to someone who does have some understanding of it P1 Let people know how I felt. You know what I mean? So yeah that's what I think it's done P2 I was a bit sceptical about starting with a new therapist, like I don't want to talk about emotions and things… but actually [laughs] I have ended up talking about my emotions and it has been really helpful. Um yeah so I see the benefit in doing so now P5

		Um I felt like I've been able to say things that like I wouldn't have even said to my parents and like actually saying them out loud it's quite scary. (p5) Yeah and also in like some of like my friendships as well trying to reach out a bit more and just step a bit out of my comfort zone in terms of communicating what's going on with me P6 The best [laughs] the best way to do it is, I'm not saying use the people around you, that's not what I mean but, um talk to the people around you. Let them know how you're feeling P8 But it has helped me because it's made me feel I can say what I want P9
	Engaging with the world	So it it's just me trying to get back into the world P8 Because I think once I know who I am that's going to help in all areas. Not just in socialising and all the rest of it but it's also with the eating and you know coming to terms with who I am P4
Category 10: Knowing, liking, and trusting the real me	Being a more real me	You're using drugs and alcohol and it completely changes you … So you're not really living as yourself when you take anything like that. Especially not drugs. (P. 1) And the biggest thing for me is I'm beginning to find out a little bit about who I am. The real me. P4 Also because it's very tiring to pretend that everything's fine when it isn't. I think that just the relief to be able to acknowledge to somebody that things weren't really okay can be such, you know can free up a lot of energy that was before used in creating this façade of everything being fine. P6 Um so we've been trying to sort figure out ways to actually let myself do what actually I want to do. Or feel what I want to feel. **(P7)** I'm in a place where if I feel sad I clearly feel sad for a reason otherwise I wouldn't feel it. It's that confidence to be okay with yourself and your reactions to things. P9
	Liking me	Because for me I really don't care so much about myself but she's making me helping learn to love myself. A bit P1 …but also I somehow um yeah in a sense deserve you know um a life that didn't involve all that secret um worry and also secret self-loathing really P6
	Developing autonomy	But even though I don't want to be in adult services I I am appreciative of the fact that I have been treated like one. P5 It [recovery] means that I'm independent. That I don't have to rely on anyone else for my survival. I can survive myself. P4 Whether that's just wishful think I don't know but that's what I'm hoping. That suddenly I will take control of my life. Not have it controlled by others. Including the anorexia. P4 Um just growing up a little bit P8 I think needing to trust yourself. So once you've learnt that the way that you were thinking wasn't okay or right um I think you just need to trust yourself **(P7)** And a lot more able to regulate myself. And not rely on other people. And be conf- I don't have self-confidence. I have to check in with other people to check that what I'm feeling or thinking is right or legitimate or you know. P9
	Gaining a new sense of identity	It gives me a sense of identity as well because before a lot of people around me saw me as just Rachel with anorexia. Drug and alcohol use. In and out of hospital. Um so now they're seeing me a bit more as something else P1 I've learnt that I'm strong. And also you know I'm I must have a reason to be otherwise why would I have survived all that so many times (P4)

		I want to be who I am. Um and once I know who I am I hope I like myself but once I know who I am I'm hoping that everything else will just fade away P4 I still am unsure about my sexuality so whoever I meet and hopefully fall in love with, man or woman, I don't know P8 It's like if we're going out "oh May can sort it". Because. And I do enjoy it. You know. That's something that I might actually go into at the end of university. Event planning and production P9
	Being flexible and spontaneous	Yeah and want and really want to have it. Not because I have to. But because actually I fancy a cake and it's okay to eat it P4 Recovery is freedom from the structure, from the rules, from the times. You know uh that is recovery. P4

Appendix Q- Relationships amongst categories and themes

Self-doubt and emotions (categories 1 & 2 and 3 & 4)

Categories 1-4 are clustered together within the phase 'Creating a sense of safety in a world of uncertainty'. Categories 1 and 2 are connected in the sense that 'perceiving emotions as negatively' may be considered a precursor or precipitator to 'avoiding emotions'. Similarly, participant's overriding sense of self-doubt (category 3) may be considered closely related to their need for certainty and predictability, including routine, structure, and rules (category 4). Associations can be drawn between emotions and self-doubt in that participants described feeling ill-equipped to deal with emotions. There are further links between categories when one considers that creating a sense of control and predictability seems to essentially function as a way of avoiding feelings of anxiety. This position may be viewed as very much in contrast to the themes of connectedness and spontaneity seen in the 'recovery and growth' phases.

Realising I'm coping badly (category 5) versus earlier categories and later categories

'Realising I'm coping badly' reflects the insight that participants gained around their use of coping strategies. This category of codes, which includes 'wanting a quick fix', 'experiencing consequences of coping strategies', 'recognising feeling numb', and 'realising that emotions build up and eventually come out', links with earlier categories, for example 'avoiding emotions' and 'creating a more predictable and less uncertain world'. Figure 2: Coping 'badly'- A preliminary model of change, draws out different maintenance cycles and explores how the different categories may be connected. For example, maintenance cycle 1 shows how maladaptive coping strategies, including behaviours associated with anorexia, help to achieve a 'quick fix' to control difficult feelings and gain a sense of control, linking with categories 1 (perceiving emotions negatively), 2 (avoiding emotions), and 4 (creating a more predictable and less uncertain world). Maintenance cycle 3, shows how the maladaptive strategies specifically impact emotions, creating initial numbness, linked again to category 2, later followed by experiencing intense emotions. This links back to category 1 in that more intensely experienced emotions reinforce perceptions that emotions are dangerous and to be avoided.

'Realising I'm coping badly' is also a central feature of participant's increasing awareness of the processes at play, described in the grounded theory as 'seeing through the façade', and is therefore also closely linked to later categories. Again, referring back to the 'coping badly' model in figure 2, it may be seen as mediating a shift from avoiding emotions to re-evaluating relationship with emotions and eventually connecting with self and others, and perhaps less directly the shift from experiencing self-doubt to beginning to like, accept and trust the real me (category 10).

Creating predictability and certainty versus connecting with self and others, autonomy, and spontaneity (category 4 v categories 9 & 10)

In many ways, aspects of category 4 are similar those seen in later phases of recovery. For example, 'sticking to the rules' around eating provided some participants with a sense of containment and independence, and seemed like a safer alternative to starvation or relying on others. However, whilst serving the function of creating predictability and certainty, including contributing to avoidance of

emotions, such strategies seemed to limit opportunities for further recovery and growth that might involve more of an integral sense of autonomy that allows for more spontaneity.

Developing motivation to change versus seeking connectedness and meaning (category 7 v categories 8, 9 & 10)

Whilst category 7 reflects the ways in which participant's spoke about deciding it's time to change, there is a contrast to be drawn with later categories within the 'recovery and growth' phase' that refer to more intrinsic motivations, such as seeking connectedness and meaning. This shift in the way participant's talk about their motivation to change and recovery was seen as reflecting a broader shift away from a focus on creating a sense of safety towards recovery and growth. Becoming more open with oneself, including with one's emotions, and with others, may be seen as both something to be tolerated in order to break out of the vicious cycles of maladaptive coping, as well as at times being experienced as intrinsically motivating itself.

Connecting with self and others and getting to know the 'real me' (categories 9 & 10)

Across participant's interviews there was a sense that there was something about connecting with oneself and one's emotions, and being open to such experiences, that was closely linked to connecting with others. These ideas are reflected in category 9- 'connecting with self and others'. They are also closely linked with themes in the category 10, particularly around getting to know one's authentic self, which contrast with earlier themes around self-doubt. Together these contrasting themes have been conceptualised as reflecting the shift away from creating a sense of safety in a world of uncertainty towards recovery and growth.

Appendix R- Table of links between emotion-focussed interventions and grounded theory

Grounded Theory- aspects of recovery	**Radically-Open Dialectical Behaviour Therapy (RO-DBT)** Lynch et al., 2013	**Emotion-Focussed Therapy (EFT)** See description in Ivanova & Watson, 2014	**Emotion Acceptance Behaviour Therapy (EABT)** Wildes & Marcus, 2011
'Realising I'm coping badly' and seeing through the façade of anorexia, leading to re-evaluation of relationship with emotions		Psychoeducation (including relationship between eating disorder and emotions)	Developing a shared understanding of the problem (including relationship between eating disorder and emotions)
'Connecting with self and others'- actively connecting with emotions (including usefulness of the more experiential aspect of therapy) and seeking connectedness with other people. Also, personal growth, including hobbies, engaging with world again, developing a positive sense of identity etc.	*Focus = emotions and impact on relationship with others* Techniques designed to enhance social connectedness (i.e. encouraging genuine self-disclosure, breaking down inhibited behaviour/encouraging playful or disinhibited expression, changing body posture/facial expression) Emotion regulation skills with focus on experiencing and expressing emotions- particular focus on envy, resentment, bitterness, and revenge and encouraging acting opposite to bitterness/encouraging pro-social behaviour	*Focus = emotions* Experiential emotion work- Encouraging clients to pay attention to their bodily experience and use words or images to symbolise; helping clients to explore confusing emotional reactions; using chair work to explore emotional conflict splits, unfinished business with significant others etc.	*Focus = non-avoidance of emotions, relationships with others, and values* Set goals (including for avoidance of emotions and other activities, and participation in valued activates and relationships)
From 'creating a more predictable and less uncertain world'/creating a sense of safety- through routine, structure, rules etc.- to more spontaneity and flexibility seen in 'recovery and growth'	Mindfulness skills focusing on reliance on rules, need for structure, and excessive avoidance of mistakes		- Contextual and experiential change strategies (e.g. mindfulness and acceptance) - Behavioural strategies, including graded exposure and self-monitoring

Appendix S- Letter to research ethics committee and trust R&D department to feed back the study results

[redacted]

12th April, 2012

Study Title: What influences self-perceptions of emotion regulation in people with anorexia nervosa?*

[redacted]

To whom it may concern,

Please be advised that my study, detailed above, is now complete and there will be no further recruitment. I await the final report from you, which I will complete and return at the earliest opportunity.

Please be informed that I will contact the R&D manager to arrange to present my study findings.

The study title had now changed to: **Seeing through the façade of anorexia: A grounded theory of change in emotion processes**

Thank you for your support with the research.

Yours sincerely,

Danielle Drinkwater
Trainee Clinical Psychologist

Copies to: R&D

Appendix T- Feedback on research findings to R&D

Summary of research

Title: Seeing through the façade of anorexia: A grounded theory of change in emotion processes

Background information:
Difficulties in regulating emotions have been implicated in the development and maintenance of anorexia. This is supported by theoretical (Greenberg & Safran, 1987; Haynos & Fruzzetti, 2011; Wildes, Ringham & Marcus, 2010) and empirical (Lavender et al., 2015; Oldershaw et al., 2015) literature. A range of psychological interventions are available but, as yet, no single approach, particularly in the treatment of adults, has proved superior (Watson & Bulik, 2014). Recently, emotion-focussed psychological treatments have begun to emerge (Dolhanty & Greenburg, 2009; Lynch et al., 2013; Wildes & Marcus, 2011). Whilst focussing on emotions may offer a way forward, current research and theory lack explanations about how emotion processes change during the process of recovery.

Research aim:
This study sought to theorise about how people with anorexia perceive their experience of emotion regulation and the factors that influence this, including any therapy-related change.

Method:
A constructivist version of grounded theory (Charmaz, 2014) was used to analyse data collected from semi-structured interviews with nine participants. The sample consisted of people attending an eating disorder service who were currently engaged in therapy.

Results:
The analysis produced ten categories reflecting different aspects of the emergent grounded theory of change. Participants described *perceiving emotions negatively*, *avoiding emotions*, *experiencing self-doubt*, and *creating a more predictable and less uncertain world*. These categories were conceptualised as reflecting a position of *creating a sense of safety in a world of uncertainty.*

Behaviours associated with anorexia were amongst the maladaptive strategies participants described using to subjectively manage emotions and cope more generally. *Realising I'm coping 'badly', re-evaluating my relationship with emotions,* and *deciding it's time for change,* are categories that reflect a second position- *seeing through the façade* of anorexia.

A third position- *recovery and growth*- emerged, in which participants conveyed a sense of being an active participant in life and moving towards positions of openness, connectedness, meaning, authenticity, and autonomy. They spoke of *seeing emotions as meaningful and valuable, connecting with self and others,* and *knowing, accepting, and trusting the real me.*

Despite reflecting a journey towards recovery, this was not an entirely linear process and participants appeared to find themselves shifting between positions. Positive change was experienced primarily through developing awareness around emotions and ways of coping, including behaviours related to anorexia.

Clinical and research implications:
The findings support an increased focus on emotions in the treatment of anorexia and offer suggestions about what may facilitate change. Providing a safe space for people to begin talking about their emotions and learn about the function of their eating disorder in relation to emotion regulation may be particularly helpful. These findings also highlight the importance of experiential aspects of

therapy in helping people to connect with their emotions. Treating the whole person, as opposed to discrete aspects of their difficulties, and harnessing a positive sense of identity and hope, may further facilitate improvements in emotion regulation and lead to more intrinsic motivations for meaningful change.

Future qualitative research would benefit from including participants further ahead in their recovery from anorexia to build on the emergent theory of change presented here. Quantitative research investigating therapeutic change during recovery from anorexia could be enhanced by focussing on particular aspects of emotion regulation. This study suggests that areas such as emotional awareness, beliefs about emotions, and emotional expression, may be particularly amenable to change. Further clarity is needed about the relationship between emotion processes, (broadly defined) recovery, and factors relating to identity. Investigating the potential mediating role of such variables may provide further insight into how positive change comes about.

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Appendix U- Summary of feedback for participants

Summary of research findings

Participant copy

Study title: Seeing through the façade of anorexia: A grounded theory of change in emotion processes during the process of recovery

The findings of the research can be described in terms of three main phases of the journey's participants described-

- Creating a sense of safety in a world of uncertainty
- Seeing through the façade of anorexia
- Recovery and growth

The diagram attached outlines the theory proposed by these findings and the main categories identified from the interviews. My interpretation of the data (interviews) centres around the idea that participants were beginning to develop awareness about how they had used anorexia to cope in various ways in the past. I have called this "seeing through the façade".

There is a more detailed description of the theory that talks you through the diagram should you wish to read it. I have also included a list of codes (themes or ideas) that make up each of the ten categories that make up the diagram. These may relate more directly to your interviews and give you an idea about how I developed my interpretations.

Thank you again for your participation and I hope you find this summary useful.

[Pages removed- same diagram as in figure 1 in text and list of codes and categories]

Description of emerging theory

Participants talked about factors that have influenced their negative perception of emotions (category 1) and their sense of themselves, including self-doubt (category 3). They also described circumstances and life events that led them to feel out of control. In their efforts to avoid emotions (category 2) and reduce uncertainty in their lives (category 4), participants developed a host of maladaptive coping strategies. Though not a conscious process initially, participants were beginning to realise they had been, and in many ways still were, coping 'badly' (category 5). Anorexia, typically characterised by restriction, was seen as one of many 'bad' strategies participants had for creating a sense of safety, including avoiding emotions, which led to a vicious cycle of maladaptive coping.

Participants began to revaluate their relationship with their emotions (category 6) and develop motivation to change (category 7). Once they had begun to 'see through the façade of anorexia' participants described various ways in which they saw emotions as meaningful or valuable (category 8). They described connecting with themselves and with others more (category 9), and appeared to be in a process of getting to know, accept, and trust themselves (category 10). These categories reflect a sense of recovery and growth, and movement towards a position of openness, connectedness, meaning, authenticity, and autonomy. This was not an entirely linear process, and participants found themselves shifting between positions.

Appendix V- Journal submission requirements

THIS HAS BEEN REMOVED FROM THE ELECTRONIC COPY