A pilot study investigating the effectiveness of a stand alone cognitive behavioural body image group for patients with bulimia nervosa and eating disorder not otherwise specified

Christine Louise Watson

Doctorate in Clinical Psychology
The University of Edinburgh
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Declaration

I, Christine Watson, declare that this thesis was written by me and that I conducted the work detailed herein. This work has not been submitted for, or accepted in, any previous degree.

Christine L. Watson
August 2009

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ABSTRACT

Objectives: Body image disturbance is an underlying feature of bulimia nervosa and residual body image concerns at the end of treatment are predictive of relapse. There are currently limited studies evaluating stand alone body image interventions with eating disorder populations. Therefore the aim of this study was to evaluate the effectiveness of a six week body image group, specifically designed for patients with bulimia nervosa and eating disorder not otherwise specified (EDNOS) prior to receiving routine treatment. The group aimed to improve satisfaction, attitudes, behaviours and checking cognitions. It also aimed to reduce eating disorder symptomatology.

Design: A between subjects controlled repeated measures design was used.

Method: 12 participants were recruited to take part across two body image groups that included components of CBT for body image disturbance. Participants attended six weekly group sessions and also carried out homework activities and mindfulness practice. Measures were administered pre and post treatment, to both the body image and waiting list control group (n=17).

Results: At post treatment, there were significant improvements in body satisfaction and body checking cognitions in group participants. The remaining body image dimensions and eating disorder symptomatology did not show any significant change, however, there were observed decreases on all of these outcomes in the body image group. Qualitative responses suggested that participants had fewer body concerns and more positive/accepting body image thoughts at post treatment. In the control group condition there was no significant change on any outcome measure during a six week period.

Conclusion: The findings suggest that a stand alone body image group has the potential to improve body checking cognitions and satisfaction in patients with bulimia nervosa and EDNOS. These findings support the conduct of a randomised controlled trial in order to further develop the evidence base for the effective treatment of eating disorders.

CHAPTER 1: INTRODUCTION

Body image disturbance is a major risk factor in the development and maintenance of eating disorders. In bulimia nervosa, only 50 per cent of cases will recover following recommended treatment, cognitive behavioural therapy. Furthermore, studies have indicated that residual shape concern remains in 30-50 per cent of cases and is predictive of relapse (Deter & Herzog, 1994). Therefore body image disturbance plays a significant role in the maintenance and relapse of bulimia nervosa (Fairburn *et al.*, 2003). These findings highlight a clear need for the development of effective treatments to address body image disturbance in eating disorders. At present, there are a limited number of studies evaluating body image treatment in eating disorders. For those that have conducted body image studies, these are usually embedded in comprehensive treatment programmes and therefore it is difficult to fully evaluate the effectiveness of the body image component of eating disorder treatment.

The main aim of this study is to evaluate the effectiveness of a stand alone body image group for people with bulimia nervosa and eating disorder not otherwise specified (EDNOS). The study will examine the effect on body image dimensions and eating disorder psychopathology. It is hoped that this pilot study will contribute to the evidence base of body image treatment in bulimia nervosa and eating disorder not otherwise specified.

Research into eating disorders, body image disturbance and treatments will be reviewed. Literature was identified from key word searches of the databases PsycINFO, EMBASE and MEDLINE. Key search terms included eating disorders, bulimia nervosa, eating disorder not otherwise specified, body image, negative body image, body image disturbance, cognitive behavioural therapy, body image treatment and body image therapy in adults. The reference sections of appropriate studies were used to identify further studies.

1.1 Eating Disorders

Eating disorders are important psychiatric diagnoses associated with substantial morbidity, both psychological and physical, and with significant mortality rates (around 20%). They are often characterised by extreme disturbances in eating behaviour and comprise a broad range of severity among sufferers.

In their seminar paper, Fairburn and Harrison (2003) highlighted that 'eating disorders are of great interest to the public, of perplexity to researchers, and a challenge to clinicians' (p.407). Therefore addressing the needs of people with eating disorders presents as a significant test to health care professionals, as they are one of the most complex disorders to treat and have the highest mortality rate of any psychiatric disorder (Bell, Clare & Thorn, 2001). On account of poor long-term prognosis and high mortality rates, prevention and early intervention are desirable, and developing effective treatment strategies is crucial.

1.2 Clinical Features of Eating Disorders

The Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV, American Psychiatric Association, 1994). discriminates between three main eating disorders; anorexia nervosa, bulimia nervosa and eating disorder not otherwise specified (EDNOS). All of the eating disorders share distinctive core psychopathology defined as the over-evaluation of shape and weight whereby the individual will mainly judge their self-worth based in terms of their shape/weight and ability to control them. For the purpose of this study, the diagnoses of bulimia nervosa and eating disorder not otherwise specified are the primary focus.

1.2.1 Bulimia Nervosa

Russell (1979) introduced the diagnosis of bulimia nervosa. The essential features are recurrent binge eating which is accompanied by a sense of loss of control. Bingeing almost always co-occurs with attempts to restrain eating, usually dieting and this is associated with undue concern and over evaluation regarding weight and shape. In an attempt to prevent weight gain, compensatory behaviours occur such as purging which further exacerbate the problem. Purging most commonly takes the form of self-induced vomiting or laxative misuse, but can also include diuretic

misuse and fasting. Other compensatory strategies can be seen in high levels of intense exercise.

Further features are categorised as body image behaviours such as mislabelling emotional states as feeling/being fat, body checking and body avoidance. These patterns of behaviours are distressing to individuals who wish to gain control over their eating behaviour. Weight is usually within the normal range (BMI=20-25) as the combination of restriction and binge eating cancel each other out. Symptoms of depression and anxiety are also common. Behavioural impulsivity and response disinhibition are at a higher rate which is also linked to substance misuse (Rosval *et al.,* 2006). Further studies have examined levels of self-injurious behaviour and time of onset. In an inpatient group, 34.3% had a history of self-injury, with the majority occurring after the onset of bulimia (49.2%) (Paul *et al.*, 2002).

1.2.2 Eating Disorders Not Otherwise Specified (EDNOS)

This refers to a group of disorders that do not meet the diagnostic criteria for anorexia nervosa or bulimia nervosa. Case descriptions indicate that the clinical features vary greatly and can be of a severe nature (Fairburn & Bohn, 2005). For example, an individual might present with many symptoms of anorexia nervosa, but Body Mass Index (BMI) is within the normal range, or they continue to experience a normal menstrual cycle, both of which are important in the diagnosis of anorexia nervosa. Other cases may involve chronic dietary restriction, sometimes accompanied by laxative misuse and over exercising.

1.3 Incidence and Prevalence of Bulimia Nervosa and EDNOS

There are many difficulties associated with reporting accurate incidence and prevalence rates in epidemiological studies of eating disorders. Incidence rates for bulimia nervosa are reported as 13 per 100,000 women per year, whereas in men the rate is 0.8 per 100,000. Prevalence rates are 1-3% for women, with a. female to male ratio is more than 10:1. (Hoek, 2006; Hoek & van Hoeken, 2003).

Hoek (2006) highlighted that there are no reliable data available regarding the incidence and prevalence for EDNOS. However, Hay (1998) suggested that EDNOS is prevalent in 2-5% of young women. In out-patient clinical settings, Fairburn *et al.,* (2009) reported that 50-70% of eating disorder cases will meet the criteria for EDNOS and are the least studied amongst the eating disorders.

In a review of clinical cases, Hoek (2006) suggests that there are a high number of people with eating disorders that either do not seek or drop out of treatment within a healthcare setting for their eating disorder.

1.3.1 Development and Course of Bulimia Nervosa and EDNOS

Eating disorders generally develop in adolescence where concerns regarding appearance and shape/weight are triggered by puberty and stereotypical ideas around thinness. It is not uncommon for dieting behaviour to take place during adolescence but these are to a lesser extent of those with classified eating disorders and there is less endorsement of overevaluation of shape/weight. There are a range of risk factors that have been identified in those who are suffering from eating disorders, however, there are no prospective studies to confirm these predictors (Jacobi, 2005).

The mean age of onset for bulimia nervosa is 23 years (Welch *et al.* 1997) with an average duration of illness of 7 years (Mitchell *et al.* 1985). In a prospective 5 year follow up study, Fairburn *et al.* (2000) found that 51% of people with bulimia nervosa, continued to exhibit symptoms of an eating disorder, with 15% continuing to meet the criteria for bulimia and 41% meet the criteria for major depressive disorder according to DSM-III-R. These findings would suggest a poor prognosis for half of those with bulimia nervosa. Fairburn *et al.* (2000) noted that research studies have failed to find consistent outcome predictors, but there is evidence to suggest that those with a history of childhood obesity, low self-esteem and disturbances in personality have a poorer prognosis.

There has been less research into the course of EDNOS. One study by Herzog (1993) examined 33 women with EDNOS and found that at a 3 year follow-up, half of the women had either symptoms of anorexia nervosa or bulimia nervosa. This highlights that there is a tendency for eating disorders diagnoses to change over time and evolve into another type of eating disorder. Therefore common symptoms persist between the eating disorders (Fairburn, Cooper & Shafran, 2003).

1.4 Risk Factors for the onset of Bulimia Nervosa and EDNOS

In view of the poor prognosis, it is important to identify risk factors in the development and maintenance of the eating disorder in order to offer the most effective treatment. Collier and Treasure (2004) highlighted that 'eating disorders are heterogeneous conditions with a complex multifactorial aetiology that includes the interaction between genes, environment and social factors' (p.363).

1.4.1 Genetic Factors

A number of studies have found strong evidence to suggest that bulimia nervosa is familial and a result of additive effects of genes (Strober *et al.,* 2000, Bulik *et al.,* 2000). Within these families there is also a raised prevalence of depression and substance misuse (Fairburn *et al.* 2003) which may explain its high comorbidity with these disorders.

Early twin studies have found heritability rates between 54-83% (Kendler *et al.,* 1991). Mazzeo *et al.,* (2006) found that the genetic heritability of bulimic disorders and behaviours vary across phenotype. An earlier study by Reichborn-Kjennerud *et al.,* (2003) found that restraint appears to be a learned behaviour, whilst purging is more genetically influenced, with rates of 72% heritability and binge eating is moderately heritable (Sullivan *et al.,* 1998).

In a large multicentre study, Bulik and colleagues (2003) found a significant linkage on chromosome 10p in families with bulimia nervosa. Further studies will investigate genes related to appetite and weight.

1.4.2 Physiology

The neurobiology of bulimia nervosa has examined eating and weight regulation systems to further understand the behavioural features of dietary restraint, binge eating, and purging. This has largely focused on the neuropeptide and monoamine systems (Kaye *et al.,* 2005). Further studies have explored serotonin neurotransmitter systems involved in mood and eating, particularly those associated with emotionally driven bingeing and purging. A range of abnormalities have been found and those in the central, peripheral and hormonal areas are thought to be secondary to disordered eating behaviour and subsequent changes in weight.

The most significant findings report continuous 5-HT abnormalities linked to changes with eating behaviour. Dieting in healthy woman is said to alter functioning (Cowen *et al.,* 1996). Whereas in recovered bulimics, abnormalities persist (Kaye *et al*., 2001). Therefore there is some suggestion that either 5-HT abnormalities are a predisposing factor or may be a consequence of dieting behaviour. Fairburn and Gowers (2008) also highlight that this may also be linked to perfectionism character traits.

1.4.3 Historical Factors

A range of historical factors have been identified that may sensitise a young person to focus on their shape/weight contributing to body dissatisfaction and therefore increasing the risk of developing bulimia nervosa. These include childhood and parental obesity, early menarche, family history of eating disorders/dieting, depression, critical comments regarding eating/shape from family, parental alcoholism and parental psychiatric disorder (Fairburn & Harrison, 2003).

There is evidence to suggest that there are higher rates of poorer family functioning and more negative parenting experiences in patients with bulimia (Dominy *et al.* 2000 and Fairburn *et al.* 1998). However, it is also important to consider the effect of the bulimic disorder within the family and this may adversely impact on family functioning. To examine this further, Brooklings and Wilson (1994) found that poor

family functioning may also contribute to broader emotional and interpersonal problems that result in co-morbid problems.

Individual experiences such as childhood sexual abuse have also been found to increase the risk, which are also key factors in the development of other psychiatric disorders. Johnson *et al.* (2002) found that sexual abuse is a non specific risk factor and is more common in people with a more impulsive, bulimic type eating disorder. More severe abuse is a risk factor for purging behaviours rather than bingeing and the presence of co-morbidity (Ackard & Neumark-Sztainer, 2003; Wonderlich *et al.,* 1997).

1.4.4 Premorbid Characteristics

Attention has been paid to individual factors, such as low self-esteem, perfectionism and pre morbid psychiatric disorder (Fairburn *et al.,* 1997) that have shown to be risk factors for bulimia nervosa.

Bardone *et al.,* (2000) found predictive interactions between perfectionism, body dissatisfaction and self esteem. When low self esteem co-occurs with high levels of perfectionism and high body dissatisfaction these characteristics contribute to the development of bulimic features and also extend to predictors of depressive symptoms. This was the first study to confirm the proposed three factor model in young females and therefore has implications for treatments for bulimia nervosa. However, a later study carried out with adolescent girls only found effects for body dissatisfaction as a predictor of bulimia pathology (Shaw, Stice and Springer, 2004). Therefore, these findings require further investigation with consideration for combination of other risk factors.

1.4.5 Sociocultural Experiences

There are a number of studies that have indicated that western idealization of thinness, media, peer and parental attitudes and behaviour regarding weight/shape are associated with the development of some eating pathologies (Tiggermann & Slater, 2004, Sweetingham & Waller, 2007).

The effects of sociocultural pressures to achieve the thin ideal have been tested in a variety of studies. Stice (2001) tested a causal model including: perceived pressure to be thin, thin-ideal internalisation, body dissatisfaction, dieting and low mood. These causal factors predicted 23% of the onset of bulimic pathology. However, it is evident that the majority of women in the western world are exposed to these conditions and only a small number develop eating disorders. Therefore it is likely that other risk factors, as discussed above, will make a larger contribution to the development of bulimia nervosa (Schmidt, (2003).

In a recent meta analytic review of risk and maintenance factors in eating pathology, Stice (2002) found that elevated body mass, pressure to be thin, body dissatisfaction, dieting, eating disturbances and modelling body image were risk factors for bulimic pathology. In terms of dieting behaviour, this can trigger binge eating and creates a maintenance cycle. Social support was found to be a protective factor. However, these univariate analyses produced small effect sizes and therefore multivariate models may provide clearer conclusions.

1.5 Summary

Bulimia nervosa and EDNOS are pervasive eating disorders that begin in the early twenties. It is known that there is temporal movement between eating disorder diagnoses and the largest percentage of clinical cases meet the diagnostic criteria for EDNOS. Despite this, there is limited research on this group but an acknowledgement that it is likely that they previously suffered from either an anorexia or bulimic condition (Fairburn & Harrison, 2003). There are a range of genetic, biological, psychological and social risk factors associated with the development of bulimia nervosa and it is likely that there is a combination of risk factors that cause the onset of dieting behaviours. As a result of dieting, there are physiological consequences that serve to maintain the condition. There are further problems associated with comorbid disorders such as depression and substance misuse that effect general psychological functioning and eating behaviour. Furthermore, the prognosis is poor for half of those with bulimia nervosa particularly with those who have low self esteem and personality difficulties.

1.6 Maintenance of bulimia nervosa and EDNOS

The risk factors discussed above have all been indicated in the development of bulimia nervosa and EDNOS. However, it is evident that eating disorders persist due to individual and systemic factors that occur as both an antecedent and consequence.

A number of psychological theories have been proposed to formulate the maintenance of bulimia nervosa in order to improve treatment outcomes. The cognitive behavioural model has received the most attention and has specifically applied CBT for the treatment of eating disorders (Fairburn Cooper and Shafran, 2003).

The first cognitive model proposed by Fairburn (1997) was supported with regression analyses confirming that appearance over-evaluation led to a change in dietary restriction that then predicted binge eating behaviour and subsequent purging behaviours (Fairburn, 2003).

Therefore, the primary maintaining factor is based on the individual's over-evaluation of self-worth based on weight/shape and their ability to control these. Figure 1 represents the cognitive model of the maintenance of bulimia nervosa (Fairburn, Cooper & Shafran, 2003, p.511)

The model suggests that over-evaluation provokes further dysfunctional attitudes and the cycle of eating disorder behaviour in the pursuit of achieving weight loss. These become the clinical symptoms of bulimia nervosa and are self-maintaining. These features are also accompanied by an intense preoccupation with thoughts about eating, weight and shape. The behaviour of binge eating appears to be both mediated by cognition, emotional and physiological processes. The cognitive rules that are attached to dieting behaviour are strict and rigid and the inevitable breaking of these rules is viewed negatively. This can lead to assumptions that they are unable to control their eating and thus temporarily abandon these rules, with binge eating.

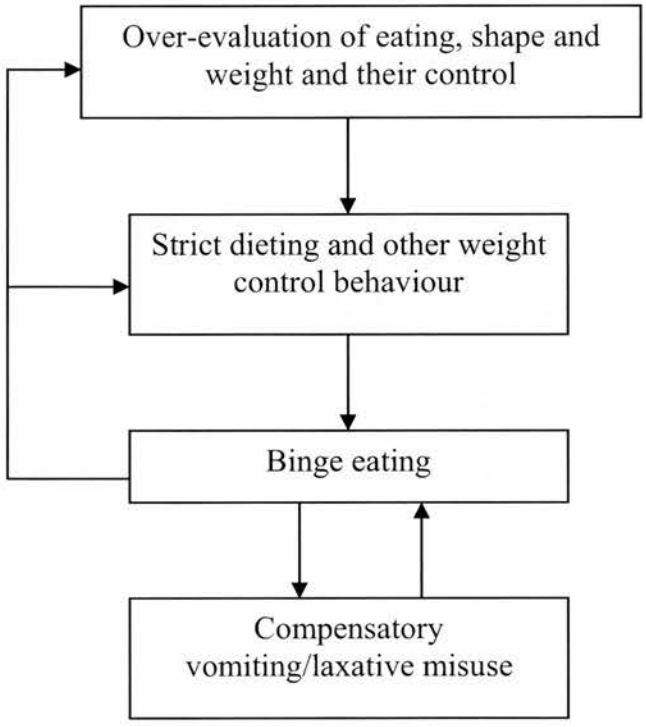

Figure 1: A schematic representation of the cognitive behavioural theory of the maintenance of bulimia nervosa (Fairburn, Cooper and Shafran, 2003, p.511)

However, binge eating further intensifies concerns regarding ability to control eating and shape/weight. Therefore, additional processes are enacted to compensate for loss of control over eating with purging behaviours. These processes further maintain dysfunctional assumptions as many individuals hold beliefs that purging removes the nutritional content of binges.

Therefore, the bulimic person has high levels of unrealistic standards that are unachievable and lead to further negative self-evaluation and self-criticism (Fairburn, 1997). This further maintains the vicious circle of bulimia nervosa as the person will strive to reach success in controlling their eating, weight and shape.

1.6.1 Transdiagnostic Model of Eating Disorders

In response to the movement between eating disorder diagnoses and only modest treatment outcomes with CBT-BN, the cognitive behavioural theory of the maintenance of bulimia nervosa was extended. This included four additional processes that have been identified as maintaining factors and supplement the 1997 model. These consist of clinical perfectionism, core low self esteem, mood intolerance and interpersonal difficulties. Figure 2 shows the extended cognitive behavioural model of the maintenance of bulimia nervosa (Fairburn, Cooper & Shafran, 2003). The extended mechanisms will now be briefly summarized.

1.6.1.1 Clinical Perfectionism

Clinical perfectionism links with the dysfunctional scheme for self-evaluation. Clinical features of this maintaining system are seen in the striving to meet high standards in terms of eating, shape, weight and also these are usually applied to other aspects of life. There is an intense fear of failure, with selective attention to performance which is frequently viewed in a self critical and negative manner.

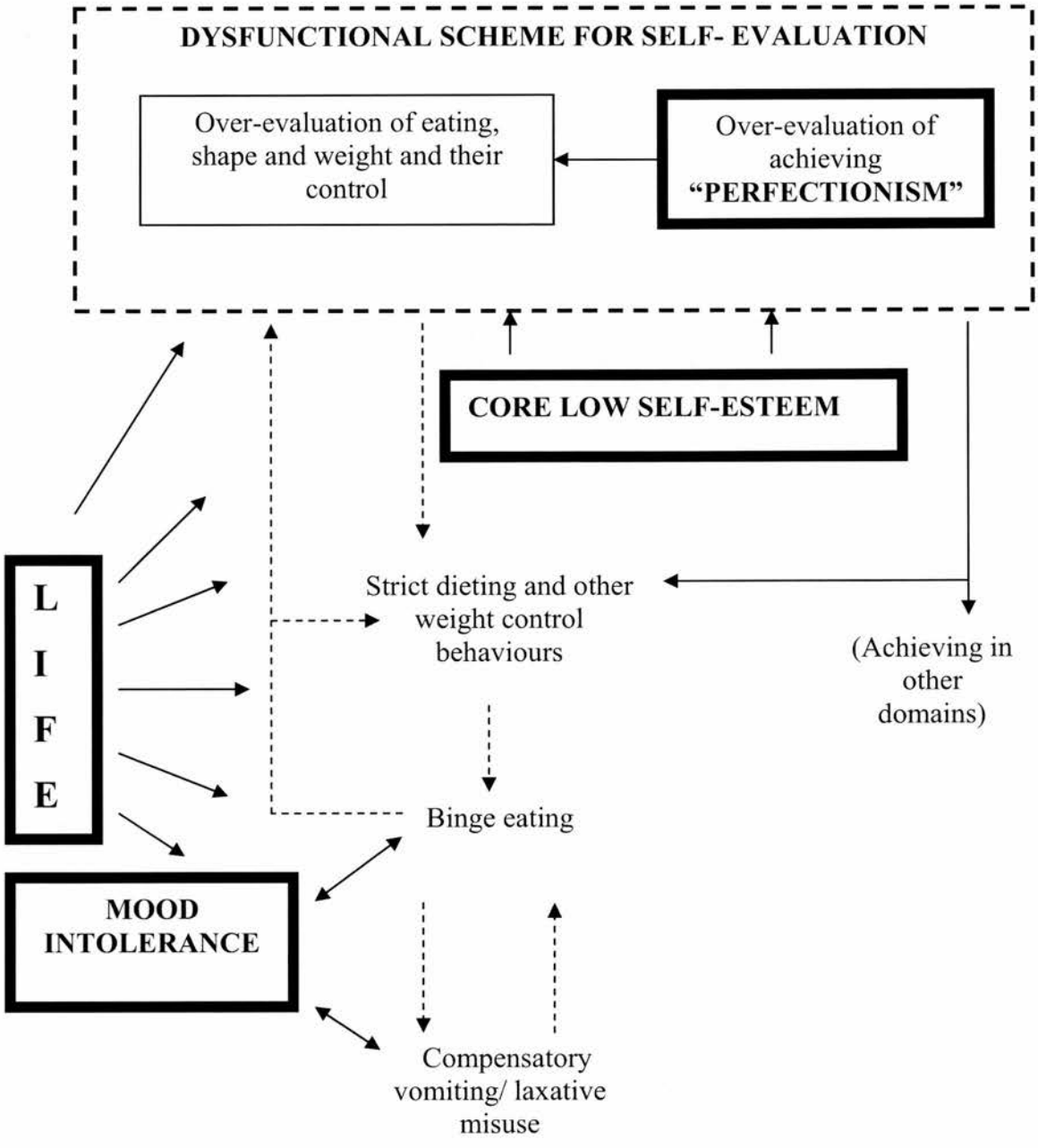

Figure 2: **A schematic representation of the extended cognitive behavioural theory of the maintenance of bulimia nervosa. "Life" is shorthand for interpersonal life (Fairburn, Cooper and Shafran, 2003, p.516)**

1.6.1.2 Core Low Self Esteem

This affects a number of patients at a global level, with pervasive negative judgements and self critical thinking applied to all aspects of their lives and ability to perform. It is thought that core low self esteem is a key factor in impeding recovery due to feelings of low self efficacy and encouragement of efforts to achieve in dysfunctionally valued areas.

1.6.1.3 Mood Intolerance

This factor has been included as a main target area, given the complex relationship between emotional states and binge eating that can become habitual (Waller, 2002). In some cases, the patient has an inability to tolerate both negative and positive mood states which also triggers cognitive biases such as, feelings of being unable to cope. The most common behaviours in eating disorders are self injury to dissipate the mood state or misuse of substances to change their mood and physical sensations (Paul *et al.,* 2002).

1.6.1.4 Interpersonal Difficulties

Eating disorders have a significant bidirectional impact on interpersonal life and those with bulimia are more sensitive to negative social interactions (Steiger *et al.,* 1999). Therefore, the aim is to improve interpersonal functioning, leading to an improvement in self esteem and introduce new schemes for self-evaluation, thereby reducing the emphasis on striving to change shape and weight.

1.7 Motivation and eating disorders

It is well recognised that those with eating disorders have difficulty changing their behaviours given the egosyntonic nature. Therefore, a combination of the curious clinician stance (Geller *et al,.* 2001, Cited in Waller *et al.*, 2007) to foster alliance and an awareness of the stages of change model (DiClemenete & Prochaska, 1998) can apply specific motivational enhancement techniques to encourage change and recovery. Common motivational activities in eating disorders are usually paper based exercises for the patient to complete that encourage the person to reflect on the pros/cons of their condition and look at life with and without an eating disorder (Waller *et al.,* 2007).

Therefore, motivation and stages of change is an important factor to be taken into consideration at the start of psychological treatment. If ambivalence persists and there is discord between therapist and patient, then the efficacy of any psychological treatment will be undermined (Vitousek *et al.,* 1998).

1.8 Summary

The cognitive behavioural models discussed here offer a comprehensive account for the processes that maintain eating disorder. Specifically, for bulimia nervosa, there is emphasis on the vicious circle of eating disorder behaviour that is primarily motivated by a dysfunctional scheme for self evaluation. For cases with additional core maintaining features, there is now a theoretical model to understand these processes in order to translate to treatment. Motivation to change has been discussed as this is an important factor that if not addressed will affect engagement in treatment and subsequent outcomes.

1.9 Treatment for Bulimia Nervosa and EDNOS

According to the Quality Improvement Scotland recommendations for the management and treatment of eating disorders (NHS QIS 2006), Cognitive Behavioural Therapy for Bulimia Nervosa (CBT-BN) is the recommended treatment for Bulimia Nervosa over the course of 4-5months. There is no specific treatment for EDNOS and the advice is to offer treatments that appear appropriate to the clinical features of the eating disorder. Interpersonal Psychotherapy (IPT) is also a recommended psychological treatment (NHS, QIS 2006). This can be used as an alternative to CBT but recovery takes around 8-12 months. The IPT model for eating disorder does not have a direct focus on modifying eating disorder behaviour. This would suggest that each treatment may have specific effects via different mechanisms.

Manualised CBT is the most researched evidence based treatment for bulimia nervosa and is usually tested in outpatient settings. Fairburn and Harrison (2003) report that there have been over 50 randomised controlled trials indicating that CBT-BN (Bulimia Nervosa) is the most effective treatment for modifying eating disorder thoughts and behaviour. However, there is only improvement in 40-50 per cent of cases that are well maintained at follow up (Wilson & Fairburn, 2002). The remaining patients either fail to respond or drop out of treatment.

Therefore, given that only around 50% show improved outcomes and the migration nature of eating disorders, particularly with the majority suffering from EDNOS, there is a clear need to further develop treatments and improve outcome (Crow & Peterson, 2009).

1.9.1 Transdiagnostic CBT for eating disorders

The transdiagnostic model by Fairburn, Cooper & Shafran (2003) has been applied to the treatment of all eating disorder diagnoses in order to improve treatment outcomes. The treatment can be delivered in either a broad or focused form and the content is defined by factors maintaining the eating disorder. In Fairburn, Cooper & Shafran, (2003, p. 522-524) the main components include four specific stages:

1. Intensive four weeks focusing on engagement and creating an initial personalised formulation and obtaining maximum behaviour change.
2. Is carried out over two to three sessions and reviews the progress of treatment and any particular obstacles to change. A reformulation is carried out to identify any of the possible four maintaining mechanisms.
3. This is the largest part of treatment and its content is directed by the reformulation. With an emphasis on modifying the patient's eating disorder psychopathology such as over-evaluation of eating, shape and weight. There are specific modules that focus on the additional four maintaining factors: clinical perfectionism, core low self esteem, mood intolerance and interpersonal difficulties and are applied as necessary.
4. The final stage of treatment focuses on relapse prevention to ensure that recovery continues at the end of treatment.

1.9.1.2 Outcomes for Transdiagnostic CBT for Bulimia Nervosa and EDNOS

Fairburn *et al.,*(2009) have recently reported on a trial comparing two transdiagnostic treatments in two forms: CBT-Ef and CBT-Eb with patients with bulimia nervosa and EDNOS. The CBT-Ef condition addressed clinical features of an eating disorder exclusively as per Fairburn's (1997) CBT model of bulimia nervosa. Whereas, CBT-Eb is a more complex treatment to address additional problems commonly associated with eating disorders; mood intolerance, clinical perfectionism, low self esteem and interpersonal difficulties.

The findings indicated that both treatments showed improvement and these changes were maintained at follow-up with 51.3% of patients reporting eating disorder features less than one standard deviation above the mean. The findings also suggested that enhanced CBT for eating disorders is more effective than earlier versions as measured by Agras *et al.,* (2000) for bulimia nervosa at maintaining no behavioural symptoms in 45.6% at a 60 week follow up. From statistical data analysis, there was no difference between the two forms of treatment. However, exploratory analysis based on clinicians' ratings for additional psychopathology indicated that the broader form of CBT was more effective in severe cases. Fairburn and colleagues concluded that until further research is carried out: CBT-Ef would be the treatment of choice for less complex cases, whereas those with any of the four additional maintaining factors, then CBT-Eb should be administered. The findings also make a primary contribution for the efficacy of CBT with eating disorder not otherwise specified.

The above findings suggest that there continues to be around 50% of patients with an eating disorder who do not respond to treatment or drop out. This also taken, with awareness that there are large number of people in the community who have clinical levels of eating disorders but do not seek treatment, suggests that further research needs to examine alternative treatment methods or a combination to improve outcome.

1.9.2 Theories on the persistence of bulimia nervosa

There have been a number of long term follow-up studies on the factors maintaining bulimia nervosa. A recent study suggests that there is a fluctuating course to the disorder, with only remission occurring after symptom abstinence for at least four months. Those with elevated thin-ideal internalisation, reward expectations from food, frequent binge eating and compensatory behaviours are predictive of persistent bulimia nervosa (Bohon, Stice and Burton, 2009). Therefore these may be key areas to address to improve outcomes.

1.10 Summary

The most evidence based treatment for bulimia nervosa is CBT, which has also been effective in cases with EDNOS. The treatment approaches based on theoretical models have efficacy in around 50 per cent of patients. It is disappointing that recent studies with a broader form of CBT did not show it to be statistically more effective than CBT-Ef. This therefore, suggests that there is further modification needed in CBT treatment for eating disorders with an emphasis on factors that maintain the disorder. As research shows that body image disturbance is a key predictor for the onset, maintenance and relapse in bulimia nervosa, this area warrants further evaluations to understand the effect on treatment outcomes.

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1.11 Body Image

Body image is a multidimensional term that conceptualises attitudinal, behavioural and perceptual components (Cash & Pruzinsky 2004). This is further distinguished between global subjective dissatisfaction, affective distress, appearance investment/evaluation and various cognitive and behavioural dimensions (Cash, 2004). There are a range of terms to explain the concept of body image, which range on a continuum from negative, to acceptance and to positive.

In the current study, the terms negative body image and body image disturbance will be referred to, where appropriate, with an emphasis placed on the evaluation and investment in body image as a measure of self-worth.

1.11.1 Body Image Disturbance in Bulimia Nervosa and EDNOS

High levels of body disturbance are present in bulimia nervosa which has been found to be a major risk factor in the development and maintenance of bulimia nervosa (Cash and Deagle, 1997). It is thought that an interaction between internalisation of the thin ideal and sociocultural pressures to be thin encourage the development of negative body image and the over-evaluation of the importance of appearance (Stice, 2002).

Stice (2001) hypothesised that body image disturbance increases the risk of bulimic symptoms through two interrelated mechanisms. Firstly, by triggering the onset of rigid dieting as an effective weight control method which then leads to binge eating that is triggered by a physiological response due to calorie deprivation. Secondly, body image disturbance is also thought to contribute to negative affect and may further maintain the cycle of restriction, binge eating and purging to facilitate affect regulation.

1.12 Clinical Features of Body Image Disturbance

There are a range of clinical features of body image disturbance and the nature and extent of these vary on an individual basis.

1.12.1 Body Dissatisfaction

This is the most common complaint in bulimia nervosa with concern for the size of body regions, typically in the stomach, thighs, buttocks and hips. As well as feelings of fatness in the upper arms and breasts. Body dissatisfaction is also associated with feelings of being a disproportionate shape (Bailey *et al.,* 1990). Farrell *et al.,* (2004) found that a non-clinical group with high shape concern appeared to have higher negative behaviours and self-critical cognitions when viewing themselves in the mirror. This suggests that shape concern/body dissatisfaction is moderated by other features of body image disturbance.

1.12.2 Perceptual Disturbance

Perceptual disturbance can be seen in distortions of images and imagined deficits. Further distortions are associated with sensory experiences such as feeling full after a meal and associating this physical sensation with images of a protruding stomach and unattractiveness. There may also be features of a discrepancy between actual appearance and a person's mental image of themselves as in at least half of eating disorder patients there is an overestimation of body size, compared to normal controls who gave an accurate account (Collins *et al.,* 1987, Cited in Garner and Garfinkel, 1997). There are various psycho biosocial triggers that contribute to size overestimation, such as low mood, eating high calorie foods, viewing media images and pre-menstrual phase (Thomson *et al.* 1993, Hamilton and Waller, 1993, Carr-Nangle *et al.,* 1994, and Taylor and Cooper, 1992; all cited in Garner and Garfinkel, 1997). Consequently, body image perception can be an unstable dimension.

1.12.3 Cognitive and Affective Features

Patients with eating disorders have an overriding preoccupation with their appearance. Haimovita *et al.*, (1993) examined body satisfaction in various situations and found that eating and social situations can heighten this preoccupation. This preoccupation appears to extenuate from an over-evaluation of the importance of appearance as a dimension of self-worth. In the context of preoccupation, body image related information is processed in a biased manner which maintains negative core beliefs and assumptions. Further research has examined cognitions linked to body image behaviours. These cognitions endorse the value of checking to reduce body image anxiety and to also take control of eating, weight and shape (Haase, Mountford & Waller, 2006).

There are further findings to suggest that physique anxiety is a mediator between checking cognitions and checking behaviour in a non clinical sample with explained variance from 23 to 34.4 per cent (Haase, Mountford and Waller, 2007). Therefore, it is likely that emotions are key components between specific checking cognitions in body image disturbance that contribute to dysfunctional behaviours. If these findings are repeated in an eating disorder sample, this has significant implications for emotional mediation models and treatment approaches.

1.12.4 Behavioural Features

There are a range of behavioural features that are a direct expression of "self evaluation unduly influenced by body shape and weight" (APA, 1994). These are seen in avoidant, checking and comparison behaviours and used to manage distressing emotions such as anxiety or shame. Most commonly, patients may avoid social situations that will emphasise their physical appearance or will wear specific clothing, to hide areas of their body that they do not like. They may also avoid seeing their own appearance in the mirror or withdraw from intimate contact.

Checking behaviour involves comparing self to peers and media ideals and also frequent checking of disliked body part/area in the mirror, pinching and repeated weighing. In an experimental study to understand the effects of body checking on

body satisfaction, Shafran *et al.,* (2007) tested the effect of high body checking or intense body scrutiny compared to low body checking with neutral descriptions in a non-clinical sample. The results indicated that high body checking led to a temporary increase in body dissatisfaction, feelings of fatness and increased the strength of body related self critical thinking. It is also evident that these behaviours can be used to motivate eating disorder behaviours such as restraint (Shafran *et al.*, 2004). Attentional biases can lead to further preoccupation and dissatisfaction (Williamson, 1996).

Grilo *et al.*, (2005) found that body checking was more associated with eating restraint and body avoidance was associated with binge eating. Therefore, this suggests that the level of body checking may be distinct to certain eating disorders (Calugi *et al.*, 2006).

1.13 The Multidimensional Assessment of Body Image Disturbance

In recent years, there has been an increase in the number and range of measures developed to assess the multi-dimensional construct of body image disturbance (Thompson & Van Den Berg, 2004). There are now measures to assess the extent to which a person's invests in appearance as a measure of their self worth and domains of self evaluation such as the shape and weight based self esteem inventory (SAWBS, Geller, Johnston & Madsen, 1997) and the Appearance Schemas Inventory –Revised (Cash, Melnyk, & Harbosky, 2004). These features are more predictive of body image dysfunction than body image satisfaction (Rudgier, Cash, Roehrig & Thompson, 2007). Further measures have been developed examining body checking cognitions (Mountford, Haase & Waller 2006) which is a clinically useful tool to guide areas of treatment. Therefore, a comprehensive assessment should be undertaken to fully understand the nature, development and maintenance of body image disturbance in bulimia nervosa in order to offer the most appropriate psychological treatment and measures outcomes.

1.14 Psycho-Biosocial Model of Body Image Disturbance and Eating Disorders

There is an identifiable gap in the literature regarding theoretical models of the maintenance of negative body image (Farrell, Shafran & Lee, 2006). Therefore at present the most relevant model to this study is that proposed by Bell and Rushforth (2008). Figure 3 incorporates the biological, social and psychological mechanisms that contribute to the development and maintenance of negative body image.

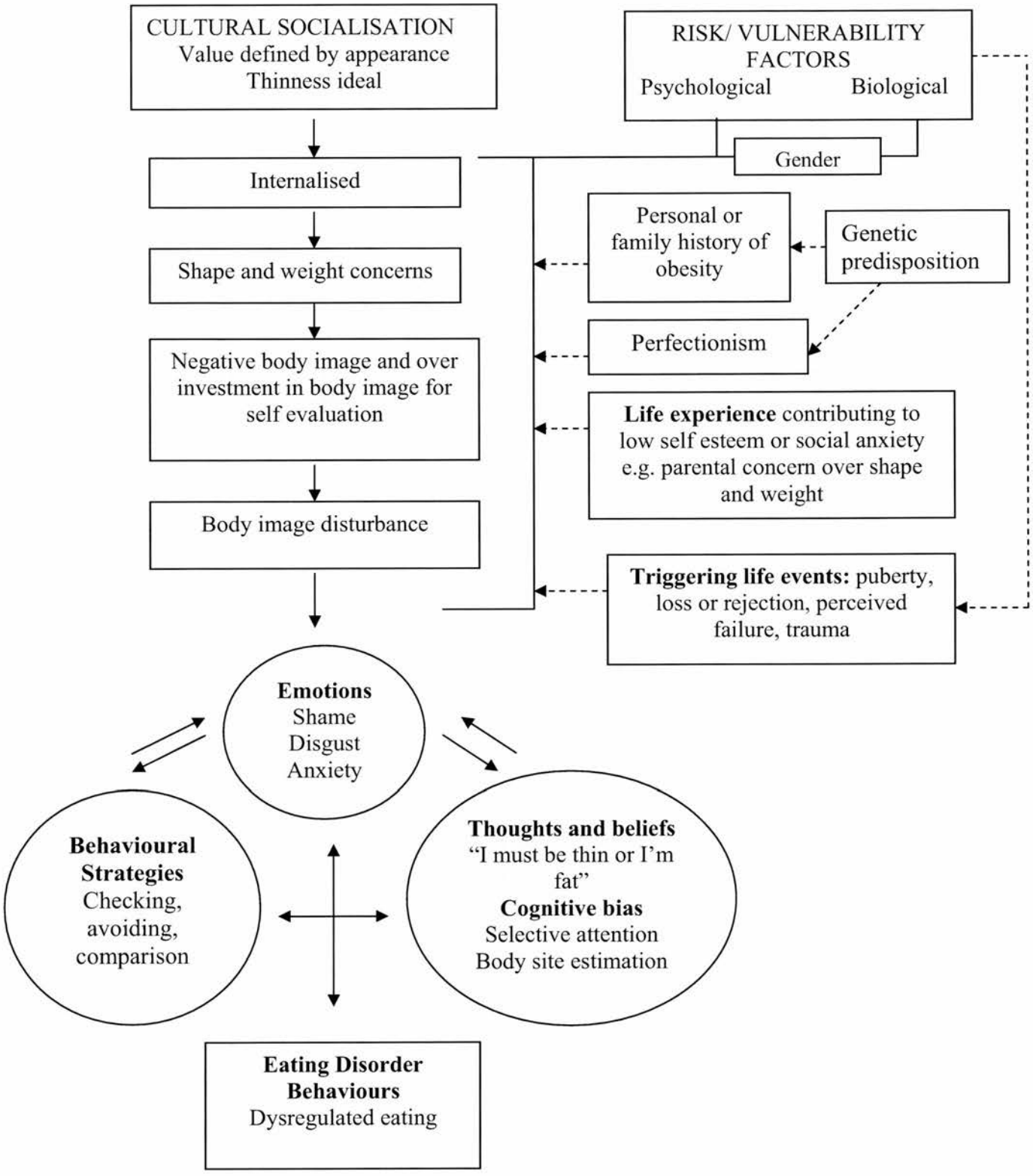

Figure 3: A psycho-biosocial model of body image disturbance and eating disorders (Bell and Rushforth, 2008, p.93)

The model links together the risk factors for negative body image and eating disorders. There is also recognition for the over-evaluation of shape and weight as noted in the transdiagnostic model of eating disorders (Fairburn, Cooper & Shafran, 2003). An investment in thin or unrealistic body ideals can lead to negative evaluation which triggers the cognitive behavioural process. Negative body image activates negative emotions such as body shame which motivates a change in eating behaviour in order to achieve the desired body shape/weight. This is further reinforced by selective attention, negative thoughts and cognitive biases (Williamson *et al.*, 2004) that further reduce mood and promote negative body image behaviours. There is also a need to focus on current or more recent influences that precipitate or maintain the body image disturbance and eating disorder pathology (Reas & Grilo, 2004). There are also some suggestions that body image behaviours are used to motivate eating disorder behaviour e.g. checking deliberately to increase distress to motivate eating restraint (Mountford, Haase & Waller, 2006). Therefore, all of these processes maintain the eating disorder behaviour and preoccupation/dissatisfaction with weight and shape (Shafran *et al.,* 2004).

1.15 Summary

Body image disturbance is conceptualised as having an attitudinal, perceptual and behavioural component. The attitudinal component is related to a number of features such as body satisfaction, investment in appearance and evaluation. In clinical samples this is observed in negative body related cognitions, self criticism, emotional distress and frequent dysfunctional behaviours. On examination of body image perception, there is a high degree of selective attention to disliked areas which can contribute to an overestimation of size. The psycho biosocial model highlights the pathways between the key risk factors in those with eating disorders that contribute to the over-evaluation of shape, weight and eating. This dysfunctional system for self evaluation leads to intense focus on body image and has the paradoxical effect of increasing body image disturbance. In the pursuit of striving to achieve the ideal shape or remain in control of eating/weight/shape this results in the maintenance of negative body image through the interaction between emotions, cognitions and behaviours.

1.16 Body Image Treatment

The current treatment approaches for body image disturbance apply cognitive behavioural therapy and have an evidence base in routine eating disorder treatment.

Rosen (Cited in Garner and Garfinkel, 1997) has proposed CBT treatment for body image in the context of eating disorders. The therapy can be applied at any stage of the eating disorder presentation, either in conjunction with eating disorder treatment, towards the end or alone. This can be on an individual or group basis within 8 sessions. The approach is non-judgmental with an emphasis on self acceptance as opposed to achieving body image satisfaction.

Rosen proposes that a systemic assessment of body image is conducted to determine all facets of body image disturbance. This will then aid the focus of treatment which can include the methods reported in Table 1. Table 1 reports the main components of CBT treatment for body image as discussed by Rosen (In Garner and Garfinkel, 1997, cognitive-behavioral body image therapy, pages 188-201).

Table 1: **Main components of CBT for body image therapy in eating disorders (Rosen, 1997)**

Key component of treatment	Method
Assessment of body image symptoms	History taking and completion of measures
Introduce concept of body image	Discussion
Review body image development	Review photographs overtime and consideration for significant events and the effect on functioning
Understand the impact of adverse experiences on beliefs	Discussion
Assess and encourage motivate to change	Motivational enhancement Set realistic goals for treatment
Body image perception	Body size estimation test
Address dysfunctional thoughts, assumptions and beliefs	Self monitoring Cognitive restructuring Regular weighing to aid cognitive challenging
Acceptance	Practice neutral descriptions in front of the mirror
Identify any other maintenance factors to eating disorder	Discussion Address separately if evident
Coping with stereotypes and prejudice	Psychoeducation Thought challenging Examine other areas for evaluation of judgment of self worth Decrease comparison
Body image avoidance	Self monitoring Graded mirror exposure Relaxation training Practise non-judgemental statements Decrease other features of avoidance with graded exposure
Checking and excessive grooming	Self monitoring Decrease behaviours Cognitive challenging and behavioural experiments Response prevention for high frequency of behaviours
Reassurance seeking	Explore negative effect on relationships and the pros and cons of this behaviour Aim to stop Practise accepting compliments
Comparison	Cognitive restructuring and encourage alternative ways of comparison other than appearance Practice self accepting statements
Pleasurable bodily experiences	Encourage a more positive body image through pleasurable experiences

The treatment has been evaluated with non-clinical samples with high levels of body image disturbance (Rosen, Saltzberg & Srebnik, 1989). This was reported to be more effective than a control group who received an intervention that controlled for attention and information. There were clinical and significant decreases in body shape concern, dissatisfaction and a reduction in avoidant behaviour. On body site estimations, overestimation decreased by 19 per cent. All of these improvements were maintained at a 2 month follow-up. However, the control group also showed improvements in body satisfaction and shape concerns but continued to score in the clinical range.

CBT treatment approaches have found promising results in non-clinical samples and given the high levels of shape concern that contribute to the maintenance of bulimia nervosa (Deter and Herzog, 1994; Fairburn, Stice *et al.,* (2003), there is a need to address body image disturbance with specific body image therapy. As recovered bulimics report that overcoming ideals to achieve a thinner figure is the hardest part of recovery (Rorty, Yager & Rossotto, 1993), this may also be positively received by clinical patients.

1.17 Summary

Body image CBT would appear to be an evidence based treatment for addressing disturbance in a clinical population in order to reduce the risk of relapse and further improve treatment outcome.

1.18 Body Image Treatment in Eating Disorders

1.18.1 Background

In a review of assessment and treatments for body image in eating disorder programmes, Rosen (1996) found that only 10 out of 26 psychotherapy studies included assessment and treatment of body image complaints. Furthermore, there was only limited information regarding body image treatment. It also appeared that body image was only addressed in a small number of sessions. It was observed that studies focusing specifically on body image produced larger changes, whereas standard CBT for bulimia only had moderate effects on body image. The main conclusions drawn from the review highlighted that treatment for body image disturbance is often included within interventions for eating disorders and apply inconsistent outcome measures. Consequently it is difficult to isolate the relative effectiveness of body image treatment. As discussed body image treatment is predictive of better outcomes and this warrants further research studies to be systematically evaluated within clinical populations (Cash & Stratchan, 2004). Therefore, these findings suggest that the efficacy of body image treatment would be best evaluated as a stand alone treatment to minimise confounding variables.

There have been two reviews examining the effectiveness of stand alone body image treatments. The first literature review (Jarry & Berardi 2004) indicated that out of 18 studies there was only one with an eating disordered sample, with the majority including participants' who had body image disturbance with a range of concerns. All but one study included a CBT intervention. The non-CBT component examined participants' reflections on the development of their own body image in comparison to CBT, with both treatments reporting improvement (Dworkin and Kerr, 1987).

The findings from the CBT studies suggest that stand alone body image interventions in non-eating disorder samples were effective in improving body image on dimensions of attitudes and avoidant behaviours. Six studies addressed the perceptual dimension of body image, however the findings were mixed as control groups showed improvement at post test. Further improvements were shown in four

out of five studies on self esteem measures. Nine studies measured change in eating attitudes and behaviour which showed improvement on a range of eating measures. These findings suggest that improving body image can decrease the symptoms that have developed as a consequence of body dissatisfaction. Clinically significant change calculations were conducted for 6 out of 18 studies which indicated rates between 68 to 83 per cent clinical improvement.

The study with an eating disorder sample was conducted by Perpina *et al.,* (1999) who evaluated the efficacy of a novel virtual reality based component to address body image in 13 participants with eating disorders. This technique applied computer imagery to allow the person to interact within a computer generated world designed to address body image disturbance. The study found that an 8 week body image group CBT treatment based on Rosen (1997) and Cash's (1996) programmes with the addition of a relaxation component was an effective treatment. In comparison the CBT body image treatment with virtual reality component, produced greater improvement in body satisfaction, improved attitudes and reduced negative thoughts and emotions around weighing. Further treatment offered to the relaxation group showed further improvements at a 12 month follow-up (Perpina Marco, Botella & Banos, unpublished data; Cited in Perpina, Botella and Banos, 2003). Therefore, this study targets areas that lead to further improvement.

Following Jarry and Berardi's (2004) empirical review a meta analysis was carried out to further evaluate stand alone cognitive behavioural therapy for body image (Jarry and Ip, 2005). This review highlighted that none of the nineteen studies included in the analysis were with an eating disordered sample due to the absence of descriptive statistics required for effect size calculations in the Perpina *et al.,* (1999) study. Jarry and Ip (2005) reported that a lack of stand alone body image treatment evaluations with an eating disorder sample may be complicated with research and ethical issues.

Therefore it is ethically important for treatments to primarily focus on eating behaviour in order to address or prevent adverse health consequences such as those typically associated with eating disorders. In order to manage these difficulties, future studies should be conducted under conditions of medical monitoring. The main findings indicated that most improvement was on the behavioural dimension, with exposure and response prevention being highly effective over time. Further improvement on the perceptual dimension was supported in therapist assisted procedures. A combination of treatment focusing on behaviour, attitudes and perceptions was shown to be the most effective. There were also findings to suggest that body image continued to improve up to 3 month period post treatment. The review also highlighted that treatment components could be improved with more attention on decreasing body image investment.

The most recent review of empirical treatments for body image disturbance focused primarily on non-clinical samples due to limited body image studies with eating disorder populations (Farrell, Shafran & Lee, 2006). The authors highlighted that there was a lack of studies applying CBT components for body image in an eating disorder population in line with evidence based guidelines. These findings coupled with those made 10 years ago suggests there continue to be limited available data to fully evaluate the specificity and effectiveness of body image treatment in eating disorder samples. Therefore there continues to be a clear need for the development of structured treatments that can be easily integrated into CBT or IPT treatments for eating disorders.

In a recent publication by Bell and Rushforth (2008), the authors proposed that an effective body image treatment should address body image behaviours, body site estimation, appearance preoccupation and attentional bias in addition to challenging the overinvestment in body image. Based on these maintaining mechanisms, they developed an individual programme to be administered at the end of eating disorder treatment with any type of eating disorder. The programme was for a minimum of 12 weeks, with a six week review. At the beginning of the programme, an individual

formulation is derived to guide the programme and understand the function and maintenance of the body image disturbance. The programme focused on 3 core areas. The first area was facilitating a stance of mindfulness, acceptance and a non-judgmental attitude. The second stage of treatment involves reducing avoidant and compulsive body image behaviours through mirror exposure and response prevention. The remaining stage encourages a re-evaluation of media images.

The programme incorporates CBT principles with self-monitoring, behavioural tasks and homework. However, there is no direct focus on cognitive challenging and therefore cognitive change is encouraged through mindfulness and the non-judgmental stance. Through personal communication with Dr Bell, there are currently no published studies regarding the efficacy of this approach.

1.19 Summary

To summarise, the above literature review, indicates that despite strong evidence for the contribution of body image disturbance in the development and maintenance of eating disorders, there is a significant gap in evaluation studies for stand alone body image treatment. The treatment manual proposed by Bell and Rushforth (2008) appears promising and requires an empirical evaluation.

1.20 Theoretical Developments in Body Image Treatment

1.20.1 Mirror Exposure

In studies with non-clinical samples it is evident that those with high shape concern report high selective attention to disliked body parts and higher checking and avoidant behaviours during mirror confrontation (Farrell, Shafran, & Fairburn, 2004). Furthermore, there was a significantly higher rate of negative or mixed cognitions and emotions. This suggests that emotional, cognitive and behaviour responses may maintain body image disturbance in exposure conditions. Therefore, this is a key treatment target with in vivo methods due to the activation of core features of body image disturbance.

1.20.2 Mindfulness

There is a current interest in the use of mindfulness-meditation based approaches (Kabat-Zinn, 1994) in the treatment for eating disorders (Kristeller & Hallett, 1999). As only moderate effects are found in routine CBT treatment for eating disorders, it is evident that the over-evaluation of shape and weight is a challenge to psychological therapies. With the effectiveness of mindfulness in other clinical groups (Teasdale, Segal & Williams, 1995), Stewart (2004) suggests that mindfulness encourages a broader method of self evaluation with the acceptance of concepts such as "you are not your body". This hopes to develop an appreciation for non-appearance attributes and provide a context for reflections on personal values and an acknowledgement of life before an intense preoccupation with weight/shape and eating. Therefore, the adoption of these principles may broaden treatment options, particularly when core body image cognitions persist and are unresponsive to routine cognitive restructuring techniques.

1.20.3 Mindfulness and Mirror Exposure

In the context of mirror exposure, Wilson (2004; In Hayes, Follette & Linhean) described a protocol for mindfulness based adaptation of mirror exposure. This involved a holistic view on confrontation with the mirror and prompts to describe with non-judgemental descriptions and stay in the present moment. This is said to encourage self acceptance and toleration of negative feelings. Therefore, in bulimic patients it is aimed to reduce body shape and weight concerns that lead to the dysfunctional eating disorder behaviour. Furthermore, mirror exposure also involves behavioural homework to reduce avoidant and checking behaviour and an opportunity for key cognitions to be modified with new evidence.

1.20.4 Body Image Emotions and Checking Cognitions

The conclusions drawn by Haase, Mountford and Waller (2007) suggest that social anxiety may be a mediating factor between checking cognitions. Therefore it may be possible that anxiety and other strong emotions such as shame (Grabhorn *et al.,* 2006) may be important targets of body image treatment. It is proposed that body checking is a safety behaviour that attempts to reduce anxiety. Therefore, CBT could focus on anxiety management to decrease this which, if anxiety is a mediational factor, would result in a decrease in checking cognitions and behaviours.

1.21 Review of Empirical Body Image Treatments

In order to review the current evidence base for body image treatment in eating disorders and to inform the design of the current study, the following literature was reviewed. Body image treatments were found to be embedded in eating disorder programmes or applied alone with non-clinical samples. There were a small number of studies that examined specific components of body image but methodological issues limit the generalisability of the findings.

A study carried out by Peterson *et al.*, (2004) attempted to evaluate the effect of CBT treatment on three aspects of body image in 77 participants with bulimia nervosa. This involved a comparison of 4 different CBT groups that included two sessions on influences on body image development and promoted body acceptance with consideration for body functions. However, the group treatment was not identical, with variability in emphasis on eating behaviours. Furthermore, the outcome measures for eating symptoms were not consistent between time points and the perception measures are said to have measurement errors. Therefore the findings have limited validity and generalisability on these components. However, there was shown to be an improvement in body shape concerns and a decrease in body size overestimation.

There is evidence in a non-clinical sample to support the efficacy of combined CBT and body image treatment for those with eating problems and body dissatisfaction that do not have symptoms within the clinical eating disorder range. Paxton *et al.*, (2007) developed the "set your body free" treatment which was shown to be effective in two forms of delivery, either an 8 session group or through internet access, with large improvements in body satisfaction, body avoidance, internalisation of the thin ideal and eating restraint at post treatment.

1.22 Summary

This review of combined treatments supports the efficacy of addressing body image disturbance, but due to research designs it is not possible to specify which treatment components are responsible for the reported body image changes.

1.23 Review of Components in Body Image Treatment

The majority of treatment studies have examined specific treatment components applied in body image therapies. These will be reviewed with evidence from clinical and non-clinical studies.

1.23.1 Mirror exposure

There are a growing number of studies that have investigated the efficacy of mirror exposure by comparing standard treatments with the addition of mirror exposure.

Hilbert & Tuschen-Caffier (2004) demonstrated an improvement of negative body image cognitions and emotions on mirror confrontation in binge eaters. There were also elements of cognitive restructuring and behavioural experiments and thus these components may have also added to the effect. Nonetheless, it supports the theory of habituation through graded exposure that also results in cognitive change. The addition of measures of body image behaviours and examination of eating disorder symptoms would have aided further conclusions from the study.

Delinksy & Wilson (2006) found significant improvements in a sample of women with high weight/shape concerns but no diagnosable eating disorder following a 3 session mirror exposure treatment. The main improvements were in body checking, body avoidance, depressive symptoms, decreased shape/weight concerns and body dissatisfaction as well as improvements in dieting behaviour. This was compared to a non-directive therapy discussing body image development and beliefs over three sessions where the control group improved on body checking, depression, body dissatisfaction and dieting behaviour at both the end of treatment and follow-up. It may be possible that in session practice eliminates the development of safety behaviours or incorrect use of the protocol. The authors concluded that the study warranted further examination with an eating disorder sample. Further research could compare two different treatment interventions; mirror exposure and altering body image behaviours, in order to identify key facilitators of change.

Vocks *et al.*, (2008) conducted a pilot study investigating the effect of mirror exposure on cognitive and emotional responses in 17 patients with eating disorders, in comparison to 24 normal controls. This study was on a female sample aged between 20-40 years. The eating disorder sample included: 3 with anorexia nervosa, 5 with bulimia nervosa and 9 participants met the diagnosis for EDNOS. The assessment included an intense exposure task to collect cognitions triggered by mirror exposure using the 'thoughts checklist' (Cooper & Fairburn, 1992) which featured questions such as 'I can't look at myself in the mirror'. In addition to measuring the strength of emotional responses at both pre and post treatment.

The body image therapy involved 10 weekly sessions of CBT that included 3 sessions of body image exposure completed via mirror and video feedback. This involved confrontation with areas that prompted negative evaluation and avoidance, as well as encouraging attention to positive parts or avoided areas. The treatment also focused on the reduction of body checking/avoidance and encouraging positive body activities.

At post treatment, the frequency of negative cognitions reduced significantly during the test procedure, although this also occurred in the control group. On further analysis between time and group, on cognitions and emotions, there were significant interactions for both components at a medium effect size, with a significant reduction at post treatment with the eating disorder group. There were also stronger findings that the strength of negative emotions reduced across both time points.

Therefore, this method of assessment is encouraging and shows the clinical change that can occur in mirror confrontation following body image therapy. However, using the EDE-Q could have identified further change post therapy. The findings are limited given the use of a healthy control group sample and therefore further studies should apply a randomised trial with an eating disorder control group. It is also hypothesised the actual assessment procedure may have had a therapeutic effect as there was a reduction in mean scores over the course of the four phases as noted by Hilbert *et al.*, (2002).

A further study with comparison between two eating disorder groups, by Key et al., (2002) conducted a pilot study investigating the effect of the addition of a mirror exposure component to an 8 week body image programme within inpatient care for anorexia nervosa, binge eating/purging subtype. This included 6 women in the standard group and 9 in the modified treatment group. In both groups, there was a mean duration of eating disorder for 8.5 years, with 10 patients previously receiving inpatient treatment.

The standard approach included CBT with additional discussions around sexuality. The modified group, has the same programme but with the addition of mirror exposure. The effect of the groups was measured on three body image dimensions: body dissatisfaction, anxiety and avoidant behaviours. Interestingly, there was no change in the standard group (post treatment). In comparison, the modified group, showed a reduction in body dissatisfaction and social activity avoidance. There was also improvement in maturity fears and interceptive awareness that is linked to emotional acceptance. Therefore, the study has found that in an anorexic group, mirror exposure is a key component in facilitating change. This process is understood by the triggering of strong emotional responses that are contained with graded exposure. Furthermore, the ability to complete the treatment and difficult tasks can promote feelings of success. However, this treatment trial was conducted within the context of inpatient treatment where patients had access to other therapists and these covariate factors were not controlled for.

In an attempt to measure the effects of two separate components added to body image therapy, Hilbert & Tuschen-Caffier (2004) compared the effect of cognitive restructuring and mirror exposure included for four sessions of a CBT treatment with a focus on body image. More specifically, the group intervention was for 19 weeks, which included 12 weeks of body image therapy. The treatments were evaluated with 28 patients receiving broader CBT treatment for binge eating.

The main findings indicated that both interventions were equally effective at improving weight and shape concerns and body dissatisfaction at post treatment and at four months follow up. Given that there was no difference between the two treatments, Hilbert & Tuschen-Caffier (2004) suggest that both exposure and cognitive restructuring have the same effect on modifying automatic thoughts and dysfunctional assumptions. These findings are only applicable to a binge eating sample and warrant further investigation on efficacy of behavioural components.

1.23.2 Video feedback

There is emerging evidence for video feedback used to develop a more objective view of the body. In one study with anorexic patients, there was an 85 per cent reduction in feelings of fatness (Rishford & Ostermeyer, 1997). In bulimic cases, video exposure had the opposite effect with an increase in negative emotions (Tuschen-Caffier *et al.*, 2003). However, as noted previously, outcome measures do not appear to be standardised and therefore it is difficult to draw any conclusions regarding the impact on body image dimensions.

1.24 Comprehensive Body Image Therapy Programmes with Eating Disorders

In a review of studies and case series, evaluating CBT for body image in eating disorder samples, this found only 3 studies that focused on core maintenance factors.

Farrell *et al.*, (2005) conducted an evaluation of an individual 2 hour CBT intervention to improve extreme shape concern with the premise that this would supplement CBT for eating disorders. This targeted four maintaining mechanisms for body image disturbance in a final sample of 8 participants, which included 3 patients in the last phase of eating disorder treatment for anorexia nervosa, bulimia nervosa and EDNOS. The treatment involved mindfulness based approaches for distancing from negative cognitions and emotions, mirror exposure to decrease selective attention and examined strategies for modifying body image behaviours with homework practice. A further treatment component applied video feedback to test

out negative shape related predictions. A case series analysis indicated that there were variable changes between participants in the trial, for the eating disorder sample, there were missing data for one person and therefore the findings on two eating disorder patients are inconclusive.

However, this brief intervention was later evaluated with a larger non-clinical group in comparison to applied relaxation. Unfortunately, Shafran *et al.*, (2009) intentionally did not include an eating disorder sample as they expected treatment would need to address additional mechanisms that were out with the research design. This therefore suggests that prior to conducting the study, the authors were aware that additional treatment components would be necessary in an eating disorder sample. Nonetheless, these findings are considered due to their pertinence to the current study and the limited number of body image intervention evaluations. Shafran *et al.*, (2009) found that in a sample of 50 women with high shape concerns, CBT was more effective than applied relaxation in improving shape concerns over a period of 3 months, post treatment. However, there are a number of methodological issues with this study that make the findings less generalisable. This is due to the application of the shape concern subscale to a 7 day time frame which only has limited norms at present (Shafran & Fairburn, 2002).

Shafran *et al.*, (2009) concluded that further systematic research is necessary to examine treatment effects and interactions in targeted treatment studies. Given the authors' initial suggestions that a more comprehensive design is necessary for eating disorders, further research with this sample, is required to evaluate the treatment protocol as an "add on" to current eating disorder treatment.

In a German study, Vocks *et al.*, (2006, Cited in Vocks *et al.*, 2008) reported that there was an improvement in body dissatisfaction, weight and shape concerns, body checking and avoidance in a mixed sample of eating disorders following CBT body image therapy. However, there was no change in body size estimation. More details are unavailable due to a German language manuscript. Through personal correspondence with the first author it was established that the paper would not be translated and therefore a critique of this study is not possible.

The most relevant paper to the current study was conducted by Stewart and Williamson (2003). The authors developed a body image therapy programme for use with patients with persistent body image disturbance and eating disorder psychopathology. A pilot study with four women with partially recovered anorexia and bulimia nervosa examining the treatment effects. Treatment consisted of 16 individual sessions with women who had not reached full recovery. The treatment protocol included CBT for body image with the addition of relaxation training and mirror exposure from sessions 3 to 16.

The main findings suggest that "body positive" is effective in reducing body dissatisfaction, ratings of depression and anxiety and also eating disorder features in four cases. However, there were confounding factors, as patients continued to attend individual therapy for other problems associated with their eating disorder. For that reason, there may have been other therapeutic factors that contributed to reported changes. The authors strongly recommended the incorporation of body image therapy once there is improvement in eating disorder symptoms and to complete the recovery process.

1.25 Summary of Chapter 1

On the basis of this review it is evident that there are only moderate outcomes in CBT treatment for bulimia nervosa. There are emerging findings for the efficacy for CBT with EDNOS (Fairburn *et al.,* 2009). There is strong evidence to suggest that body image disturbance and the over-evaluation of shape/weight is predictive of relapse. There are a number of body image treatments in the literature that have promising findings for improving a range of body image dimensions.

Recommendations were made over 13 years ago for improved methodological designs in the evaluation of the body image component in eating disorder treatment. However, to the author's knowledge, these suggestions have not been addressed with an eating disordered sample. This therefore, strongly supports a pilot study evaluating the efficacy of a stand alone body image group with patients with bulimia nervosa and EDNOS.

1.26 Aims of Current Study

The current study aims to develop and evaluate a six week manualised body image treatment for patients with bulimia nervosa or EDNOS, targeting over-evaluation of shape/weight as manifested in body image attitudes, satisfaction and behaviours.
The study will also evaluate the effect on eating disorder symptomatology. A qualitative analysis will also be applied to further understand the effectiveness of a body image group.

1.27 Hypotheses

Principal Hypotheses

1. Participants who take part in the body image group will report improved body image investment at post treatment and compared to waiting list control.

2. Participants who take part in the body image group will report improved body image shape concerns at post treatment and compared to waiting list control

3. Participants who take part in the body image group will report lower levels of body image behaviours at post treatment and compared to waiting list control.

4. Participants who take part in the body image group will report lower body image checking cognitions at post treatment and compared to waiting list control.

Secondary Hypotheses

5. Participants who take part in the body image group will report lower eating disordered symptomatology at post treatment and compared to waiting list control.

6. Participants who complete the body image group will report reduced body image concerns post treatment when compared to qualitative responses at pre treatment.

7. Participants who complete the body image group will report more positive/adaptive body image thoughts post treatment when compared to qualitative responses at pre treatment.

8. Participants who complete the body image group will report reduced body image behaviours post treatment when compared to qualitative responses at pre treatment.

CHAPTER 2: METHODOLOGY

Overview

The study investigated the effectiveness of a six week body image group designed specifically for people with bulimia nervosa or eating disorder not otherwise specified (EDNOS).

2:1 Design

The study employed a repeated measures controlled design. This allowed quantitative comparisons on measures of body image attitudes, dissatisfaction, behaviours, checking cognitions and eating disorder psychopathology between the study group and a waiting list control group at two time points.

A qualitative questionnaire was given to the body image treatment group to compare qualitative comments regarding body image concerns, thoughts and behaviours pre and post treatment. Participants were also asked to give their views on usefulness of treatment sessions and group treatment overall.

2.2 Participants

The sample comprised two seperate groups of people diagnosed with either bulimia nervosa or EDNOS. At the outset, the study chose to exclude those with an anorexic condition as the primary aim of treatment for those with anorexia nervosa is to change dietary behaviour in order to increase weight. As the current study focused only on body image, it was therefore not ethically viable to include an anorexic sample. Furthermore, in out-patient settings, such as the context for the current study, the most common eating disorder is EDNOS (Fairburn *et al.*, 2009) and there have previously been no treatment studies with this group until the outcome study reported by Fairburn *et al.*, (2009). Therefore this category of eating disorder requires further consideration in eating disorder research and this sample was included within the current study in order to improve generalisation of the findings in an out-patient setting.

2.2.1 Background Characteristics of the Sample

A total of 12 participants were included in the body image group. This sample was further categorised as completers (attended a minimum of 5 sessions) and non-completers (dropped out of group or attended less than five body image group sessions). Eleven participants spoke English as a first language and the other participant spoke fluent English as a second language.

Table 2 describes the eating disorder diagnosis, mean age, gender, weight and BMI for the completer (n=5), non-completers (n=7) and control group sample (n=17). Table 3 includes the mean duration of eating disorder in years and if the participant had previously received treatment for their eating disorder. Further information was collected regarding the percentage of participants who had a psychiatric history and co-morbid mental health problems. Eighty percent of the completer sample had a psychiatric history, whereas reports in the psychiatric case notes for the control group, indicated 29 percent. The majority of co-morbid mental health problems were diagnosed as depression, anxiety, self harm, OCD, which either existed exclusively in combination.

Table 2: Mean age, percentage eating disorder diagnoses & gender, weight and BMI in the samples of participants considered for statistical analyses.

Sample	Total Number	Eating Disorder Diagnosis	Mean age (18-64)	Gender	Weight (kg)	BMI
Treatment: ***Completer***	5	BN – 100%	30.2	5 female	60	22.4
Treatment: ***Non-completers***	7	BN – 43% EDNOS – 57%	28.6	6 female 1 male	73	25.5
Control	17	BN – 71% EDNOS – 29%	26.4	16 female 1 male	64	22.2

Table 3: **Eating Disorder and Psychiatric History in participants**

Sample	Mean years of ED (SD)	MEAN no- previous treatment for ED (SD)	Psychiatric History (%)	Co-morbid mental health problem (%)
Treatment: ***Completer***	12.8 (7.8)	3.4 (2.3)	80	80
Treatment: ***Non-completers***	10.9 (5.4)	2.3 (2.0)	43	57
Control	8.5 (6.2)	1.7 (1.3)	29	42

A week following the end of Group one, the researcher was informed that one participant had died. This person had not attended two sessions during the group trial, including the final session. Understandably, no outcome measures are available for this person.

2.3 Context for Current Study

The participants were all waiting for routine treatment at an adult outpatient eating disorder service. It provides both individual and group treatment for a range of eating disorders with cognitive analytic therapy and cognitive behavioural therapy.

In 2008, the service received 380 new referrals. In 2009, the centre monitored percentage of diagnostic group referrals on a monthly basis. A review of the referrals received from January to May, indicated that a total of 114 referrals had been received, with 43 (38%) patients diagnosed with bulimia nervosa, with a mean of 8.6 referrals per month. From January 2009, new referrals were automatically allocated to a treatment type: urgent, individual or group treatment. For the individual waiting list, the waiting time is 18 months. For group treatment, patients start treatment within 4 months.

2.4 Inclusion and Exclusion Criteria

2.4.1 *Inclusion Criteria*

The lower age limit for participants for both groups was set at 18 years and the upper age limit was 65 years.

All participants were required to:

- Meet diagnostic criteria for bulimia nervosa or eating disorder not otherwise specified (EDNOS) according to DSM-IV TR criteria (APA, 2000) (Appendix 1).
- Waiting for routine psychological treatment
- Body Mass Index between 18 - 35.
- Baseline investigations did not indicate abnormalities in biochemistry and full blood count.

2.4.2 *Exclusion criteria*

Participants were excluded from the study if they had any of the following criteria:

- Meet the diagnostic criteria for anorexia nervosa and a body mass index below 17.9. There is a limited evidence base for treatment of this type of eating disorder. However, the initial focus of routine treatment is to regularly weigh and encourage weight gain and this approach is not within the remit of the current study.
- Physical investigations indicated abnormalities in biochemistry and full blood count. Participants would need to be under medical care and their ability to attend and engage in group treatment may be limited.
- High psychiatric risk through suicide ideation and high frequency of deliberate self harm
- Soon be receiving routine treatment
- Waiting for treatment for Dialectic Behaviour Therapy
- Underlying issues for eating disorder did not relate to body image problems
- Judged to have potential difficulty participating in a group setting, specifically is suffering from a psychotic episode, a personality disorder or co-morbid substance misuse.

2.5 Procedure

2.5.1 Recruitment Process

Patients identified as meeting the inclusion criteria from referral letters and psychiatric case notes were sent an information pack through the post by the researcher. Each information pack contained an invitation letter (Appendix 2), information booklet (Appendix 4) and consent form (Appendix 6). Participants were asked to return the consent form in a stamped addressed return envelope provided.

Extensive efforts were made to recruit participants from September 2008 to June 2009. At the start of the study, the service gave permission for the author to contact any patient meeting the inclusion criteria. In January 2009, the service made changes to the management and treatment of new referrals and this had implications for the

number of potential participants who could be contacted. For a detailed account of the recruitment processes for group 1, 2 and 3, please refer to Appendix 8.

2.5.2 Summary of Recruitment for Group Treatment

The recruitment process from September 2008 to June 2009 contacted a total of 125 potential participants.

During this time, 24 participants consented to the body image group (overall response rate, 19%). 17 (71% of total consents) were fully assessed using a structured clinical interview and body image questionnaire pack. Four (17%) participants were offered at least 2 appointments and failed to attend. Seven (29%) participants consented were found at either interview or through telephone contact to meet exclusion criteria or were unable to attend the group sessions.

Following screening appointments, 13 participants met the inclusion criteria and the final informed consent was given to participate in the body image group (10% commit to group rate). The study intended to conduct a third group, but found that only one participant was able to attend this group out of four consents. Therefore on 8th June, a decision to cease recruitment and conduct of further groups was made and this resulted in an overall commit to group of 12 participants.

2.5.3 Recruitment Process for Waiting List Control Group

Following a low response rate for the group treatment, the original method to employ a randomised control design by allocating half of the participants to a treatment group and half to a waiting list control group, with the option of attending the next group, was not viable. Therefore a second part of the study was created which involved completing the questionnaire pack on two occasions by patients on the waiting list. An amendment to the original ethics application was submitted to Lothian Ethics Committee on 24th November 2008 and approval was granted on 12th January 2009 for this methodology (Appendix 24 & 25).

The patients on the waiting list who had not responded regarding the group treatment were selected as potential participants in addition to referrals added to the routine group waiting list. Therefore participants previously contacted regarding the body image group, where re-contacted with an invitation to take part in the waiting list control group and complete the questionnaire pack. A total of 61 patients met the inclusion criteria and were sent an invitation pack for the questionnaire study between February and May 2009. Twenty three consent forms (38% response rate) were returned and questionnaire packs were sent immediately and then 6 weeks following completion of the first questionnaire. Twenty three participants completed and returned the questionnaire pack at time one. At time two, 17 participants completed and returned the questionnaire pack resulting in a 28% completer rate for the waiting list control group.

2.5.4 Group Assessment Procedure

Participants were invited to attend a 60 minute appointment with the principal researcher. As part of the recruitment process, potential participants had received an information sheet (Appendix 4) and this also served as providing sufficient time to read the material and to generate questions that could be discussed at the meeting.

The meeting assessed current eating disorder behaviour and mood to ascertain level of medical and psychiatric risk as well as motivation for attending the group. Cooper, Cooper and Fairburn (1989) highlighted the importance of an interview assessment to enable the researcher to clarify the difficulties with definition and individual perception inherent in some core features of eating disorders.

Participants who attended a routine assessment interview were given a verbal explanation regarding the aims of the study, assessment process, details of the body image group and level of participation required. This gave an opportunity to opt-out if they perceived the group requirements to be too high. It was also stressed to participants that they may feel worse at the beginning of the study due to disclosing their difficulties in a group setting and also the intense focus on their body image.
A diagrammatic representation of the sequence leading to participants consenting to the study is presented in figure 4.

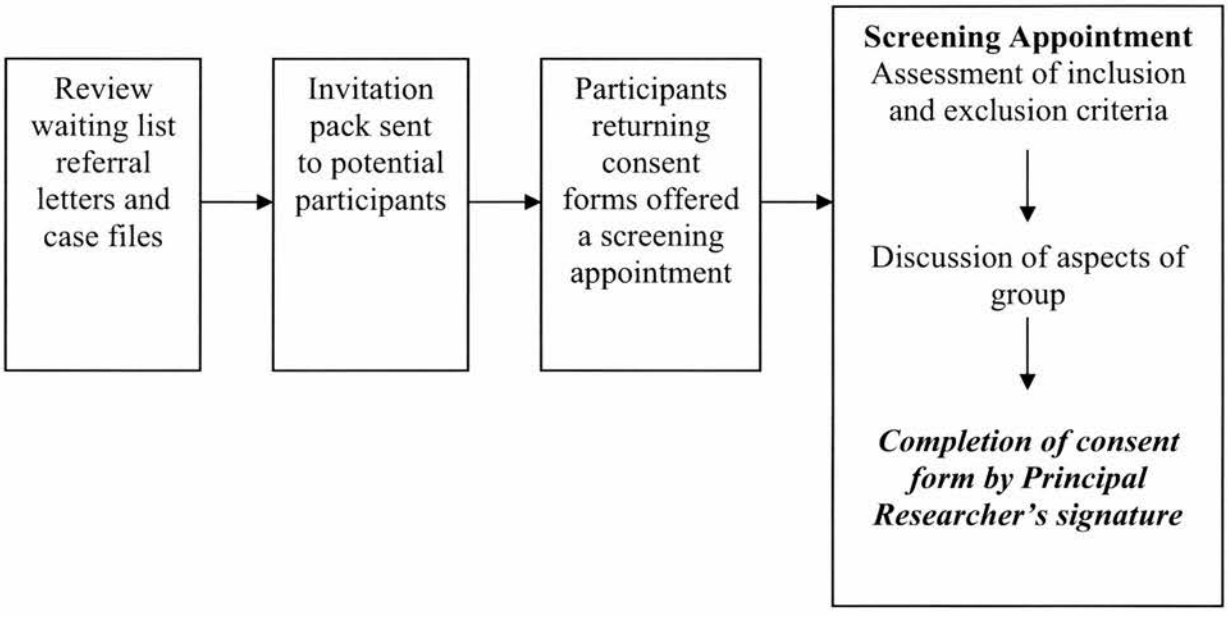

Figure 4: Sequence of events leading to participants giving consent to participate

The second stage involved a clinical interview that completed the participant general information sheet (Appendix 9) in order to explore inclusion and exclusion criteria. Participants were also taken to a treatment room where height and weight were recorded to calculate the current body mass index (BMI= weight [kg]/height [m^2]). Participants completed the Beck Depression Inventory-II (Beck, Steer and Brown 1996) within the session to ascertain level of depressive symptomatology and evidence of suicidal thoughts or ideation. For those participants with a frequent rate

of vomiting or laxative abuse, to attend their GP surgery for relevant blood tests to be conducted as per routine waiting list practice.

Once inclusion criteria had been clarified, the author read through the consent form with the potential participant to check that full informed consent was given.
Participants completed the body image questionnaire pack (Appendix 15-21) in the waiting room. Instructions for the questionnaires were included at the beginning of each questionnaire. Participants were also aware that they could approach the principal researcher in the clinic room if they had any questions or needed assistance. Once completed participants returned the questionnaire pack directly to the principal researcher. Immediately following the group, participants were asked to complete a questionnaire pack and a group feedback form. All members completed the questionnaires in the clinic setting.
At the assessment, suitable participants were given a provisional date for the start of the group. Once the recruitment phase had been completed, participants were sent an advance notice letter giving information regarding the start dates for the group and subsequent sessions (Appendix 10).
Following attendance at the first group session, a letter (Appendix 11) was sent to each participant's General Practitioner informing them that their patient was participating in the study. They were asked to contact the researcher directly if there were any concerns from blood tests conducted during the time period that the participant was attending the group sessions. If any participant was suffering from significant physical side effects due to their eating disorder, this would have excluded them from participating in the group. A copy of this letter was also inserted into the psychiatric case notes. Prior to the participant starting the study, the principal researcher contacted the GP surgery regarding the outcome of the blood test results. No participants were found to have any significant biochemical abnormalities during this study.

2.5.5 Procedure for Waiting List Control Group

Patients continuing to wait for routine treatment who had not responded to the group treatment study invitation were sent an information pack for the questionnaire study. The information pack included an invitation letter (Appendix 3), information booklet (Appendix 5) and a consent form (Appendix 7). Participants consenting to the questionnaire study were asked to complete the consent form and return this within the stamped addressed return envelope.

Upon receipt of consent, participants were sent a questionnaire pack. This included a letter explaining the process of completing the questionnaires at two time points and that the participant would receive a summary of their scores once they had completed the questionnaire at two time points. The body image questionnaire pack (Appendix 15-21) and a stamped addressed return envelope was included. Following completion of the questionnaires at two time points, a summary of scores was sent via post to each participant.

2.6 Body Image Group

2.6.1 Practical Aspects

The group sessions were held in a large meeting room at an NHS out-patient facility and lasted two hours.

2.6.2 Course Design

The body image group was specifically designed by the principal researcher. In an attempt to specify treatment purity, a six week body image group manual (Appendix 13) was developed according to current treatment guidelines and published body image treatment descriptions.

In the design of this manual, the author considered the Quality Improvement Scotland guidelines (NHS QIS 2006) for Eating Disorders who recommended that Cognitive Behavioural Therapy for Bulimia Nervosa (CBT-BN) is the strongest evidence based treatment.

The cognitive behavioural approach incorporated aspects from a number of treatments for negative body image. This included Waller *et al.*, (2007), Fairburn (2008), Cash (1997), Bell & Rushforth (2008) and Paxton *et al.*, (2007). The manual specified guidelines for the content, procedure and how the therapists should behave within the clinical sessions. Advice was also given directly by Glenn Waller through telephone communication concerning the specific content of the manual.

Chambless and Ollendick (2001) proposed that better manuals are richly elaborated with examples of dialogue illustrating application of the procedures and with descriptions of courses of action to take when problems arise in treatment. They also highlight the importance of having a treatment manual otherwise the treatment is meaningless if it cannot be defined.

At the end of each session, participants' practised mindfulness exercises which aimed to develop a sense of present moment awareness and non-judgmental description. The exercises were summarised in a handout written by Dr Charlotte Proctor, Clinical Psychologist. Each patient received a copy of the mindfulness handout and a CD with mindfulness body scan exercise lasting for 30 minutes (Appendix 14). The CD was produced by Neil Rothwell, Clinical Psychologist, NHS Lothian with a special interest in mindfulness.

2.6.3 Course Delivery

Margison and McGrath (1989) state that a good design requires trained therapists to maintain treatment consistency. In the current study, two therapists delivered the group treatment for group one. In the second group, there was an additional research assistant who largely had an observational role. The first therapist was the principal researcher for the study and had three years experience of working in adult eating disorders as a Specialist Psychological Practitioner. This experience amounted to working with patients using CBT and CAT treatments to address their eating disorder and body image concerns on both an individual and group basis. The principal researcher had also attended a range of continuing professional development courses, in particular, training in cognitive behavioural therapy-enhanced for eating disorders with Professor Chris Fairburn, University of Oxford.

The second therapist was an Assistant Psychologist with two years experience working with adult patients with severe anorexia nervosa. During the study period, she was also completing registered training in cognitive behaviour therapy within general adult mental health.
The Research Assistant who attended the sessions for the second body image group was a qualified Clinical Psychologist in Portugal and assisted the current study under the premise of gaining further clinical and research experience in the UK.

The principal therapist/researcher of the current study was under the clinical supervision of a Consultant Clinical Psychologist who monitored adherence to the treatment manual through regular supervision sessions. The therapists adopted an attitude of body image acceptance as opposed to satisfaction, with emphasis on non-judgmental and compassionate approaches (Bell and Rushforth, 2008). The therapists also encouraged participants to regularly complete homework and therapeutic activities. Furthermore, the approach attempted to be containing and secure when participants were emotionally distressed through therapeutic discussions.

When considering the length of the group, this was influenced by a number of factors such as current length of routine group treatment, potential number of groups and possible attrition rates. Therefore a decision was made to conduct the group for 6 weeks which gave sufficient time to focus each week on one new area of treatment with a summary at the final session.

2.6.4 Group Sessions – General Structure

The group sessions followed the same general structure, as detailed below.

a. Homework feedback through discussion

b. Group level reflection on homework

c. Therapist led discussion of body image topic and therapeutic area

d. Participants reflection on this topic area and practice of therapeutic activities in group discussion

e. Explanation of homework for forthcoming week

f. Mindfulness practice exercise for 15 minutes

Session one differed slightly in that a number of tasks were carried out in order to set the scene for the group. These included introduction to the aims and overview of body image group, introductions among participants and group therapists, participants separating into pairs to discuss their hopes and fears for attending the group. The group rules and confidentiality were discussed with participants. The remainder of the first session followed the same general structure as other sections, apart from homework review.

Sessions 2-6 followed the above structure. The rationale behind each element of the weekly group sessions is detailed in Appendix 12. Although certain elements remained consistent each week, including homework review, discussion of future homework (elements a, b & e), the specific nature of the remaining elements (c, d, & f) changed. Therefore, a different body image topic was discussed each week, with a different therapeutic discussion and the mindfulness activity varied. A brief outline of the weekly specific elements of the course is presented in Table 4. A more detailed description of the content of each session is present within the course manual and session handouts (Appendix 14).

Table 4: Outline of Weekly-Specific: Body image topic, homework and mindfulness practice

Week	Body Image Topic	Homework Exercise	Mindfulness Practice
1	Understanding development of negative body image	"This is my life" Mindfulness Practice	Awareness of breath
2	Maintenance of negative body image	Body image diary Motivational enhancement exercises Mindfulness Practice	Awareness of breath
3	Psychoeducation for understanding body physiology and challenging societal and media messages	Reading handouts Challenges to societal messages Body image enhancements exercises Mindfulness practice	Full body scan
4	Changing negative body image behaviours Mirror exposure	Overcoming body image checking and avoidance Mirror work practice	Mindfulness with senses
5	Self evaluation pie chart Changing negative body image thoughts and beliefs Mirror exposure	Ideal self evaluation pie chart Write an advert for yourself (non-appearance) Challenging negative body image thoughts Behavioural experiments Mirror work practice	Mindfulness with thoughts and feelings
6	Summary and recap on topic areas with extra time spent on participant's choice	Continue with challenging thoughts and changing behaviours "How I help myself now"	Body Scan

2.7 Measures

Copies of the body image measures and EDE-Q are included in the Appendix section (Appendix 15, 17, 18, 19, 20, 21). The scoring instructions for each measure are also included (Appendix 16 and 23).

In the selection of body image outcome measures used in this study, attention was paid to the suggestions made by Thomson (2004). Therefore multiple measures of body image were chosen in order to assess the efficacy of the body image group across a range of body image constructs. It was also important that the measures had been applied in previous studies with an eating disordered population and shown to be reliable and valid in order to increase the generalisability of the findings and utility in clinical practice.

Therefore the measures used in the current study were five standardised measures of body image investment, weight/shape concerns, behaviours and checking cognitions. A further measure of eating disorder psychopathology was used. A measure of depressive symptoms was also completed by group participants to help measure the level of psychiatric risk.

A qualitative feedback form was also designed specifically for this study to provide pre and post information regarding levels of body image concern, in addition to rating each session attended and reflections on group treatment.

2.7.1 Participant Data Sheet

A general information sheet was designed to gather information regarding participants in the treatment group. This recorded information regarding current eating disorder behaviour, psychiatric diagnoses, BMI, current medications, physical health problems, blood test history, previous treatment for an eating disorder and or another psychiatric condition, as well as evidence of suicide risk.

2.7.2 The Beck Depression Inventory-II (Beck, Steer and Brown, 1996)

Description of the Scale

This scale was completed by treatment group participants to identify level of depressive symptoms and risk of suicide at the screening assessment and was not used in the data analysis. Personal correspondence with Professor Chris Fairburn in

December 2007 indicated that including the BDI-II to evaluate this trial would add little meaning, given that the majority of patients with eating disorders score highly due to both depressive symptoms and consequences of eating disorder behaviour.

The BDI-11 is a 21-item self-report instrument intended to assess the existence and severity of symptoms of depression in both a clinical and normal population. Each of the 21 items is arranged with a choice of 4 statements in increasing order of severity about a particular symptom of depression. Each item is rated on a 4-point scale ranging from 0 to 3. The maximum score is 63. According to the manual, scores falling within the range of 0-13 should be classified as "minimal depression", 14 to 19 as "mild depression", 20-28 as "moderate depression" and 29-63 as "severe depression". The scale includes items which update the older version (BDI, Beck *et al.,* 1961) to the current diagnostic criteria of DSM-IV-TR (APA, 2000). The older version was based on the past 7 days, however, in line with DSM-IV-TR, the time frame for the BDI-II has been increased to the past 2 weeks.

Psychometric Properties of the BDI-II

According to the authors of the BDI-II, this version shows improved clinical sensitivity with a reliability of the BDI-II being higher than the BDI (Coefficient Alpha = 0.92 for BDI-II and 0.86 for BDI; Beck, Steer & Brown, 1996).

2.7.3 Eating Disorder Examination – self report version (EDE-Q) Fairburn and Belgin, (1994)

Description of the Scale

This is a 36 item measure derived from the EDE interview (Fairburn & O'Connor, 2008) and focuses on the past 28 days. Items addressing eating disorder attitudes are scored using a 7 point, forced choice rating scheme.

The questionnaire produces two types of data: frequency of key behavioural features of eating disorders and subscales scores that indicate the severity of the psychopathology. The second data type indicates the number of days of which certain behaviours have occurred, that is the level of binge eating and vomiting behaviour.

The subscales are Restraint (5 items; e.g. Item 1: 'Have you been deliberately trying to limit the amount of food you eat to influence your shape or weight"). Eating Concern (5 items; e.g. Item 9: 'Have you had a definite fear of losing control over eating?"). Shape Concern (8 items; e.g. Item 23: 'Over the past 28 days, has your shape influenced how you think about yourself as a person?'), and Weight Concern (5 items; e.g. Item 25: 'Over the past 28 days, how dissatisfied have you been with your weight?'). The EDE provides a global score and subscale scores. To obtain a global score the four subscales are summed and the resulting total is divided by the number of subscales (i.e. four). Subscale scores are reported as means and standard deviations. Scores within the clinically significant range are above the community norm.

Psychometric Properties of the EDE

The EDE-Q has good concurrent validity and acceptable criterion validity in an eating disorders sample (Mond, Hay, Rodgers, Owen & Beumont, 2004). Luce & Crowther (1999) demonstrated excellent internal consistency and 2 week test-retest reliability (>.81-.94) with a student population.

2.7.4 The Appearance Schema Inventory (ASI-R) Cash, Melnyk, & Hrabosky (2004)

Description of the Scale

This is a 20 item measure that measures investment in appearance. It consists of two subscales: self evaluative salience and motivational salience. This measures the definition of self worth through appearance evaluation and the extent to which a person engages in appearance management behaviours e.g. "when it comes to physical appearance, I have high standards". Respondents are asked to rate their beliefs on a scale of 1-5 (strongly disagree to strongly agree). A composite score for the ASI-R is the mean of 20 items.

Psychometric Properties of the ASI-R

The revised version has been tested using Cronbach's alpha split half reliability testing. This indicated a scale reliability of high internal consistency (>.88) for composite score. For the self evaluation subscale, relia bility was .82 for women and

.84 for men. On the motivational salience subscale, reliability was .90 for women and .91 for men. Convergent validity was demonstrated within a college population.

2.7.5 Body Shape Questionnaire (BSQ) Cooper, Taylor, Cooper & Fairburn (1987)

Description of the Scale

This is a 34 item self report measure of body dissatisfaction and preoccupation (e.g. "have you felt so bad about your shape that you have cried"). It consists of items rated on a frequency scale of one "never" to "six" and yields a total score from 34 to 204. The clinical cut-off is above 100 and it is used to provide a measure of the extent of psychopathology.

Psychometric Properties of the BSQ

Cooper *et al.*, (1987) have demonstrated good concurrent validity (.66) and discriminate validity ($t=7.62$, $p<.000$) with a bulimic sample in comparison to community samples. Further validation studies conducted by Rosen *et al.*, (1996) with samples that excluded patients with anorexia nervosa and bulimia nervosa have demonstrated acceptable concurrent validity and test-retest reliability over a three week period (.88).

2.7.6 Body Checking Questionnaire (BCQ) Reas, Whisenhurt, Netemeyer, & Williamson (2002)

Description of the Scale

This is a 23 item inventory that assesses body checking behaviours within three subscales: overall appearance, specific body parts and idiosyncratic checking. Questions such as "I check to see if my thighs spread when sitting down & I try to elicit comments from others about how fat I am". Respondents answer on a 1-5 Likert scale from never to very often. Total scores for each subscale are computed and the total score can be compared against the validity studies which give means for a range of eating disorder presentations. The clinical cut off is 82.

Psychometric Properties of the BCQ

It has shown good test-retest reliability for two weeks (.94), internal consistency reliability estimates were reported between .83 and .92 for subscales. Concurrent validity was supported with an eating disordered population with other measures (Reas *et al.*, 2002).

2.7.7 Body Checking Cognitions Scale (BCCS) Mountford, Haase, & Waller (2006)

Description of the Scale

The BCCS is a novel 21 item measure that indicated four types of checking cognition: objective verification, reassurance, safety beliefs and body control rated on a 5 point Likert scale from never to very often. The object verification category refers to a belief that body checking will assist in accurately knowing one's weight or shape (e.g. "I have to body check to see where my weight is going"). The second subscale, Reassurance, consists of beliefs that body checking will provide reassurance about one's body (e.g. "Body checking makes me feel better"). The scale safety beliefs refer to beliefs about consequences if one does not engage in body checking (e.g. "I think body checking will tell me how I feel"). The final subscale is body control which relates to beliefs that body checking helps control dietary intake and weight gain (e.g. "If I stop body checking my weight will short up"). The scores for each subscale of the BCCS are added and divide by item number to derive mean score. All scales are positively scored, with high scores indicating more disordered cognitions regarding body checking. Clinical cut offs are provided for clinical and non-clinical samples.

Psychometric Properties of the BCCS

It has demonstrated good levels of interval consistency on Chronbach's alpha (>0.80-.86) and validity in both an eating disordered and non-clinical sample (Mountford, Hasse & Waller, 2006).

2.7.8 Body Image Avoidance Questionnaire (BIAQ) Rosen, Srebnik, Saltzberg, & Wendt (1991)

Description of the Scale

This is a 19 item inventory that assesses body image avoidance behaviours on a 6 point frequency scale from never to always (e.g. "I wear baggy clothes". It has four subscales: clothing, social activities, restraint and grooming and weighing. These items are totalled and a score of 40 and above indicates a clinical level of body image avoidance.

Psychometric Properties of the BIAQ

It has demonstrated good internal consistency of Chronbach's alpha of .89 and test-retest reliability was established at .87 over a two week period with a bulimic and non clinical sample (Rosen *et al.,* 1991).

2.7.9 Group Feedback Form

A qualitative feedback form (Appendix 22) included 4 sections examining participants' body image before and after attending the group in addition to rating each session and expressing their opinions on group treatment using open response items.

The first section asked participants to describe the following: body image concerns; factors contributing to the development of negative body image; triggers, negative thoughts and behaviours related to negative body image.

The second section focused on participants' ratings of each session attended. They were asked to rate the content of each session on a 4 point-Likert scale; excellent, good, average and poor. They then rated how helpful the session was on a 4 point-Likert scale; very helpful, helpful, not so helpful, and not so helpful. The following parts asked participants to describe in their own words what they had found the most useful, if any parts were unhelpful, experience of homework activities and worksheets and finally how the session could have been improved or if they would like more information or time to discuss certain topics.

The third section asked participants their opinions on group treatment; thoughts and feelings regarding group treatment; what was most helpful and least helpful about

being in a group; did they feel that group therapists gave sufficient time to talk and allow them to think about their problems in the context of each session.

The fourth and final section examined participants' thoughts, feelings and behaviours related to body image at the end of treatment as well as what strategies they had found the most and least helpful; what they had learnt about themselves during the body image group; any identified further treatment goals and asked to report the strategies that they will continue to use. Participants' descriptions and data were analysed using content analysis.

2.8 Ethical Issues

2.8.1 Potential Distress to Participants

It was considered that some individuals might express interest in the study who did not meet the criteria for inclusion. In these three cases, a discussion took place with the individual and alternative sources of support were given.

It was appreciated that the body image group may trigger distress and therefore the group therapists continually monitored the well being of participants as the sessions progressed, to ensure that support and advice were offered if needed.

Participants were made aware in the information booklet and at the assessment, that if there was a suspicion of risk to mental or physical safety then the researcher would be professionally obliged to report this to the GP or relevant health professional.

The group therapists were also observant for possible distress at the end of the group sessions for those participants who would be continuing to wait for treatment. They were therefore advised to continue using the materials used throughout the group treatment. It was also recommended that if they needed additional support to contact their GP in the first instance.

It was possible that participants in the waiting list control group may have been distressed by completing the questionnaires. They were given the contact details for the researcher to discuss any particular issues. Attempts were made in the written feedback of summary scores to highlight to patients where they may modify their behaviour to ease any potential distress.

2.8.2 Informed Consent

Informed consent was obtained from all participants and at the screening assessment. Careful consideration was made to give participants full written and verbal details regarding the purpose and content of the group treatment so that potential participants could make fully-informed decisions regarding participation. They were also made aware that they could withdraw from the study at any time and this would not affect their future routine treatment.

2.8.3 Confidentiality

The confidential nature of all information collected as part of the study was emphasised to participants on the information booklet (Appendix 4 & 5) and during the screening appointment.

A series of measures was taken to offer the highest standards of confidentiality. Each participant was assigned a number for identification. All questionnaire data were then anonymised, transferred to and stored on a password protected NHS computer. Returned questionnaires were stored safely in an NHS locked filing cabinet. Individual identification numbers assigned to each participant's anonymised data were the only link to their personal information. Personal information was stored in a locked filing cabinet in the principal researcher's office, on NHS premises. Only the researcher had access to the data. Data from the study will be stored in a locked cabinet on NHS premises for five years, in accordance with research governance guidelines, and subsequently destroyed.

The signed consent form was copied twice, one stored in the psychiatric file and the second was given to the participant at the beginning of the first session. The original was stored by the researcher in a locked filing cabinet. Participants were also given a written summary of the questionnaire scores at the beginning of the first session and posted a summary at the end of the group.

To ensure confidentiality during the group treatment, participants were given rules regarding group confidentiality at the beginning of the first session (Appendix 14) and requested to adhere to these rules. Participants were also asked to come to an agreement between themselves regarding contact outside the group. As with routine therapeutic group practice, participants are discouraged from becoming social

acquaintances who would converse about the group treatment in an unhelpful manner.

2.8.4 Ethical Approval

An application was made to Lothian Research Ethics Committee on 16th April 2008. The study was reviewed at two separate ethical review meetings, 14th May and 9th July, attended by the principal researcher. The ethics committee raised a number of issues at these meetings and within correspondence received. For information regarding the specific issues and replies from the principal researcher please refer to Appendix 24.

To summarise briefly, the key ethical issues that where risen by the ethics committee related to the word "treatment" to be omitted from the study title; randomised controlled methodology; conduct of blood tests by GP; concerns that the research group would change the efficacy of future CBT treatment or delay routine treatment. Finally the committee were concerned that the study may coerce participants into consenting under the impression that they would receive treatment quicker. All of these issues were accommodated apart from the initial proposed research methodology which remained.

Following this correspondence, ethical approval for the study was granted on 19th August 2008 by Lothian Research Ethics Committee 2 (Appendix 24). Subsequently, the study was registered with NHS Lothians' Research and Development Office and on 22nd August 2008 approval was granted for the study to proceed (Appendix 25).

A substantial amendment was submitted for consideration on 27th November 2008 relating to the waiting list control group and approval was given by Lothian Research Ethics Committee 2 and NHS Lothians' Research and Development Office on 12th January 2009 (Appendix 24 and 25).

2.9 Sample size

Sample size estimation depends on the strength of the effect that we are trying to detect (effect size) and the amount of statistical power that we want in order to be able to detect such effects (Field, 2009). An estimated effect size for the current study was 0.8, which is a large effect size in research.

Therefore a power analysis was conducted to determine how many participants would be required to detect a large effect in the data. According to Clark-Carter (1997), based on a significance level of 0.05 and a power of 0.8, the sample size required was 25 per group for a large effect size.

In practice of the above methodology, the author conducted a retrospective analysis of the number of potential participants to the current study. This considered the following factors; routine referral numbers during recruitment, 50% opt-in rates to routine treatment and response rates for committing to treatment for the current study of 10%. By considering these figures, the calculations would suggest that the study had the potential to contact approximately 150 potential participants who intended to attend routine treatment, this would have resulted in a commitment to body image group treatment of 15 participants. Therefore the intention to treat sample size of 12 is expected. In comparison to the response rate for the waiting list control group, the total number recruited is lower than anticipated. If the study targeted 150 people and expected a 30% response rate, as found in the current study, then it had the potential to recruit 45 participants to the control group. However, as the control group participants had previously been invited to attend the group, this may have affected their decision to choose to not participate and therefore this may have reduced participant numbers. Therefore the above retrospective analysis of potential participants, would suggest that the prospective power analysis, of 25 participants per group was unrealistic on reflection of the recruitment difficulties encountered during the current study, particularly for the body image group condition.

2.10 Analysis

2.10.1 Data Analysis

Data analysis was carried out using SPSS for Windows Vista (Version 15). This included independent sampled t-tests, paired samples t-tests and mixed 2x2 repeated Analysis of Variance (ANOVA) on 5 dependent variables to test each hypothesis. This method was chosen to compare the data at two different time points and group (body image treatment or wait list control).

The effect sizes for significant t test results were calculated based on Cohen's *d* (1988) suggestions for small (*d*=0.2), medium (*d*=0.5) and large (*d*=0.8). Therefore the reported effect sizes allow for future comparisons of the data (Clark-Carter, 2004). Effect sizes found from the ANOVA were reported as eta squared.

The written responses on the group feedback form were collated using content analysis (Krippendorf, 1980) and are reported in the Chapter 5, results, part B. Content Analysis was selected as the data can be examined qualitatively and then quantitative analysis can be conducted accordingly.

CHAPTER 3: RESULTS (PART A):

Characteristics of Sample & Principal Data Analysis

3.1 PROCESS OF STATISTICAL ANALYSIS

The data was analysed and reported according to the following phases:

1. Participants
2. Exploratory data analysis
3. Principal data analysis related to the main hypotheses in terms of the body image groups aims of (1) improving dimensions of body image and (2) improving eating disorder symptomatology. This included the following analyses:
    - *2X2 Mixed Repeated Measures ANOVA*
    - *Independent t-tests*
    - *Paired t-tests*
4. Effect size as a measure of improvement for significant findings

3.2 PARTICIPANTS

3.21 Intention to treat sample

The study aimed to report results on the basis of an "intention-to-treat" sample, which included those who entered the body image group, regardless of completing treatment (Chambless & Ollendick, 2001) in addition to presenting separate data for those who completed at least 5 sessions on the basis of means and standard deviations. Given that the completer group consisted of 5 participants, the validity of statistical analysis is limited and therefore the study will only complete data analysis on the intention to treat sample in comparison to control group.

3.22 Attrition Sample

In order to ascertain whether there was any bias within the drop out sample, comparisons were made between participants who completed treatment and those dropped out on eating disorder history and major demographic variables. No significant differences were found between the two groups and therefore, including the non-completers group did not appear to contain any bias for carrying out analysis on the intention to treat sample.

3.3 EXPLORATORY DATA ANALYSIS

3.3.1 Data Screening Prior to Principal Analyses

In order to investigate whether the results obtained in the current study met the assumptions of parametric analysis, screening tests were carried out examining distribution by calculating Z scores for skewness and kurtosis (Field, 2009) in addition to applying Levene statistic. This exploratory data analysis (Appendix 26) indicated that the data were normally distributed and met the criteria for homogeneity of variance on body image measures.

On initial examination of the data, it was evident that the control group had higher baseline scores when comparing to the intention to treat sample. However, a one way ANOVA was found no significant difference between the treatment and control group at baseline on the following body image measures, for either of the samples: BSQ: $F(1,27)=0.87$; n.s. $p= 0.39$; BCQ: $F(1,27)=2.59$; n.s. $p=0.12$; BIAQ: $F(1,27)=2.38$; n.s. $p=0.14$, BCCQ:$F(1,27)=4.96$; n.s. $p=0.23$. Therefore the two samples could be compared across time for the purpose of this experimental design.

However, a significant difference was found for ASI-R composite; $F(1,27)=4.96$; $p=0.03$. The mean for body image group was 3.97 and control group was 4.35. This indicates that the control group had higher levels of over-evaluation of body image at baseline. This therefore has implications when comparing statistical data analysis for the post treatment scores between the two samples.

The data for the EDE shape concern was found to be positively skewed and the EDE global index and weight concern subscales were found to violate homogeneity of variance, Levene statistic, $p=0.005$ and $p=0.003$ respectively. It is likely that heterogeneity remains solely in the weight concern subscale. For the remaining subscales that tested the secondary hypothesis: restrain and eating concern, homogeneity was met. Furthermore, there was no significant difference between the intention to treat sample and control group on any of the EDE subscales. Therefore the subscales for eating behaviour are considered valid for analysis of the secondary hypothesis.

3.4 PRINCIPAL DATA ANALYSIS

(1) Negative Body Image

Negative body image was measured by 5 primary outcome measures for both samples of participants. These include:

1. Appearance Schemas Inventory -Revised composite score (ASI-R)
2. Body Shape Questionnaire (BSQ)
3. Body Checking Questionnaire total score (BCQ)
4. Body Image Avoidance Questionnaire total score (BIAQ)
5. Body Checking Cognitions Scale total score (BCCS)

Results are described according to the above outcome measures. The figures are positively scored, with larger scores indicating higher body image disturbance. Furthermore, the clinical cut off scores for each measure is indicated by the horizontal line within the figure.

Table 5 presents means and standard deviations for the five body image outcome measures, in each of the two samples group (reported separately completers and non-completers) and control.

Table 5: Mean baseline and end of treatment scores for the body image outcome measures completed by intention to treat, completer and control group sample.

	Non- Completers (N=7) Mean (SD)	Completer (N=5) Mean (SD)	Control (N=17) Mean (SD)
BSQ			
Baseline	134.6 (54.5)	148.8 (46.0)	153 (33.0)
End of treatment	132.1 (52.5)	135.8 (44.8)	158.1 (30.4)
ASI-R Composite			
Baseline	4.0 (0.5)	3.8 (0.6)	4.4 (0.4)
End of treatment	3.6 (0.13)	3.6 (0.1)	4.2 (0.4)
BCQ			
Baseline	56.4 (19.7)	70.6 (22.3)	75.3 (21.6)
End of treatment	54.7 (20.4)	66 (21.7)	73.6 (20.3)
BIAQ			
Baseline	40.4 (21.2)	43.8 (13.9)	50.4 (12.0)
End of treatment	40.1 (21.5)	38.0 (9.3)	50.9 (11.9)
BCCS			
Baseline	2.5 (1.1)	3.6 (0.8)	3.4 (0.9)
End of treatment	2.4 (1.1)	2.7 (0.8)	3.5 (0.9)

3.4.1 Primary Hypotheses

The data were analysed using independent t-tests, paired t-tests and *2X2* mixed repeated measures ANOVA. The main analysis compared intention to treat with control group. The results are described according to the above outcome measures and relate to the research hypotheses as follows:

3.4.2 *Hypothesis 1: Participants who take part in the body image group will report improved body image investment at post treatment and compared to waiting list control.*

3.4.3 *Outcome Measure 1: ASI-R with Intention-to-Treat Sample*

The main effect was shown by a decrease on the ASI-R in the intention to treat sample (M= 3.8, SE= 0.12) compared to control (M= 4.2, SE= 0.09) at post treatment, $t(27)=2.565$, $p = .016$, $d = 0.96$.

On the ANOVA, the results showed no significant effects of time, with ASI-R scores reduced at post treatment for both samples, F(1, 27)= 3.614; $p=.07$; Eta squared=.12. There was no significant interaction between *Time x Group*, F(1, 27)=.000; $p=1.000$, Eta squared= .000.

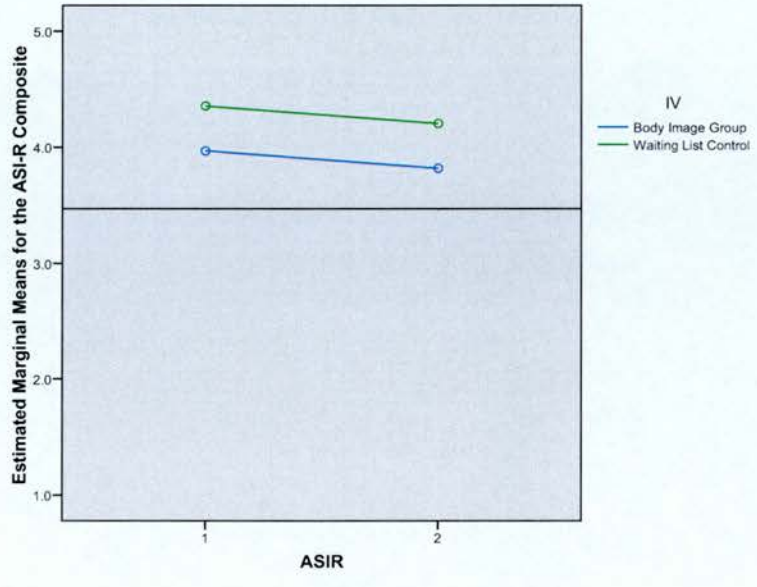

Figure 5: **Time of assessment (1=pre; 2=post) of ASI-R Composite across two groups of participants; intention to treat and control**

Further comparisons were made to baseline and outcome for the intention to treat sample, however no significant difference was found for intention to treat sample, pre (M=4.0, SE=.15) and post treatment (M=3.8, SE=. 12), $t(11)= 1.110$; $p=.2$,$d=.32$ on the ASI-R. For the control group, there was no significant difference, pre (M=4.3, SE=.10) and post treatment (M=4.2, SE=.09), $t(16)= 1.624$; $p=.124$, $d=.37$.

3.4.4 *Hypothesis 2: Participants who take part in the body image group will report improved body image shape/weight concerns at post treatment and compared to waiting list control.*

3.4.5 *Outcome Measure 2: BSQ with Intention-to-Treat Sample*

There was no significant difference on the BSQ between the intention to treat sample (M= 133.7, SE= 13.66) compared to control (M= 158.1, SE= 7.37) at post treatment, $t(27)=1.697$, $p =.10$. $d=.60$.

The ANOVA showed no significant effect of time; F(1, 27)= .491; $p=.490$; Eta squared=.018. There was a significant interaction between *Time x Group*, F(1, 27)=.9.425; $p=.005$, Eta squared=.259. Figure 6 shows the reduction of BSQ scores in the intention to treat sample at post treatment, whereas the control group scores on the BSQ increase.

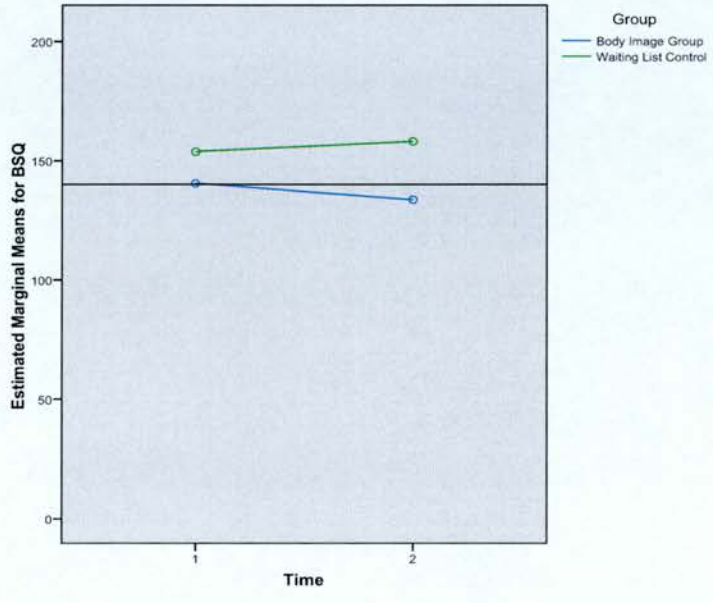

Figure 6: **Time of assessment (1=pre; 2=post) of BSQ across two groups of participants; intention to treat and control**

A paired t-test found a significant difference for body image group, pre (M=140.5, SE 14.27) and post treatment (M=133.7, SE 13.67), $t(11)= 2.284$; $p=.04$, $d= .57$ on the BSQ. There was no significant difference for the control group, pre (M=153.8, SE=8.01) and post treatment (M= 158.12, SE=7.4), $t(16)= .364$; $p=.74$, $d= -0.14$. The effect size and mean scores indicate that the control group had higher shape concerns at post treatment.

3.4.6 *Hypothesis 3: Participants who take part in the body image group will report lower levels of body image behaviours at post treatment and compared to waiting list control.*

3.4.7 *Outcome Measures 3: BCQ and BIAQ with Intention-to-Treat Sample*

Body image behaviours were measured by the BCQ and BIAQ, the results from each measure are reported independently prior to drawing conclusions on body image behaviours; checking and avoidance.

3.4.7.1 *BCQ*

There was no significant difference on the BCQ between the intention to treat sample (M= 59.5, SE= 5.99) compared to control (M= 73.6, SE= 4.91) at post treatment, $t(27)=1.826$, $p =.08$, $d=.69$.

On the ANOVA, the results showed no significant effects for either time F(1, 27)=1.488; $p=.233$, Eta squared=.052. There was no interaction between T*ime x Group* F(1, 27)=4.471; $p=.764$, Eta squared=.003.

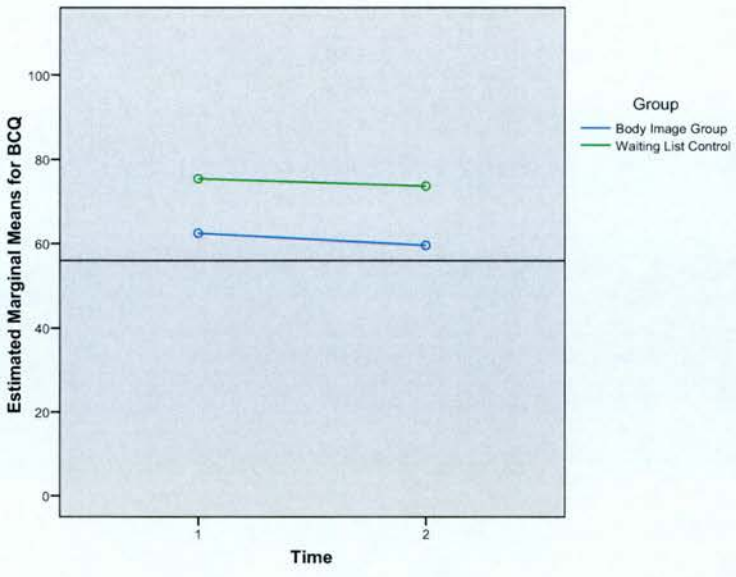

Figure 7: **Time of assessment (1=pre; 2=post) of BCQ across two groups of participants; intention to treat and control**

Further t-tests were undertaken to compare the BCQ pre and post treatment for the intention to treat sample. This indicated no significant difference between the time points, pre (M=62.9, SE 6.09) and post treatment (M=59.5, SE 6.0), $t(11)= 1.037$; $p=.32$, $d=.14$ on the BICQ. Furthermore, there was no significant difference for the control group, pre (M=75.3, SE=5.23) and post treatment (M=73.6, SE=4.9), $t(16)= .694$; $p=.50$, $d=.08$.

3.4.7.2 *BIAQ*

There was a significant difference on the BIAQ between the intention to treat sample (M= 39.3, SE= 4.87) compared to control (M= 50.9, SE= 2.88) at post treatment, $t(27)=2.187$, $p =.04$, $d=.80$.

On the ANOVA, the results showed no significant effects for either time F(1, 27)=1.205; $p=.282$, Eta squared=.043. There was no interaction between T*ime x Group* F(1, 27)=2.767; P=.108, Eta squared=.093.

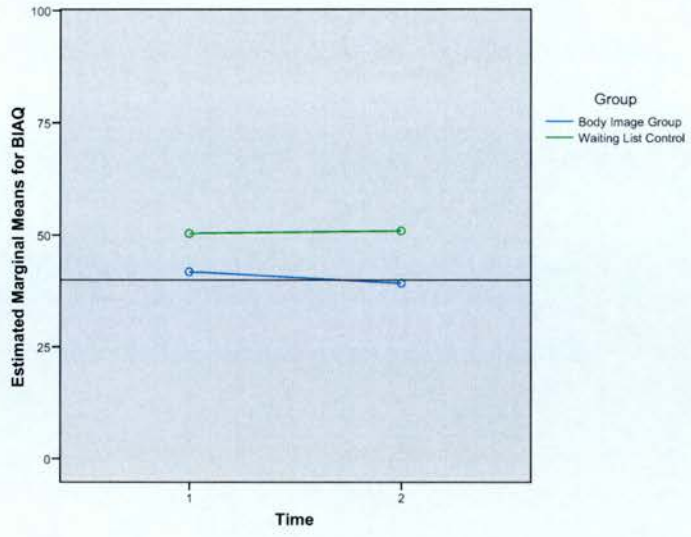

Figure 8: **Time of assessment (1=pre; 2=post) of BIAQ across two groups of participants; intention to treat and control**

Further t-tests were undertaken to compare the BIAQ pre and post treatment for the intention to treat sample. This indicated no significant difference between the time points, pre (M=41.8, SE=5.15) and post treatment (M=39.3, SE= 4.87), $t(11)= 1.673$; p=.12, d=.15 on the BIAQ. For the control group, there was no significant difference at pre (M=50.4, SE=2.90) and post treatment (M=50.9, SE), $t(16)=-.467$; $p=.12$, d=*-0.04.*

3.4.8 *Hypothesis 4: Participants who take part in the body image group will report lower body image checking cognitions at post treatment and compared to waiting list control.*

3.4.9 *Outcome Measure 4: BCCS with Intention-to-Treat Sample*

There was a significant difference on the BCCS between the intention to treat sample (M= 2.6, SE= .27) compared to control (M= 3.5, SE= .22) at post treatment, $t(27)=2.692$, $p = .012$, $d=1.01$.

On the ANOVA, the results showed no significant effects on the BCCS for either time or group, F(1, 27)=1.607; p=.216, Eta squared=.056. There was a near significant interaction between *Time x Group* F(1, 27)=3.706; p=.065, Eta squared=.12. Figure 9 shows that the scores on the BCCS decrease over time for the body image group, whereas the control scores slightly increase at time 2.

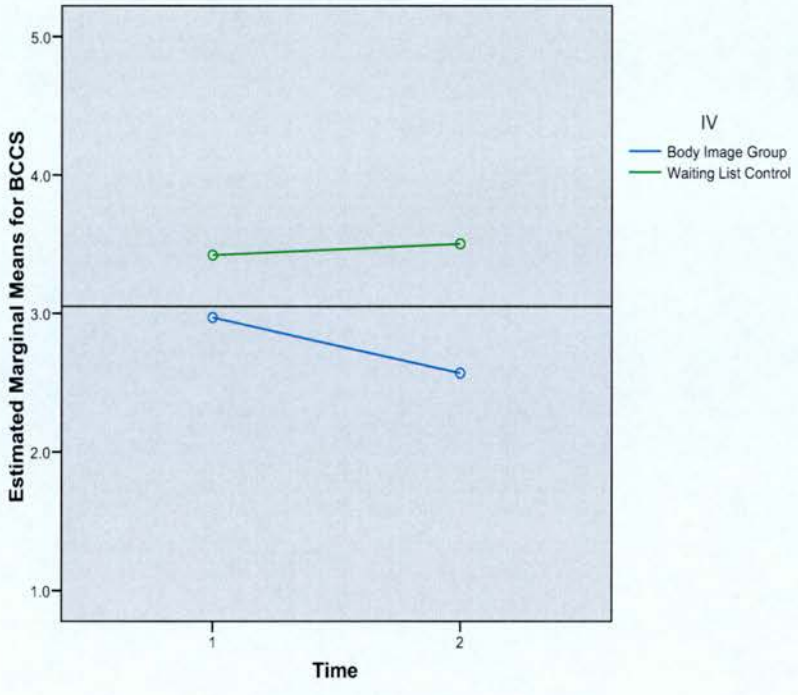

Figure 9: Time of assessment (1=pre; 2=post) of BCCS across two groups of participants; intention to treat and control

Further t-tests were undertaken to compare the BCCS pre and post treatment for the intention to treat sample. This indicated a significant difference between the time points, pre (M=2.97, SE .31) and post treatment (M=2.57, SE .27), $t(11)= 2.345$;

p=.04, *d*= .40 on the BCCS. For the control group, there was no significant difference at pre (M=3.42, SE=.21) and post treatment (M=3.5, SE=.22), *t*(16)= -.478; *p*=.64, *d*= -0.09.

Following these significant results, further analysis using independent and paired t-tests, in addition to 2x2 mixed repeated measures ANOVA were conducted on the subscales.

3.4.9.1 BCCS – Object Verification (OV)

There was a significant difference on the BCCS- object verification between the intention to treat sample (M= 2.9, SE= .28) compared to control (M= 3.7, SE= .22) at post treatment, *t*(27)=2.436, *p =.022*, *d*=.91.

On the ANOVA, the results showed a near significant effect on the BCCS-object verification for time F(1,27)=3.552; *p*=.07, Eta squared=.12. There was no significant interaction between T*ime x Group* F(1, 27)=.056; *p*=.81, Eta squared=.002.

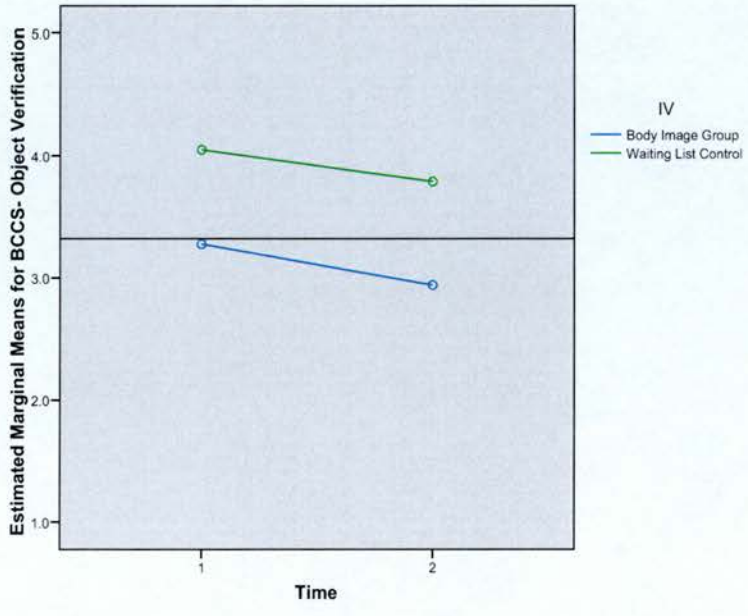

Figure 10: Time of assessment (1=pre; 2=post) of BCCS- Object verification across two groups of participants; intention to treat and control

Further t-tests were undertaken to compare the BCCS-object verification, pre and post treatment for the intention to treat sample. This indicated a non-significant difference between the time points, pre (M=3.28, SE .33) and post treatment (M=2.94, SE .28), $t(11)= 1.769$; $p=.11$, $d= .32$. There was no significant difference for the control group at pre (M=4.05, SE=.30) and post treatment (M=3.79, SE=.22), $t(16)=1.138$; $p=.272$, $d=.24$.

3.4.9.2 BCCS – Reassurance (R)

On the BCCS- reassurance subscale there was no significant difference between the intention to treat sample (M= 2.4, SE= .28) compared to control (M= 3.2, SE= .30) at post treatment, $t(27)=1.769$, $p =.09$, $d=.68$.

On the ANOVA, the results showed a non significant effect on the BCCS-reassurance for time F(1, 27)=.685; $p=.42$, Eta squared=.03. However, there was a significant interaction between *Time x Group* F(1, 27)=6.147; $p=.02$, Eta squared=.19. Figure 10 indicates that the scores on the BCCS-reassurance have a steep decrease over time for the body image group, whereas the control group scores rise at time 2 (non-significant).

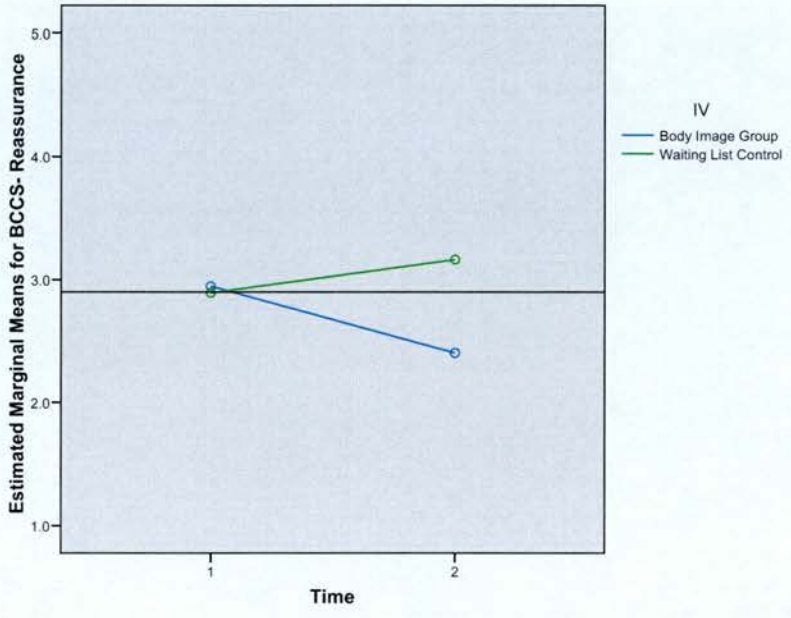

Figure 11: **Time of assessment (1=pre; 2=post) of BCCS- reassurance across two groups of participants; intention to treat and control**

Further t-tests were undertaken to compare the BCCS-reassurance subscale, pre and post treatment for the intention to treat sample. This indicated a non-significant difference between the time points, pre (M=2.94, SE .37) and post treatment (M=2.40, SE .28), $t(11)= 1.859$; $p=.09$, $d= .48$. For the control group, there was no significant difference at pre (M=2.89, SE=.28) and post treatment (M=3.16, SE=.30), $t(16)=-1.473$; $p=.160$, $d=-0.22$.

3.4.9.3 BCCS – Safety Beliefs (SB)

There was a significant difference on the BCCS-safety belief subscale between the intention to treat sample (M= 2.3, SE= .27) compared to control (M= 3.4, SE= .25) at post treatment, $t(27)=2.997$, $p =.006$, $d=1.14$.

On the ANOVA, the results showed a non significant effect on the BCCS-safety beliefs for time F(1, 27)=.374; $p=.55=$, Eta squared=.01. There was a non significant interaction between *Time x Group* F(1, 27)=2.717; $p=.11$, Eta squared=.09.

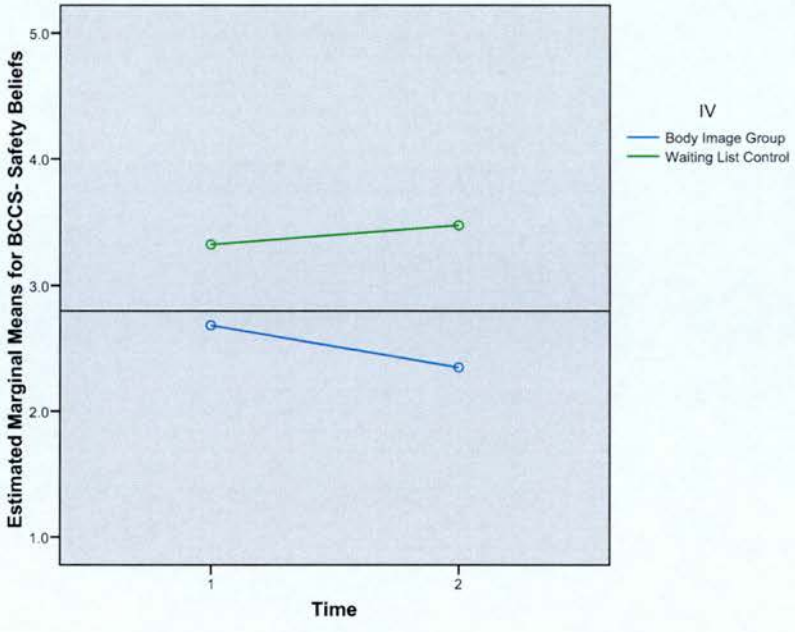

Figure 12: **Time of assessment (1=pre; 2=post) of BCCS- safety beliefs across two groups of participants; intention to treat and control**

Further t-tests were undertaken to compare the BCCS-safety beliefs subscale, pre and post treatment for the intention to treat sample. This indicated a significant difference between the time points, pre (M=2.7, SE .27) and post treatment (M=2.4, SE .27), $t(11)= 2.50$; $p=.03$, $d= .36$. There was no significant difference for the control group at pre ((M=3.32, SE=.25) and post treatment (M=3.5, SE=.25), $t(16)=-0.670$; $p=.513$, $d=-0.15$.

3.4.9.4 BCCS – Body Control (BC)

There was a significant difference on the BCCS- body control between the intention to treat sample (M= 2.7, SE= .32) compared to control (M= 3.6, SE= .24) at post treatment, $t(27)=2.103$, $p =.04$, $d=.78$.

On the ANOVA, the results showed a non significant effect on the BCCS-body control for time F(1, 27)=.169; $p=.68$=, Eta squared=.01. On the interaction effect, this was significant between T*ime x Group* F(1, 27)=6.377; $p=.02$, Eta squared=.19. Figure 12 shows that the scores on the BCCS-body control subscale decreased over time for the body image group, whereas the control groups scores increase at time 2 (non-significant for control group).

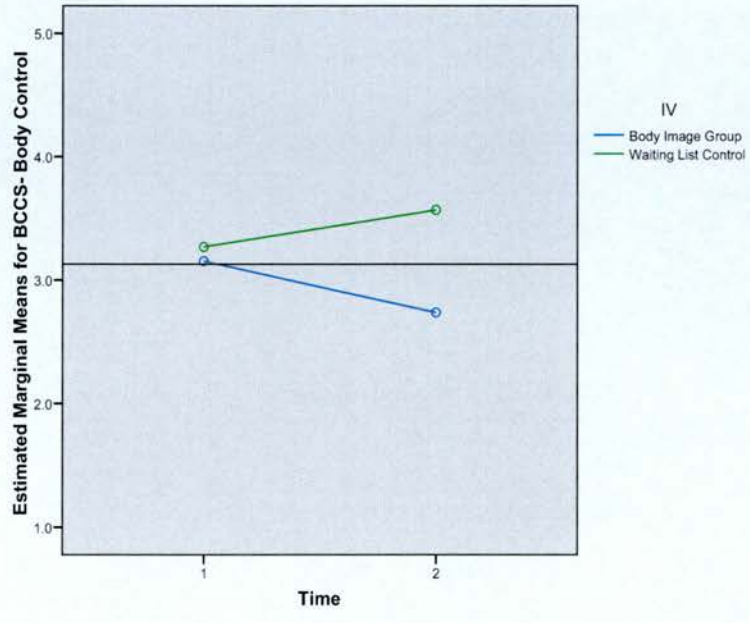

Figure 13: **Time of assessment (1=pre; 2=post) of BCCS- body control across two groups of participants; intention to treat and control**

Further t-tests were undertaken to compare the BCCS-body control subscale, pre and post treatment for the intention to treat sample. This indicated a significant difference between the time points, pre (M=3.2, SE .37) and post treatment (M=2.7, SE .32), $t(11)= 2.54$; $p=.03$, $d= .35$. There was no significant difference for the control group at pre ((M=3.27, SE=.23) and post treatment (M=3.57, SE=.24), $t(16)=-1.446$; $p=.167$, $d=-0.31$.

3.5 Secondary Hypothesis

(2) Eating Disorder Symptomatology

Eating Disorder symptomatology was measured by two outcome measures for both samples of participants. These include:

1. EDE- Eating Restraint subscale
2. EDE- Eating Concern subscale

Results are described according to the above outcome measures. The figures are positively scored, with larger scores indicating higher eating disturbance. Furthermore, the clinical cut off scores for each measure is indicated by the horizontal line within the figure.

Table 6: Means and SDs for the two eating disorder outcome measures, in each of the two samples group (Non-completers and completers) and control.

	Non- completers (N=7) Mean (SD)	**Completers (N=5) Mean (SD)**	**Control (N=17) Mean (SD)**
EDE Restraint			
Baseline	3.9 (1.7)	3.9 (1.4)	3.9 (1.4)
End of treatment	3.7 (1.7)	3.5 (0.9)	4.4 (1.3)
EDE Eating Concern			
Baseline	3.4 (1.2)	4.2 (1.0)	4.2 (1.0)
End of treatment	3.3 (1.1)	3.4 (1.8)	4.4 (1.3)

3.5.1 H*ypothesis 5: Participants who take part in the body image group will report lower eating disordered symptomatology at post treatment and compared to waiting list control.*

Data analysis was carried out on the two subscales separately and is reported below.

3.5.2 *Outcome Measure 5: EDE Restraint and Eating Concern subscales with Intention-to-Treat Sample*

3.5.2.1 EDE –Restraint

There was no significant difference on the EDE restraint between the intention to treat sample (M=3.7, SE= .40) compared to control (M= 4.4, SE= .31) at post treatment, $t(27)=1.495$, $p = .15$, $d=.56$.

On the ANOVA, the results showed no significant effects for either time or group F(1, 27)=.607; $p=.443$; Eta squared=.022. There was found to be a significant interaction between T*ime x Group* F(1, 27)=4.856; $p=.04$; Eta squared=0.15. Figure 13 shows that the scores on the EDE restraint decrease over time for the body image group, whereas the scores for the control group increase at time two (control group change is significant, $p=.05$).

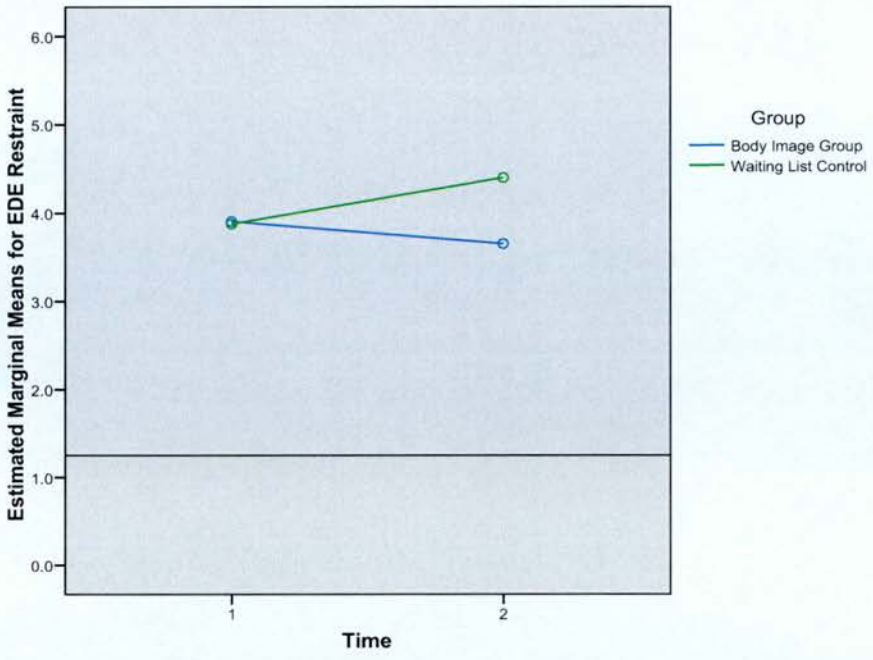

Figure 14: **Time of assessment (1=pre; 2=post) of EDE Restraint across two groups of participants; intention to treat and control**

Further t-tests were undertaken to compare the EDE restraint pre and post treatment for the intention to treat sample. There was no significant difference found between the time points, pre (M=3.9, SE .49) and post treatment (M=3.7, SE .40), $t(11)$= 1.088; p=.30, d=.16. For the control group, there was a significant difference at pre ((M=3.87, SE=.34) and post treatment (M=4.39, SE=.31), $t(16)$=-2.130; p=.05, d=-0.40 with the mean scores indicating an increase in eating restraint.

3.5.2.2.EDE –Eating Concern

There was no significant difference on the EDE concern between the intention to treat sample (M=3.4, SE= .39) compared to control (M= 3.9, SE= .27) at post treatment, $t(27)=1.314$, $p = .20$, $d=.49$.

On the ANOVA, the results showed significant effects for time and group F(1, 27)=5.888; P=.02; Eta squared= .18. There was no significant interaction between T*ime x Group* F(1, 27)=.113; *p=.74;* Eta squared=.004. Figure 14 shows that the scores on the EDE eating concern decrease over time for both the body image group and the control group.

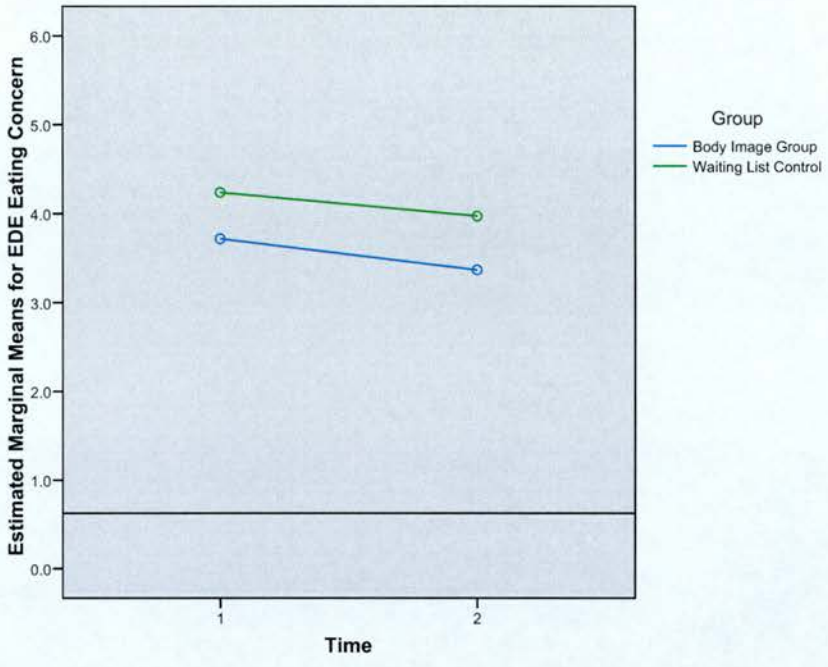

Figure 15: **Time of assessment (1=pre; 2=post) of EDE eating concern across two groups of participants; intention to treat and control**

Further t-tests were undertaken to compare the EDE eating concern pre and post treatment for the intention to treat sample. There was no significant difference found between the time points, pre (M=3.7, SE .34) and post treatment (M=3.4, SE .39), $t(11)= 1.651$; $p=.13$, $d=.24$. There was no significant difference for the control group at pre ((M=3.87, SE=.34) and post treatment (M=4.39, SE=.31), $t(16)=-1.745$; $p=.100$, $d=-0.26$.

To summarise, when means and variances are compared between the intention to treat and control group, the results suggest that there is a change in eating behaviour at time two. For both groups, eating concern decreased over time but there was no significant difference between the two groups. In terms of eating restraint, the ANOVA indicates that there is a significant interaction between time and group, with the intention to treat sample showing a decrease in eating restraint. Further post hoc tests indicated that the control group scores significantly increased at time two (higher frequency of eating restraint) and there was no significant difference between pre and post eating restraint in the body image group. Therefore the control group change is likely to account for the interaction effect found on the ANOVA.

3.6 SUMMARY OF EFFECT SIZES

An effect size provides an objective account of the effect of improvement independent of sample size (Field, 2009). For the analysis reported in this chapter, two estimates of effect size have been reported, Cohen's (1988) *d* and Eta squared. Based on Cohen's (1988) suggestions for small (d=0.2), medium (d=0.5) and large (d=0.8) effect, the effect sizes presented in Table 7 indicate that the body image group has produced a medium effect size in improvement in body shape/weight concerns and a small to medium effect size for body checking cognitions.

Table 7: **Effect sizes for Intention to Treat Sample at the End of Treatment**

Outcome Measure ITT N=12	Pre therapy Mean	Pre Therapy SD	Post Therapy Mean	Post Therapy SD	Effect Size (Cohen, 1988) d= μ0-μ1/SD	Effect Size Time Eta Squared	Effect Size Interaction Eta Squared
ASI-R	4.0	0.51	3.64	0.41	0.32	0.26*	0.000
BSQ	140.5	49.4	133.7	47.32	0.57*	0.052	0.26*
BCQ	62.3	21.1	59.5	20.8	0.14	0.052	0.003
BIAQ	41.8	17.8	39.3	16.9	0.15	0.043	0.093
BCCS	3.0	1.1	2.6	0.92	0.40*	0.056	0.12**
BCCS - OV	3.3	1.1	2.9	.97	0.32	0.12**	.002
BCCS - R	2.9	1.3	2.4	.96	0.48	0.03	0.19*
BCCS - SB	2.7	.94	2.4	.93	0.36*	0.01	0.09
BCCS - BC	3.2	1.3	2.7	1.1	0.35*	0.01	0.19*
EDE - restraint	3.9	1.7	3.7	1.4	0.16	0.022	0.15*
EDE - eating concern	3.7	1.2	3.4	1.4	0.24	0.18*	0.004

* statistical significance at $p<.05$ ** approaching statistical significance $p=.07$

Chapter 4: Results (Part B):

Qualitative Data Analysis & Exploratory Findings

This chapter will report the findings from data collected from the feedback form completed by seven participants at post treatment (Appendix 22).

On the basis of the questions asked and responses, the data will be investigated using two approaches. Section one will carry out Content Analysis to test three hypotheses. Section two will present exploratory findings based on participants responses to developmental and current triggers for negative body image, helpful/least helpful strategies during the body image group, reflections on completing the body image group and opinions on group treatment.

SECTION 1: CONTENT ANALYSIS

The data were analysed using Content Analysis (Krippendorf, 1980). This is a reliable and valid technique that allows inferences to be made from text within the context of their use. Therefore the data are meaningful to a particular situation and allow trends in communication to be examined in themes and collated for the contribution to psychological knowledge (Holsti, 1969). Furthermore, content analysis has been applied in a range of studies with those with eating disorders, including an examination of daily life experiences in bulimic patients (Pettersen, Rosenvinge & Ytterhus, 2008) and patients with anorexia nervosa perspectives on family therapy (Ma, 2008). These studies support the validity of using content analysis with a range of eating disorders and thus content analysis is deemed an appropriate method for analysing participants' qualitative feedback post treatment.

In order to analyse the data in a meaningful manner that could be replicated by another researcher, units of analysis were attached to body image concerns, thoughts and behaviours. The emerging themes were recorded from participants' written responses and the author allocated coding categories for items that related to the aspects of body image. The total number of responses for each theme are reported.

In order to test research hypotheses 6, 7 and 8, grouped qualitative responses were compared between pre and post treatment in the context of body image concerns, thoughts and behaviours. Where appropriate the responses were counted for those relating to positive and negative features of body image.

4.1 *Hypothesis 6: Participants who complete the body image group will report reduced body image concerns post treatment when compared to pre treatment on qualitative responses.*

There were 14 separate responses at pre treatment, whereas at post treatment, there was a total of 17 response regarding body image concerns. The research examined these responses and made inferences regarding what type of body dimension they most appropriately represented. This indicated 7 aspects of negative body image, for example, the body dissatisfaction category included comments such as "I'm ashamed of my body" or "I'm unhappy with my body". The following tables report all categories and number of responses.

4.1.1 Body Image Concerns at pre and post treatment

To test this hypothesis, participants' responses pre and post treatment will be reported and compared. Table 8 reports the number and type of body image concerns at pre treatment.

BODY IMAGE CONCERNS AT PRE TREATMENT

Table 8: **Number and type of reported negative body image concerns at pre treatment**

PARTICIPANTS' NEGATIVE BODY IMAGE CONCERNS- PRE TREATMENT	NUMBER OF RESPONSES
Body dissatisfaction – feeling fat, unhappy or ashamed of body	7
Desire to change body/appearance	5
Avoidance of body image	3
Preoccupation with body image	5
Judgement of self based on body image	1
Concerned regarding what others thought of their body	2
Guilt for negative body image thoughts and behaviours	1

BODY IMAGE CONCERNS AT POST TREATMENT

Table 9: **Number and type of reported negative body image concerns at post treatment**

PARTICIPANTS' NEGATIVE BODY IMAGE CONCERNS POST TREATMENT	NUMBER OF RESPONSES
Body dissatisfaction	3
Concerns regarding giving up eating disorder and what that will mean	1
Continue to have negative body image thoughts	1

Table 10: **Number and type of reported positive body image concerns at post treatment**

PARTICIPANTS' POSITIVE BODY IMAGE CONCERNS- POST TREATMENT	NUMBER OF RESPONSES
Body satisfaction: feel better/improved confidence	5
Acceptance of body and less judgmental	2
Improved self care	1
Relaxed attitude to body and body image ideals	2
Awareness of negative thoughts and behaviours	1

Table 11: **Number and type of responses associated with changing body image concerns at post treatment**

PARTICIPANTS' BODY IMAGE CONCERNS RE: CHANGE- POST TREATMENT	NUMBER OF RESPONSES
Need to work further at challenging thoughts and behaviours	2

The responses reported at pre and post treatment suggest that body image has improved. At the beginning of the group, there were no positive body image responses whereas at post treatment, there were 11 responses associated with positive body image. The majority of these were related to body image satisfaction. There were no responses indicating that the person wanted to change their body and there appeared to be some acceptance of body image. There are no comments regarding constant preoccupation with body image and what other people think about them. Interestingly, there appears to be some cognitive shift in body image attitudes e.g. change in body ideals. Therefore these findings suggest that hypothesis 6 can be accepted.

4.2 *Hypothesis 7: Participants who complete the body image group will report more positive/adaptive body image thoughts post treatment when compared to pre treatment on qualitative responses.*

4.2.1 Body Image Thoughts/Beliefs at pre and post treatment

At the beginning of treatment there were 12 reported negative body image thoughts. These were examined and responses appropriately fitted 6 categories that included negative thoughts re: shape and appearance, cognitive rules, self critical thoughts and concerns regarding what others thought of them. At post treatment there were 18 reported body image thoughts and these reflected both negative and positive thoughts about body image. Therefore these were coded separated in order to observe the difference in the content of thoughts. The positive thoughts reflect key areas of treatment such as acceptance of body image and considering the function of the body.

To test this hypothesis, participants' responses pre and post treatment will be reported and compared. Table 12 reports the number and type of body image thought/beliefs at pre treatment.

BODY IMAGE THOUGHTS/BELIEFS AT PRE TREATMENT

Table 12: **Number and type of reported negative body image thoughts at pre treatment**

PARTICIPANTS' NEGATIVE BODY IMAGE THOUGHTS PRE TREATMENT	NUMBER OF RESPONSES
Negative weight/shape thoughts	8
Negative appearance thoughts	4
Cognitive rules regarding exercise and shape/weight	4
Cognitive rules regarding unrealistic ideas to life	3
Self critical thoughts – non shape related	2
Concern regarding others opinions on their body	2

There were no reported positive body image thoughts/beliefs at pre treatment.

BODY IMAGE THOUGHTS/BELIEFS AT POST TREATMENT

Table 13: Number and type of reported negative body image thoughts at post treatment

PARTICIPANTS' NEGATIVE BODY IMAGE THOUGHTS POST TREATMENT	NUMBER OF RESPONSES
Negative self/appearance thoughts	2

Table 14: Number and type of reported positive body image thoughts at post treatment

PARTICIPANTS' POSITIVE BODY IMAGE THOUGHTS POST TREATMENT	NUMBER OF RESPONSES
Adaptive rules for exercise	1
Greater consideration for physical health and function of body	3
Awareness of others being less critical	1
Positive shape/weight thoughts	2
Positive evaluation of progress in group	1
Decrease on cognition errors associated with body image	7
Improved scheme for self evaluation	1
Acceptance of body image	2
Appreciation of negative consequences of eating disorder and poor body image	1

Table 15: **Number and type of responses associated with changing body image thoughts at post treatment**

PARTICIPANTS' BODY IMAGE THOUGHTS RE: CHANGE - POST TREATMENT	NUMBER OF RESPONSES
To continue thought challenging	2

The post treatment thoughts appear to be less negative and statements are indicative of cognitive change. Some participants are acknowledging certain cognitive errors and linking this with new evidence to challenge their negative thoughts. There appears to be endorsement of new values that were a key area in treatment such as considering alternative ways of judging themselves rather than solely on weight and shape. There is also recognition of the function of the body, linking this to eating behaviour and health consequences of an eating disorder. There are also suggestions that participants are trying to accept themselves and will continue working on challenging their negative thoughts.

4.3 *Hypothesis 8: Participants who complete the body image group will report reduced body image behaviours post treatment when compared to pre treatment on qualitative responses.*

4.3.1 Body Image Behaviours at pre and post treatment

To test this hypothesis, participants' responses pre and post treatment will be reported and compared. Table 15 reports the number and type of body image behaviours at the pre treatment. The reported behaviours were classified under the terms checking, avoidance, unhelpful comparison, excessive grooming and compulsive exercise. These are the most common behavioural features of negative body image. For example, pinching and weight were classified as checking behaviours, whereas do not look at myself in the mirror would indicate avoidance. Each type of behaviour is included in the data summary as each participant reported a range of checking behaviours.

BODY IMAGE BEHAVIOURS AT PRE TREATMENT AND POST TREATMENT

Table 16: **Number and type of reported body image behaviours at pre and post treatment**

PARTICIPANTS' NEGATIVE BODY IMAGE BEHAVIOURS	NUMBER PRE	NUMBER POST
Checking	16	9
Avoidance	9	2
Unhelpful comparison	5	2
Excessive Grooming	1	0
Compulsive Exercise	3	0

At post treatment, the majority of participants reported that they continued to carry out body image behaviours but to a lesser frequency when compared to those reported at pre-treatment. There were no reported positive body image behaviours at pre treatment. Whereas, at post treatment, four participants reported they compared themselves in a more helpful manner, applied a non-judgemental attitude when looking in the mirror and were using mindfulness.

Participants responses at post treatment compared to pre treatment suggest that participants attempted to decrease unhelpful body image behaviours such as avoidance and unfair comparison. There is a reduction in checking behaviour, but this continued to occur to a lesser degree. There are indications of intentions to change behaviour and continuing practice of body image strategies. These findings suggest that the majority of participants have started to address their behaviour and some have achieved a reduction of unhelpful behaviours, with the inclusion of more adaptive approaches such as mindfulness and less judgmental attitudes when viewing their appearance.

SECTION 2: EXPLORATORY FINDINGS

The following findings represent the raw responses given by participants to the following questions:

- Developmental factors and triggers for negative body image
- Strategies found helpful during body image group
- Least helpful strategies during body image group
- Self reflections following group treatment
- Opinions on group treatment
- Participants own suggested improvements to the body image group treatment

There were a range of responses reported which limited the use of content analysis as it was deemed more appropriate to report the full response.

4.4 Developmental factors and triggers for negative body image

Participants' responses indicated that a range of factors had contributed to the development of their negative body image. These included the following: family and peer relationships, school influences, work environment, comparisons to peers and those in the media, discussion of diets and endorsing perfect body ideals. Some participants commented that they were obese as a child and were aware of negative attitudes towards overweight people.

Current triggers for negative body image were related to a number of factors. These included: having a bad day, low mood, stress, negative body image behaviours, eating disorder behaviours, media images, social situation where appearance is noticed and commented on, clothing feeling tight or feeling fat in certain clothes, recently done less exercise and failing to meet body ideals.

4.5 Strategies found helpful during body image group

Table 17 reports the main strategies that participants found helpful during treatment.

Table 17: Most helpful strategies during body image group

MOST HELPFUL STRATEGIES	NUMBER OF RESPONSES
Thought challenging	4
Changing comparison parameters	1
Thinking of my body as a tool and not an object; it is important to have a healthy body, it is not just about looks	4
Gave me time to reflect and think about myself, my life	1
Learning to respect and care for me and my body	1
Learnt new ways of dealing with social situations that usually bring up body image concerns	1
Pamper myself, with beauty products	1
Distraction	2
Mindfulness	2
Decreasing body checking	1
Doing pleasurable activities e.g. painting a picture, phoning a friend	1
Mirror exercise	1
Openly discussing my thoughts, feelings and problems	1
Writing problems and thoughts on paper, cleared my head	1
Body image diaries and worksheets	1
Reading articles and body confident magazine	1

Table 18 reports the strategies that participants found the least helpful during the body image group.

Table 18: Least helpful strategies during body image group

LEAST HELPFUL STRATEGIES	NUMBER OF RESPONSES
None – all helpful in some way	3
Completing endless questionnaires	1
Diary sheet – forget to do them and then feel upset that I have not done this	1
I found the mirror work very difficult but I realise that it is helpful and it will take time before I am more comfortable with it	1
I find it extremely difficult to stop comparing myself to others, this is natural to me	1

Exploration of participants' feedback suggests that they have found a range of strategies useful and interestingly each participant endorses different key components of treatment. Two separate participants raised that some treatment components were difficult i.e. mirror work and comparison. However, there was some acknowledgement that this is a process of treatment and may take time to become more comfortable with the procedure. Two participants found completion of questionnaires and diary sheets unhelpful.

4.6 Participants' self reflections following group treatment

Participants were asked specifically what they had learnt about themselves during the body image group. There were a range of interesting responses that are reported in Table 19. These responses would suggest that following the body image group, participants are making broader positive self statements that are linked to self esteem and self-efficacy. There is also acknowledgement of unhelpful attitudes and styles of thinking.

Table 19: **Participants reflections on completing the body image group**

PARTICIPANTS' SELF REFLECTION ON BODY IMAGE GROUP TREATMENT	NUMBER OF RESPONSES
I am strong enough to get through my problems	2
Others do not see me in the way that I originally thought	1
I need to slow down with other things in my life to have time to take care of myself	1
Some of my beliefs are irrational	1
I needed to start speaking about my problem	1
I judge myself very negatively and need to be kinder to myself	1
I focus too much on parts of my body that I do not like	1
I don't appreciate what I do like or what my body does for me	1
Understood where my eating disorder came from	1
I have accepted that I have an eating disorder and need help	1
Discussing painful issues is beneficial in the end	1
Realised how depressed and unhappy I was, oblivious to this before the group	1
Realised how obsessed I am with my eating and how I let it control my life	1
I am a worthy person and should respect myself more	1
That only I can change my future, thoughts and behaviours	1

4.7 Opinions on group treatment

Participants were asked to reflect on the experience of being in a group. Open ended questions asked participants (1) what it felt like to be in a group; (2) what did you find the most helpful about being in a group; (3) what did you find the least helpful about being in a group. Participants expressed a number of comments in their responses. Their comments and number made are reported in tables 20, 21, 22.

Table 20: **Experience of group treatment**

EXPERIENCE OF BEING IN GROUP TREATMENT	NUMBER OF RESPONSES
Felt good, not the only person feeling like this, feel less alone, helped to be around others with similar problems	7
Group support was invaluable	1
Looked forward to sessions	1
Allowed me to be honest in front of others without fear of judgment	1
Realised common thoughts, patterns and triggers	1
Uncomfortable at first	2
At the end, I was anxious that once it is over I will lose support of others even though it was just the presence of others	1
Awkward and anxious at first as we all have an eating disorder and it is a difficult topic to address	2
The group got more difficult each week as more focused on trying to change thoughts and behaviour	1
Felt very exposed at the start, once I cried, I felt that was the worst that could happen	1
No problem with being in a group, felt I was able to be open and relaxed	1

Table 21: **Most helpful aspects of group treatment**

MOST HELPFUL ASPECTS OF BEING IN A GROUP	NUMBER OF RESPONSES
Meeting new people with similar problems	2
Group support	1
Learning from others; Other peoples' comments stimulated my thoughts and feelings, made me realise or recognise new things	2
Feeling understood and understanding other people	2
Opportunity to talk about my own problems	3
Not being alone with my problems	2
Realising the reasons for my thoughts and behaviours	1
Others shared my negative thoughts even though in my mind they looked great	1
Good for brainstorming ideas and comparing different thoughts and feelings	2
Addressing things that were difficult but now realise that it helped	1
Helped challenge my beliefs and be more open	1
Helped me realise that I can change my ways	1

Table 22: **Least helpful aspects of group treatment**

LEAST HELPFUL ASPECTS OF BEING IN A GROUP?	NUMBER OF RESPONSES
Some sessions were repetitive	2
Other members non-compliant or failing to attend some sessions	1
Not being able to analyse things at a deeper level	1
Difficult to discuss certain things when so many people present	2
The group makes it difficult to deal with everyone's individual thoughts/ideas despite us all having similar problems, we are different	1
I think individual treatment may benefit me more	1
Getting upset in front of other people	1
Difficult being in a group with younger members who have different issues but I know that it would be too difficult to do a group dependent on age range	1

Responses in table 21 and 22 suggest that each participant has mixed feelings towards being in a group. They each acknowledge that they felt less isolated due to meeting others with similar problems. However, for some participants, initial sessions were more difficult due to being encouraged to talk openly about body image problems. The author acknowledges that during Group 1, there was inconsistent attendance by three participants and this had a negative impact on group delivery and cohesion. Nonetheless, participants appeared to gain benefit from hearing other people's experiences and working together at trying to challenge their thoughts and behaviour.

4.8 Participants suggested improvements to the body image group treatment

Throughout the group treatment, participants were encouraged to give feedback after each session via the feedback form and also by verbal communication to any of the group therapists. Participants were specifically asked how the body image group could be improved, their responses are summarised below. These responses will be addressed within Chapter 5, Discussion.

Table 23: Suggested improvements to body image group

PARTICIPANTS' SUGGESTED IMPROVEMENTS TO BODY IMAGE GROUP	NUMBER OF RESPONSES
Follow up session after 6 weeks would be useful as a goal	1
Longer course of body image treatment	1
Have a group specific to certain age groups	1
More discussion around eating disorders and reasons for onset	3
Allow more time for discussing what the participant raises and only follow session plan as a guide	1
Spend more time discussing body image homework diaries	1
More time to discuss changing body image behaviours	1
To complete an exercise comparing a normal person's lifestyle to that of someone with an eating disorder to realise that it is not helpful	1
Would be helpful to hear stories of someone who has recovered from their eating disorder and body image problems	1
Would like material more specific to me	1

CHAPTER 5: DISCUSSION

The main aim of the study was to evaluate the effectiveness of a stand alone body image group for people with bulimia nervosa and eating disorder not otherwise specified. The body image group was a cognitive behavioural intervention that targeted over evaluation of shape/weight as manifested in body image attitudes, cognitions and behaviours. The group also emphasised non-judgmental acceptance based on mindfulness technique (Bell & Rushforth, 2008).

The study compared four dimensions of body image: investment, shape concerns, behaviours, checking cognitions and eating disorder psychopathology at pre and post treatment between the body image and control group. The body image group sample consisted of 12 participants with mean eating disorder duration for 11.9 years, with almost half having previously received eating disorder treatment.

The main findings of the study will be highlighted and interpreted in comparison to previous treatment. As discussed in chapter 1, there are only a small amount of studies conducted evaluating body image treatments in eating disorder samples (Farrell *et al.,* 2006). Anderson and Maloney (2001) also highlight that studies evaluating CBT for body image disturbance in those with bulimia use different outcome measures and this alters the reported effects of treatment. Furthermore, in non-clinical evaluation of body image treatment, a wide range of measures are used and this complicates the comparison of treatment outcomes between different studies (Jarry and Berardi, 2004). Therefore there are a limited number of studies that the current findings can be compared against. The strengths and limitations of the study will be examined. Further discussion of the clinical implications and suggestions will be made for future research.

5.1 Interpretation of Results

Hypotheses relevant to each body image dimension and eating disorder psychopathology will be examined as appropriate.

5.1.1 Hypothesis 1: Participants who take part in the body image group will report improved body image investments at post treatment and compared to waiting list control.

The findings for body image investment are to be interpreted with caution in comparison to the control group, as noted in 3.3.1, it was found that the control group had significantly higher levels of appearance based investment. Furthermore, both samples reported decreases in appearance investment at post treatment which was non-significant on analysis of variance. On direct comparison between the body image group, pre and post treatment, there was no significant difference, therefore hypothesis one was rejected.

This revised measure has only been applied in a small number of studies and to the author's knowledge, there has been no study to use this to evaluate body image treatment in eating disorders. Given that this is a key area of bulimic psychopathology, it was not expected that there would be significant differences following a 6 week intervention, considering that this sample had an average of 11 years eating disorder history.

5.1.2 Hypothesis 2: Participants who take part in the body image group will report improved body shape/weight concerns at post treatment and compared to waiting list control.

Participants in the body image group reported significant decreases in body shape concerns at post treatment. These improvements were found to have a large effect size (d=0.57), furthermore an interaction occurred with a large effect size (Eta squared=.259). Interestingly, shape concerns in the control group increased over the 6 week time period although this was non-significant. Therefore hypothesis two was accepted.

This improvement in body shape is consistent with both Key *et al.*, (2002) and Stewart and Williamson's (2003) body image treatments in eating disorder cases. These studies included mirror exposure and were carried out between 8-16 weeks, therefore it is significant that the current study facilitated an improvement in shape concern in a 6 week treatment. However, due to different research designs and eating disorder diagnoses, these findings are not able to be directly compared against these studies.

The brief CBT for shape concern trial conducted by Shafran *et al.,* (2009) in a non-clinical sample is more comparable to the current study's treatment protocol. Shafran *et al.,* (2009) found a decrease in shape concerns as reported by two measures that are known to correlate in their original format with the BSQ (Rosen *et al.,* 1990)., however, the comparison conclusions are limited due to a different sample. Furthermore, Shafran *et al.,* (2009) highlighted that further replication with an eating disorder sample was necessary in order to inform conclusions regarding its clinical utility.

Studies that have included mirror exposure with the application of non-judgmental and acceptance techniques report improvements across a range of body image dimensions, including body image satisfaction (Key *et al.,* 2002; Delinksy & Wilson, 2006). Therefore the two sessions of mirror exposure and homework practice that aimed to decrease negative statements when looking in the mirror may have contributed to the improvement in satisfaction found in the current study. At the initial mirror exposure exercise, it was observed that the majority of participants were self critical and negative when viewing themselves in the mirror. At the second session they were more able to be neutral in their descriptions and reported less anxiety during the exercise.

Based on the improvement in body image satisfaction, the findings support the effectiveness of a stand alone intervention in addressing body shape concerns.

5.1.3 *Hypothesis 3: Participants who take part in the body image group will report lower levels of body image behaviours at post treatment and compared to waiting list control.*

Hypothesis 8: Participants who take part in the body image group will report reduced body image behaviours post treatment when compared to pre treatment on qualitative responses.

The above hypotheses are concerned with the frequency of body image behaviours such as checking and avoidance at pre and post treatment. On quantitative data analysis there was no significant change in body checking and body image avoidance in comparison to the control group at interaction with time and group or post treatment.

On qualitative examination, participants responses indicate that the frequency of body image checking and avoidance has decreased which suggests that hypothesis 8 can be accepted. A small number of participants were also applying positive behaviours such as mindfulness and non-judgemental acceptance when looking in the mirror.

Taken together, these findings suggest that the body image group has stimulated some small improvements in body image behaviours but to a non-significant level. Therefore hypothesis 3 will be rejected.

These non-significant findings are unsurprising given the high levels of body checking and avoidance found in eating disorder samples (Mountford *et al.,* 2006; Reas *et al.*, 2002) and higher frequency is predictive of more severe eating disorder psychopathology (Shafran *et al.,* (2004) which is evident on high clinically significant scores at baseline and post treatment on the EDE. These findings suggest that a follow-up data point would have been helpful to identify whether further change occurred with a greater period of time for participants to practice new skills.

Furthermore, there is a direct association between body checking and over-evaluation of eating, shape and weight. There are also some suggestions that body image behaviours are used to motivate eating disorder behaviour e.g. checking deliberately to increase distress to motivate eating restraint. This is observed in increased eating disorder behaviour that maintains low mood, and preoccupation/dissatisfaction with weight and shape (Shafran *et al.,* 2004). Therefore there may need to be an emphasis on eating disorder symptoms at the same time as challenging body image behaviours.

5.1.4 Hypothesis 4: Participants who take part in the body image group will report lower body image checking cognitions at post treatment and compared to waiting list control.

The findings indicate that group participants had lower body image checking cognitions at post treatment, in comparison to controls with a large effect *(d*=1.01), eta squared = 0.12). However, there were no interaction effects found to be significant. Further examination of the subscale scores indicated that significant change had occurred in safety beliefs when compared to the control group at post treatment (*d*=1.14). For body control, there was a significant interaction between time and group, indicating a large effect for an improvement in body control beliefs within the intention to treat sample (Eta squared=.19).

This is a novel measure and to the author's knowledge it has not previously been applied as an outcome measure in body image treatment studies. In a body image intervention, a reduction in body checking cognitions would indicate change in the person's beliefs in the benefits of checking and their perceived ability to control their size with eating behaviours (Mountford, Hasse & Waller, 2007). Most specifically this finding represents a reduction in maladaptive cognitions that are linked to eating disorder behaviours.

Therefore the findings here suggest that the intervention has targeted and achieved a reduction in unhelpful body checking cognitions that are a core psychopathology of eating disorders and a maintenance factor (Fairburn, Cooper & Shafran, 2003),

although it is difficult to ascertain the specific effect within the broader context of other research.

There is a clear link between checking cognitions and checking behaviour but it is important to consider if there are additional factors that mediate this process. Research in this area is at an early stage but with a non-clinical sample, there is evidence to suggest that social physique anxiety mediates the checking cognitions and behaviour. Therefore if this finding is replicated in an eating disorder sample then clinical interventions could place an additional focus on emotions. Anxiety and shame are suggested emotional variables in this process and therefore specific CBT techniques could be applied (Hasse, Mountford & Waller (2007).

5.1.5 Hypothesis 5: Participants who take part in the body image group will report lower eating disordered symptomatology at post treatment and compared to waiting list control.

For the eating restraint condition, there were significant higher levels of restraint in control group at post treatment. When comparing the two groups at post treatment, there was no significant difference. Further analysis produced an effect of time and condition, with a small effect size (eta squared= 0.12). Taking the non significant change scores for the body image group into consideration this suggests that the deterioration in the control group contribute to the significant interaction.

On the measure of eating concern, there was a significant effect of time between groups. However, eating concerns decreased in both groups at time 2 and therefore it is difficult to make conclusions based on the effect of the body image group. This assumption is concluded by the non-significant finding between the two time points for the body image group condition. Therefore hypothesis 5 was rejected.

In consideration of the above findings and links to body image, a small number of studies have found that a decrease in dieting could be explained by an indirect link with increased body satisfaction following body image intervention (Delinksy & Wilson, 2006). In this case, the current study's significant change in body

satisfaction may have contributed to the small but non-significant decrease in eating restraint. Furthermore, studies on obese patients, found that increased body checking is linked to eating restraint and increased body avoidance was associated with binge eating (Grilo *et al.,* (2005). On examination of the line charts for body checking and eating restraint for the body image group (Figure 7 & 13), the scores decrease over time for both measures, which indicates that both checking and eating restraint reduced and therefore is not explained by these previous findings There was also a reduction in eating concerns and body image avoidance. These observational findings offer some support for previous research, however, this is to be interpreted with caution due to non-significant findings.

5.1.6 Hypothesis 6: Participants who take part in the body image group will report reduced body image concerns post treatment when compared to pre treatment on qualitative responses.

On content analysis there was a reduction in negative body image concerns, at post treatment with the addition of 11 positive body image statements that included self reported body satisfaction, acceptance of body and less judgmental, relaxed attitude to body and improved self care. These findings indicate that there are less body image concerns and are supportive of the significant decrease in body shape concerns.

5.1.7 Hypothesis 7: Participants who take part in the body image group will report more positive/adaptive body image thoughts post treatment when compared to pre treatment on qualitative responses.

As with the body concerns findings, there were no positive body image thoughts at pre treatment, whereas, at post treatment there were 19 positive related body image thoughts. These thoughts would also be considered to be adaptive and show cognitive change. Participants at post treatment have an appreciation for cognitive errors there is evidence that these decreased, particularly on body image assumptions. Participants also indicated that they needed to continue working on challenging their negative thoughts.

5.1.8 Hypothesis 8: Participants who take part in the body image group will report reduced body mage behaviours post treatment when compared to pre treatment on qualitative responses.

There was a reduction in all body image behaviours reported at post treatment. Moreover, participants reported that these behaviours were occurring to a lesser degree. There were also findings to suggest that four participants had incorporated adaptive body image behaviours such as mindfulness and non-judgmental attitudes when viewing themselves in the mirror. This is an important finding that is not identifiable on the quantitative measures and suggests that some aspects of the intervention have been observed by participants and suggest that they find these of use. As previously reported, non-judgmental mirror exposure and mindfulness leads to improvements in body image (Delinksy & Wilson, 2006).

5.2 Interpretation of Qualitative Exploratory findings

Participants reported a range of factors that had contributed to each of their negative body development for example, family and peer relationships, being obese as a child, endorsing thin body ideals. These factors have all been indicated, amongst others in the development of eating disorders and body dissatisfaction, (Fairburn & Harrison, 2003) which in turn is predictive of dieting behaviour (Stice, 2003). Furthermore, a wide variety of triggers were reported for negative body image and participants' responses implied that mood, self evaluation, eating disorder and body image behaviours in addition to cues in social environment.

On responses regarding views of being in a group, the majority of participants indicated that this reduced feelings of isolation. Some participants felt uncomfortable initially within a group setting, particularly when discussion involved difficult topics and also when there became more of an emphasis on changing body image.

Further exploration found a number of helpful components, these included group support, opportunity to talk about problems, learning from each other and there also appeared to be an instillation of hope and improved self-confidence.

These findings are encouraging and link to therapeutic factors specifically found in group therapy (Yalom, 2005). This suggests that the group facilitated the installation of hope, universality, imparting of information and interpersonal learning. For those who found the group emotionally challenging at the beginning, the group may have offered them a corrective emotional experience as well as a safe environment to disclose difficult emotions. It was evident that for the first group, variable attendance may have had an impact on the development of group cohesiveness. However, this important therapeutic factor takes a significant amount of time to develop and therefore would not be expected with a short term intervention.

There were a number of key components that participants reported to be helpful within the treatment which suggests there may be individual differences in how negative body image is manifested and therefore the treatment for a group needs to be comprehensive and address a range of factors in order to target areas relevant for each person over the course of treatment. Moreover, participants suggested that the body image treatment should have a longer duration and in conjunction with eating disorder treatment. This would allow more time to discuss progress and any obstacles to further improvements in a therapeutic setting.

5.3 Summary of findings

To summarise, quantitative analyses have found a significant reduction in body shape concerns and body checking cognitions at post treatment, with large effect sizes. Further analysis between the control group condition found consistent findings, with body image group being superior to control group in reducing body shape concerns. There was a near significant interaction between the control group and body image group, with paired tests indicating a significant reduction in checking cognitions at post treatment for the body image group.

These significant findings on two separate dimensions of body image are both interesting and encouraging for effectiveness of this pilot stand alone group treatment. Previous studies have indicated that there is a link between satisfaction, body checking and eating improvements (Shafran *et al.,* 2007). Furthermore, there is a predictive model between these dimensions of body image and eating disorder

psychopathology. As there are decreases in body checking cognitions in a direction where the person realises that body checking is an unhelpful strategy this may be linked to specifically reducing body shape concern. In the current study, there was no significant improvement in eating disorder pathology. These findings are tentative as further data analysis is required to either confirm or reject these hypotheses, however, this would require a larger sample to carry out regression and path analysis statistical techniques.

The qualitative findings suggest reduced body image concerns and behaviours at post treatment. Furthermore, there is an increase in reported positive body image thoughts which suggests that the study has had a positive effect on making small improvements to body image attitudes, satisfaction and behaviours. On exploratory findings related to participants' self reflection there are two responses (e.g. "I am strong enough to get through my problems") related to improved self efficacy at post treatment, however, this was not assessed on quantitative measures. It is suggested that challenging body image behaviours through graded exposure can improve self efficacy and this may be a factor in these improvements (Vocks *et al.*, 2008, Key *et al.,* 2001) in this small number of participants.

The control findings suggest that there were a small number of improvements on appearance schemas, body checking and eating concern. However, it is interesting to note that checking cognitions increased despite a reduction at the checking behavioural level. There was however, an obvious increase in avoidance and it is proposed that there is a fluctuation between body checking and avoidance in eating disorder groups and this is related to eating behaviour (Shafran *et al.,* 2004).

5.4 Comparison of findings to current CBT theory and treatments for body image in eating disorders

Recent outcome studies for CBT-E in both the broad and focused form, report around a 50% improvement for either treatment. Body image treatment is incorporated in an attempt to reduce over-evaluation of shape and weight. Therefore these findings suggest that there continues to be a need for more effective

interventions for bulimia nervosa and eating disorder not otherwise specified. In consideration of the emotional connections found by Hasse, Mountford and Waller (2007) in predicting checking cognitions and behaviours, this may be an area that warrants further study.

There continues to be a need for a theoretical model of the maintenance of body image disturbance (Farrell, Shafran & Lee, 2006). The findings of the current study warrant further investigation for the link between checking cognitions and body shape concerns.

5.5 Strengths and Limitations of the Study

This trial is a novel study examining a stand alone body image group in an eating disorder population. It has also assessed a range of body image dimensions at two time points and in comparison to a control group which allows for dismantling the effects of spontaneous remission on investment, satisfaction, cognitive and behavioural aspects of body image.

In a recent publication, Shafran *et al.,* (2009) highlighted the need for brief shape concern interventions to be examined in an eating disorder sample with also an emphasis on dismantling treatment processes. The current pilot study has been able to contribute to this important development in eating disorder treatment evaluations.

5.5.1 ***Recruitment Process***

A number of factors impacted on the study's ability to maximise recruitment over a nine month period. The author was aware of limitations during the recruitment phases and made extensive efforts to identify potential participants and contact non responders on two separate occasions in attempt to improve response rates.

Furthermore, it is important to consider the difficulties that large eating disorder services ordinarily face in routine clinical practice. Waller *et al.*, (2009) has recently reported that out of 1887 referrals, only half will begin treatment, with only a quarter completing treatment over 20 sessions. Therefore this suggests that a clinical

research intervention would not expect a response rate above 25%, given the drop out rates in routine treatment.

These reduced opt in levels, highlight that those with eating disorders are difficult to engage in treatment. There are a number of explanations for this such as reduced motivation to change. Furthermore, eating disorders are secretive conditions associated with shame and this may affect treatment seeking behaviour.

5.5.2 Sample

The sample represented a treatment seeking eating disorder group and consistent with other studies, the average duration of an eating disorder was 11.9 years. It is well known that the majority of bulimic patients do not seek treatment for many years due to shame and secrecy and therefore this duration would be expected (Fairburn & Gowers, 2008).

Interestingly, the control group had higher scores at baseline. As part of the recruitment method, the majority had previously been invited to participate in the body image group. From a small number of correspondences with those in the control group following receipt of the invitation to the body image group, a number of participants indicated that they would find it too distressing attending a group, particularly given the emphasis on discussing their body image problems in a group environment. This therefore suggests that the control group may have had higher levels of body image disturbance that they did not feel comfortable disclosing in a group.

5.5.3 Sample Size

The author acknowledges that according to prospective power analysis and reduced number of participants required for each group, that the study may have been insufficiently powered to detect effects. However, the findings indicated both small and large effects according to Cohen (1988) and therefore this does not appear to have limited the study's power to detect changes in these two dimensions of body image.

As previously noted, there are a limited number of studies evaluating body image treatments in eating disorders. For the six studies that have included an eating disorder sample, the number of participants ranges from 5- 30, with a mean of 17. Therefore there is variability within published sample sizes and in comparison to the current study, 12 participants within the intention to treat group are similar to other studies.

During the course of the study, five participants dropped out, (45 per cent) which was slightly above the range for treatment trial drop outs as summarised by Mahon (2000) with rates between 5 to 40 per cent. There are some findings that have shown that drop out is higher in group treatment. This may be due to a combination of the anxiety provoking nature of beginning to speak about a secret problem, possibly heightened by being in a group. Those with a longer history of bulimia nervosa are more likely to remain in treatment (Waller, 1997) and this finding is supported with as the participants in the completer group had suffered from an eating disorder for an additional two years (12.8) compared to the non-completer sample (10.9). It is evident that drop outs in groups can disrupt group cohesion (Connelly *et al.,* 1986) and this may have affected the development of this important therapeutic factor. For those who dropped out of the group, it appeared that particular life events may have affected their ability to fully participate in the group and therefore it could be hypothesised that this was a factor. However, it is also important to consider that drop out may represent the participant's ability to receive the independent variable, i.e. treatment and this may have been a causal factor (Mahon, 2000).

5.5.4 Generalisability

The findings are related to a small number of participants with bulimia nervosa or eating disorder not otherwise specified who had actively sought treatment for their eating disorder. It was found that the completer sample all met the criteria for bulimia nervosa and the non-completer sample had a larger proportion of EDNOS cases (57%). As it is likely that the main findings relate to the completer sample, this would suggest that the findings are most representative of those with bulimia nervosa.

Furthermore, the findings are only comparable to other studies that measure the same constructs of body image with either the same measures or those that have construct validity. Therefore this needs to be taken into consideration when generalising the findings.

5.5.5 Methodological Implications

The study applied a range of body image measures which are recommended in evaluation studies (Thompson, 2004) to assess the multidimensional construct of body image. However it is evident that additional measures could have been used to identify the level of body image disturbance and changes on other dimensions such as body image states or body image quality of life.

Furthermore, in vivo measures of cognitive and emotional response to body image distress as suggested by Vocks *et al.*, (2008) may improve the ecological validity of measuring body image disturbance. If a larger sample had been recruited a randomised controlled design would have been employed to improve the reliability and validity of the findings.

5.5.6 Design

A strength of the study was the comparison of a waiting list control group which allowed for more reliable evaluation of the findings as opposed to those solely based on pre and post treatment scores. Furthermore, the same measures were administered at different time points which allows for change to be evaluated over time. One limitation is that a follow-up assessment was not carried out. This was considered at the initial design stages of the study but given the time consuming nature of the trials, it was deemed better to focus on obtaining control comparison data. Therefore the study could be improved with the addition of a follow-up to investigate treatment effects over time.

For the purpose of evaluation for a pilot study, the body image treatment was specifically designed to be delivered over 6 sessions. This has shown to produce significant improvements on two areas which suggest that the treatment could be

improved. Therefore following consideration for previous body image studies with non-clinical samples (6-12 sessions) and the researcher's observations that a further 2-3 sessions would have allowed consolidation and further practice, it is suggested that the body image treatment is delivered over 9 sessions.

The study was also able to collect participant's views on the body image group treatment, which better informs the clinical implications of this study. Furthermore, a recent study by Roy *et al.,*(2006) indicated that there is limited published research exploring services users' views on eating disorder services and views on treatment received. Their questionnaire study with adults indicated a range of both positive and negative responses, with the majority commenting on the format and content of therapy and the therapeutic relationship. Therefore the exploratory findings are able to contribute to this key area of development in involving service users, as specified by integrated care pathway models.

5.5.7 Statistical Considerations

A limitation of the study is that completer analysis was not conducted given the small sample within this group. The author acknowledges that the conduct of completer data analysis would best reflect the effects for participants who have received a full course of treatment (Elkin *et al.,* 1989). Therefore the results of the intention-to-treat analysis may be considered an estimate of the overall performance of a treatment programme.

The study was able to report effect sizes which allowed the findings to be compared to relevant studies. However, as the sample was smaller than anticipated, firm conclusions cannot be given that the effect sizes are representative of the population as a whole.

The technique of content analysis has a number of advantages, however, one as independent coding was conducted by another researcher, this not allowed for reliability to be evaluated. However, the author examined the data in an objective

manner and received regular supervision through the process of data analysis and reporting of findings.

5.6 Clinically significant change

In intervention evaluation studies, it is usual practice to report the statistical significance of differences between treatments in terms of an alpha level of $p<0.05$ or <0.01. However, it is also important to measure the level of clinically significant change. The most commonly used methods to measure this change were devised by Jacobson and Truax (1991). The author was aware that if a larger sample had been achieved, this would have been investigated further. Upon examination of the mean scores for the completer sample, these continued to be above the clinical cut offs (Reported in Appendix 23) and therefore there was no reliable change to calculate.

5.7 The Current State of Body Image Interventions in Eating Disorders

As discussed, recent findings on the outcomes of two types of CBT-E suggest that further research studies are needed to evaluate the efficacy of the broad and focused treatment protocols (Fairburn *et al.,* 2009). In body image treatment, there is a growing emphasis on mindfulness based mirror exposure to improve cognitive, affective and behavioural components. There is preliminary support that this reduces body image disturbance (Vocks *et al.*, 2008).

There is also emerging literature on prevention programmes for body image dissatisfaction and low self esteem in adolescents. These are of a psychoeducational nature with discussions also around methods of self evaluation (McVey *et al.*, 2004). Further testing with those with high body dissatisfaction is required to validate the effectiveness of these approaches. However, given the high rates of body dissatisfaction and the range of negative consequences of eating disorders that continue to be hard to treat, this is an important area of development for body image research.

On reflection of the various risk and maintenance factors, these should be taken into consideration when developing prevention programmes that target people at higher risk. Particularly improving body satisfaction and low mood as well as increasing areas that are non-appearance related for evaluating self worth. Further attention should be paid to decreasing perfectionism and social pressures to be thin. Protective factors should be increased such as social support and self esteem.

5.8 Clinical Implications

There is evidence to suggest that the treatment evaluated in this study has improved two aspects of body image and could complement routine eating disorder CBT, as supported by findings for a brief CBT treatment for shape concern (Shafran *et al.*, 2009). It is also important to consider the negative effects of an eating disorder and therefore not giving these any attention in treatment may reduce the acquisition of benefit of the body image intervention. Furthermore, a small number of participants commented that they would like help with their eating disorder at the same time as body image. This clearly has significant implications for treatment.

The findings presented here and in consideration with others such as Shafran *et al.,* (2007) highlight a need for body image treatment to place an extended focus in eating disorder treatment and focus on decreasing body checking in order to improve body satisfaction, feelings of fatness and self-critical thoughts.

Studies such as Paxton *et al.,* (2007) suggest that a combined treatment addressing eating concerns and body image produces large effects for improved body satisfaction and medium effects for decreased avoidance, comparison and internalisation of the thin ideal. Whilst, this study was with a non-eating disorder sample, baseline measures were in the clinical range. Therefore, these findings support the efficacy of body image interventions in either a face to face group or internet delivery, with therapist online contact.

Based on only moderate outcomes on standard treatment for bulimia nervosa, further treatment trials need to be investigated. It is therefore possible that body image

interventions would target the 50-70% of patients who do not improve following CBT or IPT (Wilson, 2005) and particularly decrease the risk of relapse by addressing the over-evaluation and investment of shape and weight in those with bulimia nervosa.

As previously discussed in chapter 1, eating disorder not otherwise specified condition does not have a current evidence based treatment and therefore the application of body image treatment may improve understanding into effective treatment methods.

Compassionate mind training is being applied specifically to eating disorders with the work of Paul Gilbert (2005). This links well with mindfulness based approaches of self acceptance and reducing perfectionistic drives (Stewart, 2004). The process involves the development of positive affect such as warmth to encounter the hostility of self critical thinking in order to develop self directed compassion.

5.9 Future Research

These encouraging findings support further studies examining the efficacy of the body image group with a larger number of participants in a randomised controlled trial. As previously noted, the treatment protocol could be modified to extend to a 9 week course, with additional time spent on the application of mindfulness and mirror exposure.

As highlighted by Farrell, Shafran & Lee (2006) there is a distinct gap in the literature regarding the specificity of body image interventions and important individual components. Therefore, future studies could extend the current study by evaluating a short course of CBT for eating disorders and comparing to a stand alone body image group of same duration. This would aid the understanding of main contributing factors to the eating disorder.

5.10 Conclusion

To conclude, this pilot study has evaluated the effectiveness of stand alone body image treatment in those with bulimia nervosa and eating disorder not otherwise specified. Whilst the sample size is small, the results suggest that body satisfaction and checking cognitions can be improved with a CBT treatment, mindfulness techniques and mirror exposure. These findings are encouraging and contribute to the small evidence base for body image interventions in eating disorders. As routine treatment outcomes are only in the moderate range, body image therapy has the opportunity to alleviate high levels of body disturbance that have become persistent and detrimental to the person's life. Finally, the research design supports the conduct of a randomised control trial and also suggests further methods of evaluating the specific effect of body image therapy.

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APPENDIX 1

DSM-IV criteria for:

A. Anorexia Nervosa
B. Bulimia Nervosa
C. Eating Disorder Not Otherwise Specified

A. DSM-IV Criteria for Anorexia Nervosa

A. Refusal to maintain body weight at or above a minimally normal weight for age and height (e.g. weight loss leading to maintenance of body weight less than 85% of that expected or failure to make expected weight gain during period of growth, leading to body weight less than 85% of that expected).
B. Intense fear of gaining weight or becoming fat, even though underweight.
C. Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or denial of the seriousness of the current low body weight.
D. In postmenarchal females, amenorrhea ie, the absence of at least three consecutive cycles. (A woman is considered to have amenorrhea if her periods occur only following hormone, e.g. estrogen administration.)

- **Restricting Type:** During the current episode of anorexia nervosa, the person has not regularly engaged in binge-eating or purging behaviour (i.e. self-induced vomiting or the misuse of laxatives, diuretics, or enemas).

- **Binge-Eating/Purging Type:** During the current episode of anorexia nervosa, the person has regularly engaged in binge-eating or purging behaviour (i.e. self-induced vomiting or the misuse of laxatives, diuretics, or enemas).

B. DSM-IV Criteria for Bulimia Nervosa

A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:(1) Eating, in a discrete period of time (e.g. within any 2-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances.(2) A sense of lack of control over eating during the episode (e.g. a feeling that one cannot stop eating or control what or how much one is eating).
B. Recurrent inappropriate compensatory behaviour in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, enemas or other medications; fasting or excessive exercise.
C. The binge eating and inappropriate compensatory behaviours both occur, on average, at least twice a week for 3 months.
D. Self-evaluation is unduly influenced by body shape and weight.
E. The disturbance does not occur exclusively during episodes of anorexia nervosa.

- **Purging type**: During the current episode of bulimia nervosa, the person has regularly engaged in self-induced vomiting or the misuse of laxatives, diuretics or enemas.

- **Nonpurging type**: During the current episode of bulimia nervosa, the person has used inappropriate compensatory behaviours, such as fasting or excessive exercise, but has not regularly engaged in self-induced vomiting or the misuse of laxatives, diuretics or enemas.

C. Eating Disorder Not Otherwise Specified

Includes disorders of eating that do not meet the criteria for any specific eating disorder. Examples include:

A. For females, all of the criteria for anorexia nervosa are met except that the individual has regular menses.
B. All of the criteria for anorexia nervosa are met except that, despite significant weight loss the individual's current weight is in the normal range.
C. All of the criteria for bulimia nervosa are met except that the binge eating and inappropriate compensatory mechanisms occur at a frequency of less than twice a week or for duration of less than 3 months.
D. The regular use of inappropriate compensatory behaviour by an individual of normal body weight after eating small amounts of food (e.g. self-induced vomiting after the consumption of two cookies).
E. Repeatedly chewing and spitting out, but not swallowing, large amounts of food.

Binge-eating disorder: recurrent episodes of binge eating in the absence if the regular use of inappropriate compensatory behaviours characteristic of bulimia nervosa.

APPENDIX 2

INVITATION LETTER FOR PARTICIPANTS OF THE BODY IMAGE GROUP

The Cullen / Edinburgh
Traumatic Stress Centre
Royal Edinburgh Hospital
Tipperlinn House
Tipperlinn Road
Edinburgh EH10 5HF
Telephone 0131 537 6806 / 6874
Fax 0131 537 610

NHS
Lothian

Date
Invitation Letter
Version 2 (22/7/2008)
Enquiries to: Christine Watson

Dear patient,

I would like to invite you to consider getting involved in a research study looking at the effectiveness of a stand alone body image group for patients diagnosed with bulimia nervosa and eating disorder not otherwise specified.

Before you decide whether you would like to take part, it is important to understand why the research is being done and what it will involve for you. I have **enclosed an information sheet** about the research study and a **consent form**. Please read these carefully. Talk about it to your family and friends if you would like to. If you have any questions about the research, please feel free to contact me either:

by phone 0131 537 6806 (Mondays) or 01387 244495 (Tuesday to Friday)
or email cwatson@nhs.net

Please take your time to decide whether you wish to take part.

If you wish to take part in the study, please sign and return the consent form in the SAE provided and I will be in touch with you in due course to offer you an assessment appointment.

Thank you for considering taking part in the study.

Yours sincerely

Christine Watson
Principal Researcher
Trainee Clinical Psychologist
Enc. Information sheet for participants & consent form

APPENDIX 3

INVITATION LETTER FOR PARTICIPANTS OF THE WAITING LIST CONTROL GROUP

The Cullen / Edinburgh
Traumatic Stress Centre
Royal Edinburgh Hospital
Tipperlinn House
Tipperlinn Road
Edinburgh EH10 5HF
Telephone 0131 537 6806 / 6874
Fax 0131 537 610

Date
Invitation Letter
Version 2 (24/11/2008)
Enquiries to: Christine Watson

Dear patient,

I am writing to ask if you would consider taking part in a research study evaluating a stand alone body image group for patients diagnosed with bulimia nervosa and eating disorder not otherwise specified.

For one aspect of the study, I am comparing people waiting for treatment at the Cullen Centre, with those taking part in a body image group. I am therefore contacting you whilst you are waiting for treatment. If you choose to participate, you would be asked to complete a questionnaire pack on two separate occasions. If preferred, you will receive feedback on your scores. As per routine practice, you will receive your treatment at the Cullen Centre when your name reaches the top of the waiting list.

Before you decide whether you would like to take part, it is important to understand why the research is being done and what it will involve for you. I have ***enclosed an information sheet*** *about the research study and a* ***consent form****. Please read these carefully. Talk about it to your family and friends if you would like to. If you have any questions about the research, please feel free to contact me either:*

by phone 0131 537 6806 (Mondays) or 01387 244495 (Tuesday to Friday) or email cwatson@nhs.net

If you wish to take part in the study, please sign and return the consent form in the SAE provided and I will be in touch with you in due course.

Thank you for considering taking part in the study.

Yours sincerely

Christine Watson
Chief Investigator
Trainee Clinical Psychologist

Enc. Information sheet for participants & consent form

APPENDIX 4

PARTICIPANTS INFORMATION BOOKLET FOR BODY IMAGE GROUP

RESEARCH STUDY:

An evaluation of a stand alone cognitive behavioural body image group for patients with bulimia nervosa & eating disorder not otherwise specified

PARTICIPANT INFORMATION BOOKLET

Version 3: 22/07/08

Information leaflet for potential participants

Participants are being recruited to take part in an evaluation of a stand alone group for body image problems in people with bulimia nervosa. The research is being conducted as part of a qualification of Doctorate in Clinical Psychology at the University of Edinburgh.

Before you decide if you wish to take part, it is important that you understand why the research is being conducted and what will be involved. Please take time to read the following information with care and if you wish, feel free to discuss it with friends, relatives and the researcher. If there is anything that seems unclear, or you would like to know more about, please ask.

Thank you for taking time to read this information leaflet.

What is the purpose of this study?
The study aims to develop further understanding about the effectiveness of treatment of negative body image. Participants waiting for treatment at the Cullen Centre, for their eating disorder will be invited to participate. The information from this study will help people who work in this field to develop their knowledge in the best treatments for body image problems in people with bulimia nervosa.

What will happen if I take part/ what will I have to do?
If you agree to take part, you will be asked to meet the researcher at the Cullen Centre, where you can ask questions followed by an interview and complete questionnaires to ensure that you are a suitable participant for this study. The interview and questionnaires are intended to help identify if you are a suitable participant for the study and to also compare pre and post treatment scores. If your eating disorder has worsened since you were assessed by the Cullen Centre, it may be necessary to have your physical health checked by one of the Doctors and we will inform you of the results.

Participants meeting the research criteria will be randomly assigned to either the body image group or a wait list control group. The results will be compared to see which one is better. If assigned to the body image group, you will be asked to regularly attend a six week group for body image problems. These sessions will last two hours and you will be asked to complete homework between sessions to aid your progress. An audiotape of these sessions will be recorded for supervision purposes. It is anticipated that each group will have between 4-8 members. Following completion of the group, you will be asked to repeat the questionnaires immediately post treatment. This will take up to two hours of your time. If you are assigned to the wait list control group, you will be asked to complete a number of questionnaires at two different time points; assessment and 6 weeks later, taking up to two hours. During this time, you will remain on the waiting list for routine treatment. The body image groups will be repeated on several

occasions and you will be given the option of later attending a future group if you are still waiting for routine treatment.

Following completion of the research study, you will receive your routine treatment once you name has come to the top of the Cullen Centre waiting list.

What are the possible benefits of taking part?
In participating in this study, you will attend a body image group that uses cognitive behavioural therapy, which is an evidence based treatment for bulimia nervosa. For some people, body image problems contribute to their eating disorder and this may also help alleviate some of those symptoms. In order to get the most out of the body image group, it will be important for you to be open and contribute to the group discussions, set goals for yourself and try out homework tasks between sessions. Taking part in a group will give the opportunity to meet others with similar difficulties and support each other in making positive changes. You will also be helping to advance knowledge and the understanding of the benefits of a stand alone body image group in the treatment of bulimia nervosa.

What are the possible disadvantages and risks of taking part?
The nature of body image problems can make them hard to face and you may find this difficult during the group and afterwards. It is also possible that you may be suffering from physical health problems due to your eating disorder and these may only be identified when being assessed for participation in the group. If this is the case, the researcher will recommend that you seek advice and treatment from your GP. If you are in the waiting list control group, completion of the questionnaires may make you feel that you want treatment sooner and every effort will be made to accommodate you in a future group for treatment of body image problems. If you have any concerns or questions about the above, the researcher is more than happy to discuss this before you make any decision.

Should I take part?
It is your choice to decide whether you wish or do not wish to take part. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a consent form. You are free to withdraw at any time and your routine treatment will not be effected.

What if something goes wrong?
As the treatment will involve thinking and talking about your body image problems, there is very little that can go wrong. However, the researcher is ethically and legally obliged to tell you that there are no special compensation arrangements. If you are harmed due to someone's negligence, then you may have grounds for legal action but you may have to pay your legal costs. Regardless of this, if you wish to complain about any aspect of the way you have been approached or treated during the course of the study, the normal NHS complaints mechanisms will still be available to you.

Will my taking part in the study be kept confidential?
You may find it helpful to tell someone, such as a close family member of your GP that you are taking part in this study. The researcher will inform your GP that you are participating in the study, for medical monitoring if necessary. The researcher will only inform other parties if further information emerges that raise serious concerns about your health and well-being or the safety of another person. In this event, the researcher will discuss the process of this, with you. At the start of the body image group, all participants will be asked to keep information discussed confidential. You will also be encouraged to make an arrangement on an individual basis regarding contact with other members outside of the group sessions. The researcher will also need to share the content of group sessions with supervisors. However, all identifying information will be removed and will be held in a secure office in a locked filing cabinet.

What will happen to the results of the research study?
The results will be included in a Doctoral thesis for fulfilment of the Doctorate in Clinical Psychology by the researcher. It is also anticipated that the results will be presented at conferences and to relevant staff groups, as well as submission to an academic journal. The results will remain anonymous and all information remains confidential. The researcher would be happy to give you verbal and written feedback regarding individual response to the study.

Who is organising the research?
The researcher is a Clinical Psychologist in Training at the University of Edinburgh/East of Scotland Doctorate in Clinical Psychology Training Course.

Who has reviewed the study?
This study has been subject to review by Lothian NHS Research Ethics Committee. The study will also be reviewed on a regular basis by supervisors within the Clinical and Health Psychology Department at the University of Edinburgh and the Cullen Centre, Royal Edinburgh Hospital.

Contact for further information:
Please feel free to contact the researcher, Christine Watson on 0131 537 6806 (Mondays) or 01387 244495 (Tuesday to Friday) or email cwatson@nhs.net

Independent Advice:
If you would like to speak to someone other than the researcher about the study, Dr Patricia Graham, Clinical Psychologist, is available to offer independent advice. She can be contacted on 0131 537 6783 or email Patricia.Graham@nhslothian.scot.nhs.uk

You can also contact Eating Disorder Organisations such as Scottish Eating Disorder Interest Group http://sedig.members.beeb.net and BEAT, Beating Eating Disorders at www.b-eat.co.uk for further independent advice.

APPENDIX 5

PARTICIPANT INFORMATION BOOKLET FOR WAITING LIST CONTROL GROUP

RESEARCH STUDY:

An evaluation of a stand alone cognitive behavioural body image group for patients with bulimia nervosa & eating disorder not otherwise specified

Questionnaire Study

PARTICIPANT INFORMATION BOOKLET

Version 4: 24/11/08

Information leaflet for potential participants

Participants are being recruited to take part in an evaluation of a stand alone group for body image problems in people with bulimia nervosa. The research is being conducted as part of a qualification of Doctorate in Clinical Psychology at the University of Edinburgh.

Before you decide if you wish to take part, it is important that you understand why the research is being conducted and what will be involved. Please take time to read the following information with care and if you wish, feel free to discuss it with friends, relatives and the researcher. If there is anything that seems unclear, or you would like to know more about, please ask.

Thank you for taking time to read this information leaflet.

What is the purpose of this study?
The study aims to develop further understanding about the effectiveness of treatment of negative body image. The information from this study will help people who work in this field to develop their knowledge in the best treatments for body image problems in people with bulimia nervosa.

What will happen if I take part/ what will I have to do?
If you agree to take part, as a patient waiting for treatment at the Cullen Centre you will be asked to complete a questionnaire pack at two different time points, within a six week time period. It will take you approximately 30 minutes to complete the questionnaires each time.

You will receive your routine treatment once you name has come to the top of the Cullen Centre waiting list.

What are the possible benefits of taking part?
By taking time to complete the questionnaires, these will show you what areas you may want to work on using self help materials whilst on the waiting list and also once you begin treatment.

You will also be helping to advance knowledge and the understanding of the benefits of a stand alone body image group in the treatment of bulimia nervosa.

What are the possible disadvantages and risks of taking part?
By completing the questionnaires you may feel that you want treatment sooner, this however, may motivate you to use widely available self help materials for bulimia nervosa. If you have any concerns or questions about the above, the researcher is more than happy to discuss this before you make any decision.

Should I take part?
It is your choice to decide whether you wish or do not wish to take part. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a consent form. You are free to withdraw at any time and your routine treatment will not be effected.

What if something goes wrong?
There is very little that can go wrong with completing questionnaires. However, the researcher is ethically and legally obliged to tell you that there are no special compensation arrangements. If you are harmed due to someone's negligence, then you may have grounds for legal action but you may have to pay your legal costs. Regardless of this, if you wish to complain about any aspect of the way you have been approached or treated during the course of the study, the normal NHS complaints mechanisms will still be available to you.

Will my taking part in the study be kept confidential?
You may find it helpful to tell someone, such as a close family member or your GP that you are taking part in this study. All identifying information will be removed and will be held in a secure office in a locked filing cabinet.

What will happen to the results of the research study?
The results will be included in a Doctoral thesis for fulfilment of the Doctorate in Clinical Psychology by the researcher. It is also anticipated that the results will be presented at conferences and to relevant staff groups, as well as submission to an academic journal. The results will remain anonymous and all information remains confidential. The researcher would be happy to give you verbal and written feedback regarding individual response to the study.

Who is organising the research?
The researcher is a Clinical Psychologist in Training at the University of Edinburgh/East of Scotland Doctorate in Clinical Psychology Training Course.

Who has reviewed the study?
This study has been subject to review by Lothian NHS Research Ethics Committee. The study will also be reviewed on a regular basis by supervisors within the Clinical and Health Psychology Department at the University of Edinburgh and the Cullen Centre, Royal Edinburgh Hospital.

Contact for further information:
Please feel free to contact the researcher, Christine Watson on 0131 537 6806 (Mondays) or 01387 244495 (Tuesday to Friday) or email cwatson@nhs.net

Independent Advice:
If you would like to speak to someone other than the researcher about the study, Dr Patricia Graham, Clinical Psychologist, is available to offer independent advice. She can be contacted on 0131 537 6783 or email Patricia.Graham@nhslothian.scot.nhs.uk

You can also contact Eating Disorder Organisations such as Scottish Eating Disorder Interest Group http://sedig.members.beeb.net and BEAT, Beating Eating Disorders at www.b-eat.co.uk for further independent advice.

APPENDIX 6

CONSENT FORM
FOR BODY IMAGE GROUP

The Cullen / Edinburgh Traumatic
Stress Centre
Royal Edinburgh Hospital
Tipperlinn House
Tipperlinn Road
Edinburgh EH10 5HF
Telephone 0131 537 6806 / 6874
Fax 0131 537 610

NHS
Lothian

Patient Identifier Number:

Participant Consent
Version 3 (22/7/2008)
Enquiries to: Christine Watson

PARTICIPANT CONSENT FORM

Study: An evaluation of a stand alone cognitive behavioural body image group for patients diagnosed with bulimia nervosa & eating disorder not otherwise specified (EDNOS).

Main Researcher: Christine Watson

Please put a tick in each of the boxes to show that you have read the information:

1. I confirm that I have read and understand the information sheet dated for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactory. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected. ☐
3. I understand that relevant sections of my Psychology notes and data collected during the study will be examined by Christine Watson from NHS Lothian and NHS Dumfries and Galloway, where it is relevant to my taking part in this research. I give permission for this individual to have access to my records. ☐
4. I agree to my GP being informed of my participation in the study. ☐
5. I agree to physical health tests being conducted if indicated at the assessment interview to ensure that I am medically well enough to participate in the study. ☐
6. I agree to take part in the above study. ☐
7. I agree to maintain group confidentiality. ☐
8. I would like to receive feedback on my questionnaires and progress within the group. ☐

Print Name	Date	Signature
Name of Person taking consent	Date	Signature

When completed, 1 for patient; 1 for researcher site file; 1 (original) to be kept in medical notes

APPENDIX 7

CONSENT FORM
FOR WAITING LIST CONTROL GROUP

The Cullen / Edinburgh Traumatic
Stress Centre
Royal Edinburgh Hospital
Tipperlinn House
Tipperlinn Road
Edinburgh EH10 5HF
Telephone 0131 537 6806 / 6874
Fax 0131 537 610

Patient Identifier Number:

Participant Consent
Version 4 (24/11/2008)
Enquiries to: Christine Watson

PARTICIPANT CONSENT FORM

Study: An evaluation of a stand alone cognitive behavioural body image group for patients diagnosed with bulimia nervosa & eating disorder not otherwise specified (EDNOS).

Main Researcher: Christine Watson

Please put a tick in each of the boxes to show that you have read the information:

1. I confirm that I have read and understand the information sheet dated for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactory. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected. ☐
3. I understand that relevant sections of my Psychology notes and data collected during the study will be examined by Christine Watson from NHS Lothian and NHS Dumfries and Galloway, where it is relevant to my taking part in this research. I give permission for this individual to have access to my records. ☐
4. I agree to take part in the above study by completing the questionnaire pack. ☐
5. I would like to receive feedback on my questionnaires. ☐

Print Name	Date	Signature
Name of Person taking consent	Date	Signature

When completed, 1 for patient; 1 for researcher site file; 1 (original) to be kept in medical notes

APPENDIX 8

SUMMARY OF RECRUITMENT PROCESS

Recruitment process for body image group

The following gives a detailed account of the recruitment processes and outcomes for groups 1, 2 and 3.

1. Recruitment for Group 1 -September 2008 to January 2009

During this time, the Cullen Centre routinely carried out assessment interviews for new referrals which were approximately 8 weeks post referral. Treatment options would be discussed at the session and dependent on the patient's body mass index, they were given the option of either individual (qualified or trainee under supervision) or group treatment. Their name was then placed on the relevant waiting list.

In September 2008, there were 79 patients allocated to the qualified individual waiting list and 15 patients met the study inclusion criteria. These patients had been placed on the individual waiting list between January 2007 and August 2008. On the training case waiting list, there were 29 cases and 17 cases met the study inclusion criteria. These cases had been placed on the waiting list between July 2007 and August 2008. Therefore, a total of 32 participants were contact via mail and a reminder pack was sent three weeks later to non-responders. Five participants responded to this method of recruitment (16% response rate) between October and December 2008.

Following completion of retrospective recruitment methods, patients attending routine assessment appointments between September and January 2009 who were deemed to meet the inclusion criteria were given an information pack by the assessing clinician. They also gave the patient a brief account of the study. Information packs were also placed in the waiting area during periods of new patients assessments. In November 2008, provisional dates were given for the start of the first group to begin in January in order to speed up response times. During this time 30 patients were given information packs.

Outcome of Recruitment Process for Group 1

A total of 62 patients were informed of the study and 10 participants consented to the group (a response rate of 16%). Of the 10 returned consent forms, 8 participants attended for an assessment interview. One participant failed to attend the appointment and through telephone contact with the second participant, it was established that they were unable to attend the group time.

Following assessment interviews, 7 met the inclusion criteria and one met the exclusion criteria due to active suicide ideation. One participant was unable to attend the group session time and opted to participate in the waiting list control group. Therefore, a total of 6 participants were suitable and able to attend the group treatment sessions between 12th January and 16th February 2009. 10% of potential participants who consented to treatment, met the inclusion criteria and were able to attend Group one.

2. Recruitment process from January to June 2009

In January 2009, in response to pressures to decrease treatment waiting times, the Cullen Centre instigated a new referral management system and offered more treatment groups. The final decisions resulted in a discontinuation of assessment appointments and therefore referrals received from October 2008 were allocated to a treatment type on the basis of referral information. An additional routine group was also made available and the majority of patients allocated to this additional Cullen Centre group met the criteria for the current study. This had significant implications for recruitment of this study. In February, the Cullen Centre specifically requested that the principal researcher did not contact any patients allocated to routine group treatment to give the service time to organise their patient management system. At that time, there were 35 patients waiting for group treatment.

By the middle of March 2009, the referral management system was operational and at the end of March the Cullen Centre had fully recruited for their additional group. This therefore gave the current study a clear indication regarding which new referrals could be approached. Between March and April 2009, 38 patients were contacted, with a second invitation pack sent to non responders two weeks later.

Outcome of Recruitment Process for Group 2

A total of 10 participants returned consent forms (response rate 26%). Three participants failed to attend the assessment appointment and 1 participant met the exclusion criteria. Therefore 6 participants met the inclusion criteria and were able to attend the group sessions between 27th April and 8th June 2009 (commit to group response rate 16%).

3. Recruitment process from May to June 2009

The study attempted to recruit participants to conduct a third group from 15th June to 20th July 2009. At this time, the Cullen Centre was continuing to revise their waiting list and assessment for routine group treatment. They expressed concerns that the current study may confuse patients waiting for treatment and also believed that these patients would have commenced routine treatment by this time. Therefore they only gave permission for the principal researcher to contact patients allocated to the individual waiting list. However, the majority of the patients allocated to this type of treatment suffered from anorexia nervosa, interpersonal issues or binge eating disorder. Therefore this had significant implications for the number of patients that could be contacted. The principal researcher reviewed the waiting list on a weekly basis to identify suitable potential participants. There were additional difficulties with the speed of process of new referrals by the administration department and this further reduced the number of participants that the researcher was able to contact.

Given these limitations, the author made extensive efforts to attempt to conduct a third group. A total of 15 participants who had previously consented to the waiting list control group and had completed measures, were sent an invitation pack regarding the third group. A further 10 new referrals were contacted. A total of 4 participants returned the consent from (16% response rate). Three out of four participants attended an assessment interview. In one case, the participant had lost a considerable amount of weight and met the criteria for anorexia nervosa and was therefore unsuitable. A further two participants were due to start routine treatment, one for the new cognitive analytic group and the second would commence individual therapy by July. The principal researcher was informed of this prior to one assessment appointment and following another. The fourth potential participant

attended the interview and met the inclusion criteria. Therefore this yielded a 4% commit to group rate.

At this stage, the author further consulted her supervisors with regards to extending the recruitment time, despite being aware that this data would not be available for the thesis submission. Given the accumulation and a progression of limitations imposed on recruitment for the current study by the Cullen Centre, on 8th June 2009, a decision was made to end recruitment and no further groups were planned. The one remaining participant was informed of this outcome.

APPENDIX 9

GENERAL INFORMATION SHEET

Name:
.....

Address:
.....
.....
.....
.....

Date of Birth: ..... Age: .....

Gender: Male / Female

Diagnosis:
.....
.....
.....
.....

Date referred to CC: ..... Date assessed at CC:.....

Last measurements taken:
Height: .....
Weight: .....
BMI: .....

Duration of eating disorder: .....

Previous treatment for eating disorder: Yes / NO
If Yes, give details:
.....
.....
.....
.....
.....
Previous treatment for Psychiatric Condition: Yes / NO
If Yes, give details:
.....
.....
.....
.....
.....
Previous inpatient treatment: Yes / NO
If Yes, give details:
.....
.....
.....
.....

Blood Tests completed at assessment by CC: Yes/NO Date:.....
Results:.....
.....
.....

Assessment Measures	Score
EDE-Q	
BDI	
ASI-R	
BSQ	
BCCS	
BCQ	
BIAQ	

Frequency of purging behaviour:
.....
.....

Type of purging (change?):
.....
.....

Change since assessment by CC?
.....

Physical recordings at assessment:
Height: .....
Weight: .....
BMI: .....

Significant change?. .....

Repeat blood tests indicated?

Yes: GP informed: Date letter sent:

Results received:
.....

Outcome:
.....

No:

Suicide risk:
.....

APPENDIX 10

GROUP START DATE LETTER

The Cullen / Edinburgh
Traumatic Stress Centre
Royal Edinburgh Hospital
Tipperlinn House
Tipperlinn Road
Edinburgh EH10 5HF
Telephone 0131 537 6806 / 6874
Fax 0131 537 610

NHS
Lothian

Date: 14th April 2009
Enquiries to: Christine Watson

Dear

Re: An evaluation of a stand alone cognitive behavioural body image group for patients diagnosed with bulimia nervosa & eating disorder not otherwise specified (EDNOS).

Thank you for attending the screening appointment and agreeing to take part in the body image study. I am writing to inform you that the body image group will begin on **Monday 27th April, 3-5pm at the Cullen Centre.**

There will be between 6 people taking part in the group and it will be facilitated by Christine Watson, Trainee Clinical Psychologist and Lisa Ahern, Assistant Psychologist. Please note that there is a bank holiday on 4th May and consequently there will be no session that day.

The dates for each session are as follows:
Session 1: Monday 27th April, 3-5pm
Session 2: Monday 11th May, 3-5pm
Session 3: Monday 18th May, 3-5pm
Session 4: Monday 25th May, 3-5pm
Session 5: Monday 1st June, 3-5pm
Session 6: Monday 8th June, 3-5pm

I would be grateful if you could confirm your attendance on 0131 537 6806/6874. All being well, we look forward to meeting you again on the 27th April.

Yours sincerely

Christine Watson
Trainee Clinical Psychologist
Principal Researcher

c.c Cullen Centre

APPENDIX 11

GP LETTER

The Cullen / Edinburgh
Traumatic Stress Centre
Royal Edinburgh Hospital
Tipperlinn House
Tipperlinn Road
Edinburgh EH10 5HF
Telephone 0131 537 6806 / 6874
Fax 0131 537 6104

Date : 2009

GP Letter – Option 1
Version 3 (22/07/2008)
Enquiries to: Christine Watson

Dear Dr X,

RE:

I am a writing to inform you that the above person has agreed to take part in a research study looking at the effectiveness of a stand alone body image group for patients diagnosed with bulimia nervosa or eating disorder not otherwise specified. The study has been subject to review by NHS Lothian Ethics Committee and I am under supervision of Professor Mick Power, University of Edinburgh & Dr Patricia Graham, Clinical Psychologist, NHS Lothian.

The study will require that the above patient attends six week group treatment at the Cullen Centre whilst waiting for routine treatment at the Cullen Centre, Royal Edinburgh Hospital. The group will be taking place from 27th April to 8th June 2009. Once completing the group treatment, they will receive routine treatment at the Cullen Centre, once their name has reached the top of the waiting list.

If you become aware of any change in the patient's physical health during the course of the research study, please can you inform me at the above address. If the patient is found to have physical health abnormalities associated with their eating disorder, they may not be suitable for participation in the group and would need to be treated as usual within your GP practice whilst waiting for routine treatment.

If you have any questions regarding this, please feel free to contact me on 0131 537 6806 (Mondays) or 01387 244495 (Tuesday to Friday) or email cwatson@nhs.net

Many thanks in advance for your assistance,

Yours sincerely

CHRISTINE WATSON
Principal Researcher
Trainee Clinical Psychologist
c.c Cullen Centre, Royal Edinburgh Hospital

APPENDIX 12

RATIONALE FOR BODY IMAGE TREATMENT GROUP MANUAL

Rationale for Body Image Treatment Manual

The following sections outline the rationale for the general structure of group sessions including the overarching theory for body image therapeutic topics.

a. Homework feedback through discussion

Homework setting and discussion is a key part of CBT and an agent for change in eating disorders (Waller *et al.*, 2007). Therefore this was discussed at the beginning at each session; this enabled all participants to reflect on the changes they had made and consequences to thoughts, behaviours and feelings towards their body.

b. Group level reflection on homework

The group setting provided participants with an opportunity to reflect on how others had felt carrying out their individual homework and what they had learned. They were also able to discuss any difficulties they had encountered such as; exercises were emotionally provoking, effort required to challenge thoughts and change behaviours, difficulty in practicing mindfulness activities. Many of these difficulties are conceptualised as typical difficulties associated with therapeutic change. Therefore it is important to allow participants the opportunity to disclose these feelings and acknowledge that they are common experiences, whilst giving encouragement and support to continue their efforts by both the group therapists and other participants.

c. Therapist led discussion of body image topic and therapeutic area

Development of negative body image

Participants were encouraged to reflect on experiences that had shaped their body image development. This included reflecting on their thoughts, feelings and significant events over the course of their body image development from childhood through to adulthood, in specific developmental time period. They were prompted to identify when they first started to view their body negatively and if there were any significant events at that time. This may have included the effects of family and peers relationships as well as influences by school or hobbies. Further time was spent discussing family, peer and social attitudes to body, puberty, personality traits such as perfectionism, effect of significant traumatic events, and mental health

problems. These factors have all been identified as contributing to the development of negative body image (Cash & Pruzinsky 2004). Participants were given a homework activity using a worksheet called "this is my life" which required the person to reflect on the development of their body image whilst viewing photographs from birth to present day.

Maintenance of negative body image

This session introduced the psycho biosocial model of body image disturbance (Bell and Rushforth, 2008) to help participants understand how negative body image is maintained and triggered. The process begins by significant events and environmental influences that cause body image distress. This then becomes maintained by negative thoughts such as "no one likes me because I am fat" with persistent behaviours such as checking appearance or avoidance of social situations. Discussion also centred on the unhelpful nature of these thoughts and behaviours, which become a maladaptive way of coping with negative body image. A brief CBT model (Beck, 1995) was demonstrated on a flip chart and included participant's examples. The participants were also given handouts with blank maintenance diagrams to complete the maintenance cycle with statements and information relevant to themselves. Further homework activities enabled participants to monitor their negative body image in the context of situation, thoughts, feelings, behaviour and consequences. Participants also evaluated the pros and cons of their current situation in comparison to the pros and cons of changing their body image. These exercises are commonly used in the motivational enhancement in part of treatment for eating disorders (Treasure and Schmidt, 2001). This activity was intended to increase motivation to change in group participants.

Psychoeducation

This is a core part of CBT and in the context of body image it was important to give participants information that may aid change to their thoughts and behaviours. This involved group exercises examining the function of the human body in order to facilitate thinking that the body is more than just an object. This activity stimulates new thoughts and ideas in participants and they become more aware of the over-

powering nature of their body image preoccupation. The group therapist also gave information regarding the role of physiology and set point theory to help participants challenge unhelpful societal messages in their environment. Discussion also focused around current media messages and the differences in cultural values for body shape and weight, with an emphasis on historical changes in body shape. Through homework activities, participants monitored the effect of media and societal messages, with an emphasis on challenging any unhelpful or unrealistic ideas. Further time was spent on body image enhancement exercises such as pampering and physical activities for enjoyment and construction. The premise for these exercises was to encourage the participants to develop a more positive relationship with the body they have rather than striving to change it.

Changing negative body image behaviours

The aim of this session was to modify unhelpful body image behaviours, particularly given the relationship between maintaining negative thoughts. This involved discussing typical body image behaviours and CBT strategies to either decrease or stop checking behaviours, overcome body image avoidance and examination of comparison behaviours. Participants were also informed regarding the "moody mirror" concept (Cash, 1997). This highlighted changes in mood which are usually attributed to being ugly or fat. These changes were discussed with group members and consideration of other events in their life at that time. This allowed participants to become more aware of situational influences as opposed to any rapid physical changes in appearance. Participants were given written information on instructions for changing body image behaviours and homework sheets to work on specific areas relevant to their difficulties.

Mirror exposure

The principles of mirror exposure were applied in two sessions. Mirror exposure triggers cognitive and emotional related thoughts and feelings when completing the exercise. Mirror exposure was used in conjunction with mindfulness skills of acceptance and non-judgmental attitudes that have been found to be effective in studies such as Stewart (2004).

Therefore the focus of mirror work during these sessions was to introduce participants to non-judgemental methods of describing their bodies (Tuschen-Caffier *et al.*, 2003, Delinksy & Wilson, 2006) and also as a means to reducing emotional avoidance and any anxiety through graded exposure. During the conduct of mirror exposure, can be evident that a participant either over focuses or avoids certain body areas. Participants were encouraged to practise using the techniques when looking in a mirror on a daily basis and were given a handout to remind them of the process (appendix 14).

Changing negative body image thoughts and beliefs

The concept of thought challenging and testing out alternative thoughts and behaviours was the main content of the session through cognitive restructuring. Participants were first introduced to the ideas that eating disorders are maintained by an overvaluation of shape and weight (Fairburn *et al.*, 2003). They then completed a self-evaluation pie chart to understand how much emphasis they placed on appearance and discussion centred around difficulties with placing a large emphasis on shape and weight when evaluating self worth (Geller *et al.*, 1998). Further techniques involved those included in CBT-E for eating disorders (Fairburn *et al.*, 2003). This discussed the possibility of developing other self-evaluation domains, particularly those that were sociable and enjoyable. Conventional CBT strategies were employed such as cognitive restructuring techniques and participants were given written instructions and guidance for challenging negative thoughts and this process was discussed within the group and with the use of the flip chart. This encouraged participants to become aware of cognitive errors and ways of identifying more helpful body image thoughts and ways of testing these out. Through homework diary sheets they were encouraged to practise these skills and consider other aspects of their lives when evaluating their self worth.

Summary and reflection

The final session summarised the key areas of treatment and strategies applied through the body image group. Participants were invited to choose areas that they would like to practice further or answer their questions. There was also emphasis on what participants had learnt or changed during the group sessions and particular areas that they would continue working on. This rationale also identifies with the principals of relapse prevention and participants were encouraged to reflect on triggers to negative body image and how they would now manage these concerns. Given that this was a short treatment for body image concerns with varied duration, participants were strongly encouraged to continue working on the strategies learnt and moving towards acceptance of their body image.

d. Participants reflection on this topic area and practice of therapeutic activities in group discussion

The therapists gave participants the opportunity to ask questions and discuss any anxiety or distress. In addition to participants' reflecting on their own experiences, thoughts, behaviour and how this affected their mood and attitudes towards their body image. Participants were encouraged to develop an understanding between these processes, with particular focus on each area at individual sessions, before linking these components of CBT treatment at the final session. The remaining part of the sessions outlined specific strategies for changing thoughts and behaviours. These processes were discussed and participants were also given handouts with written instructions. During the therapist led discussions, the group worked through participants' examples of maintenance of negative body image using the appropriate techniques for each session. This gave participants an opportunity to practice homework activities and ask questions before the end of the session.

e. Explanation of homework for forthcoming week

Sufficient time was left remaining at the end of each session for instructions regarding the homework activities for the following week. This was important as it reiterates the importance of completing homework for therapeutic benefit.

f. Mindfulness practice exercise for 15 minutes

The final 15 minutes of each session, involving mindfulness practice in order to further develop participants' non-judgemental attitude towards their bodies, in addition to promoting adaptive ways of coping in a larger context that the participant could apply to their lives in the broadest sense. The session introduced participants to the theory and aims of mindfulness as well as different types of mindfulness practice. It is also gave participants the opportunity to discuss any questions and potential barriers that may arise in the group setting. Throughout the group, a variety of mindfulness practices were introduced to help participants develop different ways of being present within their daily lives.

There were four main mindfulness practices used and facilitated by the lead therapist. The first activity included mindfulness of breathing and this directed participants to notice the sensations of breathing in various parts of the body for a period of 5 minutes. This can be a difficult practice, given that there is less cognitive stimulation and therefore the mind can wonder. This exercise was repeated at two sessions, to give further practice and encouragement in this key area of mindfulness practice.

The body scan practice involved participants being directed sequentially to different areas of the body (from head to toes) over a period of 15 minutes. The body scan exercise encourages a greater awareness of the body and increasing the connection between negative emotions that can sometimes be manifested within the body. In the context of this study, it allows participants to be aware of their whole body and may extend their thoughts to the function of each part. This can assist with the process of decreasing selective attention to disliked areas of the body. The body scan practice is highly directed and participants receive the largest amount of instructions, which can give less opportunities for the mind to wander and therefore the participants are more focused on the present moment.

The mindfulness of senses exercise, directed participants to be aware of sensations in their environment and within their body. They were invited to focus on sensations such as taste, focus on sounds in their environment and if they carried out the exercise with their eyes open, the visual environment. Participants were encouraged to silently name the sensations and be aware of feelings associated with this.

The final exercise involved mindfulness with thoughts and feelings. Participants were given encouragement to observe a thought and feeling and let it go, without getting caught up with the content or placing a judgment. This exercise is particularly important and links to interventions for managing frequent negative and self critical thoughts about body image that are common in those with eating disorders. This provided an additional opportunity to practice being non-judgmental to general thoughts and negative body image thoughts, when triggered by situations or exposure.

At the end of each session, participants were encouraged to practice mindfulness exercises frequently and apply the general principles to all aspects of their daily lives where possible.

APPENDIX 13

BODY IMAGE TREATMENT GROUP MANUAL

Session 1
Introduction to the group treatment approach and understanding the development of negative body image

- Introductions to group facilitators and members
- Introduction to the group approach and aims
- Group rules & expectations

10mins

- Members are asked to discuss their goals, hopes and fears for the group. In pairs and then feedback to group. **10mins**
- Brief overview of treatment sessions. Members are informed that the group sessions will cover the following topics: **10mins**

Session Number	Main Topic
1	Understanding negative body image and its development
2	Understanding the maintenance of negative body image & identify targets for change.
3	Psychoeducation and encouraging positive body image activities
4	Challenge negative body image behaviours & mirror exposure
5	Challenging over-evaluation of shape and weight & mirror exposure
6	Summary and relapse prevention

Handouts & resources to be given out at relevant session

- Understanding body image development
- Body image diary
- Mindfulness handout and exercises
- Article by Brownell, K,D (1991). Dieting and the search for the perfect body: where physiology and culture collide. Behaviour Therapy, 22, 1-12.
- Ready to change & how I manage body image concerns at moment
- Basic facts about fat
- Common cognitive errors in people with negative body image
- Guidance for thought & belief challenging
- Evidence for and against a belief
- Behavioural experiment sheet
- Overcoming body checking and fixing
- Overcoming body image avoidance
- Exposure information sheet
- Non-judgmental stance
- Helpsheet for change: How I need to help myself now

Session one: Development of negative body image

Aims: Understand the concept of negative body image

Agenda:
1. What is body image?
2. Body image development
3. Homework task
4. Mindfulness exercise

Topic: Concept of body image

Discussion points to include:
What is body image?

Body image can be defined as the picture someone has in their mind about their appearance (i.e. size & shape) of their body and the attitude that they form towards characteristics of their body.

Thus there are three components of body image: the perceptual part, or how someone sees their body, the attitudinal part, how someone feels about how they think they look and the behavioural part, how these perceptions and attitudes influence someones behaviour. A negative body image can be in the form of mild feelings of unattractiveness to extreme obsession with physical appearance that impairs normal functioning.

Body Image Attitudes in Women

It is becoming increasingly common for women to feel unhappy with their body shape and weight. Many women feel very bad about their body, they don't like it, often try to hide it by avoiding activities they really enjoy doing, and would love to be able to change it.

In society, there are constant messages about the way one's body should look. The advertising and media worlds spend a lot of money convincing us that we should want to aspire to fit a certain "thin" ideal stereotype. The truth however is that very few women can look like "models", especially when comparing themselves to photographs and images of models in magazines. In fact, very few models in real life look the same as their photographs in fashion magazines. Apart from full body make-up they have had applied, professional lighting and a daylong team of make-up and hair artists, the picture has also often been air brushed and re touched before being published. Digital imaging can drop 10 kilograms from a woman's body, adjust it to appear shapelier, remove skin imperfections and blemishes, and whiten teeth and eyes. No wonder there is so much concern and preoccupation with one's physical appearance among women in society today. It is not your fault! Thinness has become a stereotype of female physical attractiveness, yet most women are not biologically

designed to be this way. This puts even more pressure on many women, as they are constantly faced with media images and influences about this "thin ideal".

Pressure like this may lead to a preoccupation with trying the latest fad diet, giving your money away to dieting companies, investing in gym memberships, and becoming disheartened about your own bodies. Feeling unhappy and disliking your body isn't good for anyone's self-esteem and when these feelings become really strong, it is often referred to as body dissatisfaction.

Body dissatisfaction can mean many different things. It may include being preoccupied about shape and weight and letting these things dominate your thoughts. A body dissatisfied woman may frequently worry about gaining weight and even distort her own perception of body size. Social situations may become daunting, exacerbating the scrutinization of one's own body and others by constant comparison. This can then lead to avoidance of social situations as they become increasingly too painful. Unfortunately, this avoidance then leads to feelings of loneliness and isolation, which affects our mood and our confidence. As you can imagine, this cycle then continues and the individual can become more withdrawn and unhappy.

Body dissatisfaction can often cause women to develop unhealthy eating behaviours in an attempt to control body shape and weight. However these behaviours only end up creating more difficulties. Dissatisfaction with one's body is a diagnostic criterion for eating disorders. A negative body image is associated with anorexia, bulimia and binge eating disorder. Many people with eating disorders who change their behaviour successfully continue to struggle with a negative body image. People with severe body image disturbance are more likely to relapse. For many women, getting over the desire to be thin or thinner is the most difficult part of recovery. It is therefore important for you to tackle your negative body image.

15mins

Topic: Understanding the development of negative body image

Discussion points to include:-

- History of body image development
  - Body image gradually forms, beginning in childhood. Many factors lead some people to view their body in a positive way, whilst others can develop upsetting and negative views.

- Influential factors

1. Historical influences – how past experiences have shaped how you view your appearance in the ways you do.
2. Current influences – experiences in everyday life that determine how you think, feel and react to your looks.

Identity is rooted in your experience of being embodied. By the age of two years, children can recognise themselves in the mirror and have some self-awareness. They later reflect on how other people view their appearance.
Pre-school children learn how society views physical characteristics e.g. Cinderella, Barbie and Ken. Children thus form a view of what is and isn't considered to be attractive and start to judge themselves on own appearance and how well it matches up to societal ideals.

Questions to consider:

When first focused or noticed your weight/shape/appearance?
First judge yourself by weight/shape/appearance?

Group member specific social pressures - Family/peer attitudes

What did others do/say about your weight/shape?
Recall critical incidents/events at that time which influenced body image
Developmental stages significant to body image – puberty and early relationships
Reflect on how these made you feel

Looking for exceptions
Was there anybody who didn't criticise your weight/shape/appearance?
Identify times when felt positive or non critical about the way you looked/ felt about body?
What was different? How did this feel?
What do you like about your appearance?

Additional influences
Influence of cultural and social norms- conform to a standard for physical attractiveness
Media influences

Sociocultural factors influence body dissatisfaction and eating problems through societal pressure on women to achieve an ultra slender body shape. One theoretical model has suggested that sociocultural pressures to have a thin body are transmitted by family, peer group and friends, and the media. These pressures influence how we internalise the "thin-ideal" stereotype, body dissatisfaction, and dieting behaviours. It is thought that the degree to which these factors impact on our own life depends on our self-esteem. Various societal influences from our family, peers, and the media have been demonstrated to be precursors to the development of dieting behaviour. These influences include modelling others, competitiveness, comparison with others and conforming. It has also been suggested that an individual with a lower sense of autonomy may be more vulnerable to these social influences of body comparison and internalising the "thin-ideal".

Family influences – comments/ mental health problems, illness, obesity
Life experiences contributing to low self-esteem or social anxiety

Life triggers – puberty, loss, rejection, perceived failure and trauma.
Perfectionism
Physical illness
Bullying
Sports

Impact of negative body image on current functioning:

- attitudes
- emotions
- self esteem
- functioning; social, work, relationships
- behaviour **40mins**

Homework

Use "This is your life – understanding your body image development" worksheet for describing how your body image developed and significant events that led to negative features.

5mins

Introduce mindfulness & exercise

15mins

Session 2: Maintenance of negative body image

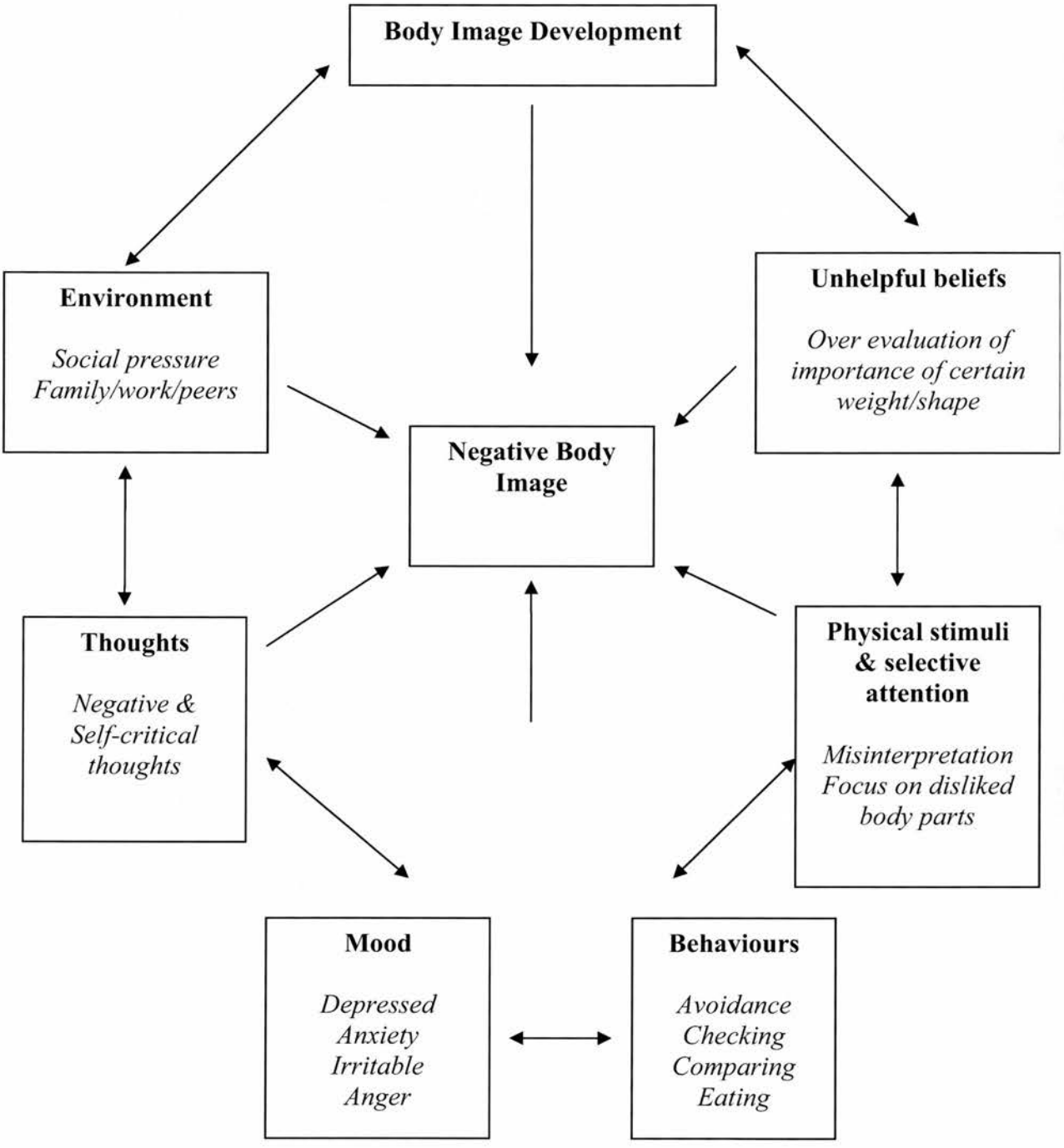
Aims: Understand how negative body image is maintained

Agenda:
1. Homework feedback
2. Formulation model of negative body image
3. Homework task
4. Mindfulness exercise

Homework feedback **15mins**

Introduce a formulation model of how negative body image is maintained by environmental factors, thoughts, beliefs and behaviours. Link this together with development of negative body image.

Bio-psychosocial formulation model



Group exercise

To use the flip chart for identifying maintaining factors that fit into the categories into the above formulation model. The diagram will facilitate discussion of maintaining factors and how these trigger eating disorder behaviours. Group members will be encouraged through group activity to share maintaining factors on both an individual or hypothetical level. It is anticipated that group member's responses will cover the following information below.

Maintaining Factors to discuss

1. Environment

General social pressures
- media
- culture

Group member-specific social pressures
- Family
- Work
- Peers

2. Behaviours

Body Avoidance
- Situations when feel self-conscious e.g. shopping, sport, exercise, intimate relationships, social situations

Discussion will lead onto informing the group how avoidance is an unhelpful long term strategy for the following reasons:

To convey that avoidance decreases distress in the short term but do not allow the person to see the situation differently. It prevents the person from learning that feared consequences do not occur.
It can also magnify the body image concerns by reinforcing a group members belief and does not allow them to deal with any feared consequences should they occur.

Body Checking

Frequent checking of aspects of appearance or weight
Examples
- studying and scrutinising appearance in mirror
- frequent weighing
- measuring body dimensions
- pinching folds of skin
- seeking reassurance from others about appearance

To convey that checking will give the group member some relief in the short term, but will then increase focus on areas of dissatisfaction. It can also contribute to a belief that checking helps prevent feared consequences (e.g. weight gain).

Comparison

Identify times when more likely to compare self to others. Is there a particular pattern to this behaviour. For example, who compare against and conclusions drawn from this behaviour. How often and where more likely to compare? Assess magazine & media usage for comparisons.

How does this feedback into thoughts about self and body image?

3. Eating disorder related behaviours

A brief discussion highlighting how body image concerns can trigger various types of eating disorder behaviours. For example, dieting, bingeing, purging, taking laxatives, diuretics and excessive exercise.

4. Negative thoughts

Discussion to focus on frequent negative and self-critical thoughts about body.

Introduce concept of thinking errors/ biases (give handout ....)
Encourage checking and avoidance and thus feedback into each other.

Self critical thoughts can be distressing and can often lead to further negative thoughts or to unhelpful behaviours. To allow the group to give example of this process.

5. Misinterpreting Physical Stimuli & selective attention.

Certain physical stimuli may be interpreted as fatness or weight gain. For example, the sensation of body wobble and premenstrual fluid retention. To normalise these processes and encourage a healthier attitude to these stimuli. Increased attention to disliked body parts, creates further anxiety and dislike.

6. Dysfunctional beliefs

It is thought that dysfunctional/unhelpful beliefs & appearance assumptions underlie negative thoughts about body image. These beliefs accumulate to an over-evaluation of the importance of weight and shape. Therefore, any perceived failures in this area will cause significant distress and maladaptive coping strategies. Through group discussion, identify specific beliefs.

Examples of some beliefs may include the following:

- only thin people are successful
- If I looked liked I wished, my life would be better
- I have to look perfect to gain respect
- Only thin people have self-control

Discussion to examine the maintaining processes:-

These beliefs maintain body dissatisfaction as they encourage a belief that the group member's appearance is responsible for low confidence, poor performance at work or relationship problems. Furthermore, the person may delay making attempts to improve other aspects until they have reached a specific weight or shape where they imagine themselves to be happier.

60mins

Homework

1. Using a body image diary to monitor and record triggers that activate negative body image thoughts, avoidant, checking and comparing actions.
   The handout will ask the group member to record the following information:-
   - triggers/situation
   - feelings
   - thoughts
   - behaviour
   - consequences

2. Motivational exercises
   - To list the pros and cons for current behaviour and pros and cons for improving body image. To use this as a motivation for attending group and trying out homework tasks.
   - Use the helpsheet ready for change & to identify specific body image areas to change/improve

15mins

Mindfulness exercise **15mins**

Session 3: Psychoeducation

Aims:

1. To view the body as a tool and not an object
2. Role of physiology
3. To examine social and media pressures on body dissatisfaction.

Agenda:

1. Homework review
2. Understand function of body
3. Role of physiology
4. Role of societal attitude and media towards appearance and beauty
5. Homework task
6. Mindfulness exercise

Homework Review

- To discuss what group members have learned from completing self-monitoring diary.
- Media exercise – what observed, noticed anything different?
- Pros & Cons and helpsheet to change exercises – to discuss in the group what members had noticed, common motivators and goals for change.

30 mins

Psychoeducation

The aim of psychoeducation is to relay information that may help a person to have a more informed view to about their body and its function.

Key topics to include are described below:

Understanding the functions of the body

The aim is to broaden a person's attitude to their body by becoming less focused on the body as an object and have a more balanced perspective. In doing so, it is hoped that group members would start to see their body as a vital instrument that tells a story about their life and possesses invaluable skills, functions and abilities.

Discussion questions will focus on:-

- What do you use your body for?
- What is its purpose?
- How does it achieve that?
- How has your life shaped your body?
- What innate abilities does your body have?
- What could you not do if your body was different?
- Who do you use your body with other people?
- How does your body interact with your environment?
- What messages does your body give you?
- How does your body change?

Group members will be encouraged to work in pairs to discuss 2-3 of these questions and then these answers will be discussed in the larger group.

The role of physiology

Following group members gaining an understanding into the development of their own body image it is useful to broaden their thinking onto the role of physiology.

Discussion to include:-

Set point theory

To introduce the hypothesis of set point theory that suggests that body weight/shape is genetically influence and that our minimum weight cannot be significantly altered over the long term without having detrimental consequences.

Thus eating a healthy regular diet and engage in reasonable exercise, your body will gravitate to a particular weight and natural fluctuations of 1-2kg per week will occur. By moving away from a healthy regime using eating disorder behaviours, this is difficult to maintain and has negative consequences.
Therefore following a healthy diet can lead to an increase or decrease in weight, but promote an acceptance of this weight being "meant to be".

The need for body fat for healthy biological functioning

Discussion to convey the following:-

- Importance of minimum level of body fat to function
- Women have a higher body fat than men. 25% compared to 10-15%.
- Lower levels of fat reduce resistance to disease, muscle weakness, irritability and can affect fertility
- Body fat levels increase rapidly during adolescence in young women of normal weight (body fat is approximately 16% at the start of adolescence and around 25% by the end)

- This increase is accumulated around the breasts, thighs and bottom – leading to a more womanly shape and laying down fat stores for optimum pregnancy
- Whereas in men, body fat is more centrally distributed and there is less dramatic change for a young man to deal with.

To give handout 2D5 from CBT for eating disorders- A comprehensive treatment guide. This handout reports basic facts regarding the function of body fat, food sources and why it is necessary for a healthy body.

The role of societal attitude & media towards appearance and beauty

Discuss how fashion magazines, television advertisements and shows, and films promote cultural "glorification of thinness" by equating it with attractiveness, happiness and success, while at the same time linking fatness with such negative attributes as laziness, ugliness and failure.

Consider what is the impact of the messages?

Discuss how many girls and women who cannot achieve the standards set by the media may experience shame and a sense of not being good enough. Without supportive parents and peers, many girls or adolescents may be unable to ignore images of ultra-thin models gracing media related pages.

How do these messages fit with the changes that happen to our bodies in puberty?

Ask if group members are aware of how the idealised images of women's bodies have changed over time from Marilyn Munroe to current icons that are usually medically underweight and often have eating disorders.

There have always been pressures on women to change their body shape (e.g. by use of corsets in Victorian Europe) and across cultures (e.g. by foot binding of women in China). Reflect on recent cultural practices e.g. cosmetic surgery, dieting, suntanning.

Discuss how these particular influences impact on the client. Validate how difficult it is to manage the competing pressures to be thin and the natural urges to eat. We are bombarded by images of food as a source of pleasure (M&S adverts!) or a symbol of closeness, sharing and celebration.

"There is scientific research that has found that visual images of thin models significantly contribute to an increase in body dissatisfaction, especially in people who already have body dissatisfaction or an eating disorder."

What could you do differently in order to not let magazines or watching TV/films make you feel negatively about your body?

Group Task – critically examine popular magazines
Look for articles related to weight/shape/dieting and observe the main message that the magazine is suggesting. Think about which magazines are more drawn to and why? What do you select to look at or read? How does looking at magazines impact on their body image?

45 mins

Homework

1. To read handout on basic facts about fat.

2. To read article by K. D Brownell (1991) on the clash between sensible eating and cultural expectations. Reference: Brownell, K.D. (1991). Dieting and the search for the perfect body: where physiology and culture collide. Behaviour Therapy, 22, 1-12.

3. Complete body image diary

4. Media Influences

Over the following week if you are watching television or reading a magazine, take note of the fashion pages and the product marketing pages, and think about the following questions:

- What do I see in this photograph?
- What messages does the photograph give me about the way women "should look"?
- How does the photograph/image make me feel about my own body and appearance?
- What am I thinking when looking at it?
- What is the magazine trying to sell me?
- How does the magazine want me to feel?
- Who do I know that looks like this?
- What effect do the images have on my life?

5. Group members are encouraged to introduce some of the following body image enhancement exercises that they may be avoiding or already apply but in an unhelpful way.

   - Non-judgement description of body

   Stand in front of mirror and describe your body, be aware when negative or critical comments enter your mind. Then let them go and simply describe what you see. For example, when looking at your hand – my hand has 5 fingers, nails and a few lines and creases from movement. As opposed to my fingers are fat and stumpy. The emphasis is on self-acceptance and tolerating negative feelings as they are experienced at that moment.

- Pampering and being kind to yourself
    - Long showers or baths
    - Use pampering body creams and think positive/more helpful thoughts when touching/seeing your body
    - Apply make-up, nail polish or a try a new hair style.
    - Treat yourself to a beauty treatment – for relaxation.
    - Shopping for clothes that make you feel nice and suit your shape.

- Physical activities
    - Exercise – what is its purpose? For pleasure or to burn off calories and when feeling guilty?
    - Introduce new activities that you would enjoy e.g. dance class, ice skating, horse riding, mountain biking, gentle walks in the country.
    - Less strenuous options – reading, knitting, making things, visiting museums and galleries, going to gigs and concerts.

15mins

Mindfulness exercise **15mins**

Session 4: Changing negative body image behaviours

Aim: To modify unhelpful negative body image behaviours
Agenda:
1. Body checking
2. Mirror use
3. Appearance fixing
4. Comparison
5. Avoidance
6. Mislabelling emotions
7. Homework task
8. Mirror exposure exercise
9. Mindfulness exercise

Homework review **30mins**

Using the self-monitoring diary sheet from the previous weeks, group members are asked to identify a key behaviour that has had a negative effect on their body image & or eating disorder. They are encouraged to decrease this behaviour over the next week using the following guidance and complete the modifying unhelpful body image behaviours diary sheet.

Strategies for changing negative body image behaviours

1. Body Checking

Identify and categorise type of shape checking e.g. studying self in mirror, weighing or pinching skin, measuring body parts, wearing certain clothes.

Examine your reasons for body checking – why do you do this? Does it help? Does it make you feel worse?

- Identify realistic goals
- Anticipate negative thoughts and feelings & work out a plan to deal with these.
- Either stop checking behaviours or gradually decrease and monitor the consequences of changing your behaviour.
- How do you feel now?
- Anticipate

2. Mirror use

Self-monitor the frequency &purpose
What looking for?
What person does?
Does it achieve what the person hopes?
How look/ feel after?

Reflections on mirror use....

How do we know what we look like?
Should we believe it?
What we see in mirror depends to a large extent on how we look
Scrutiny is prone to result in magnification – if you look, you'll find something you don't like
Contrast with accidental reflections e.g. shop windows

3. Appearance fixing

Self monitor type and triggers to fixing and grooming appearance
Duration of fixing and grooming
How helpful is this? How feel if didn't do this?
Goal – to gradually reduce the time spent on fixing and grooming

4. Comparison

Self-monitoring
Question how helpful is this to you?
Gradually reduce frequency of comparing
Behavioural experiments
- Compare every 3rd person of similar age.
- Scrutinise attractive people

Note down thoughts and feelings

5. Avoidance

Self monitoring – type, frequency and triggers to avoidance
e.g avoiding seeing reflection, wearing certain clothes to cover up or hide away, photos being taken, doing certain activities, social occasions, certain people, physical intimacy.

How helpful is this? Impact on thoughts & feelings?
Set goals - graded exposure with behavioural experiments

6. Feeling fat "moody mirror" - mislabelling emotions

Self monitor:

- Identify triggers
- Changes in intensity of emotions

Questions to ask yourself

- What else am I feeling right now?
- What else is going on?
- Are there others reasons for change in emotional state?

35mins

Homework

To modify negative body image behaviours using diary sheets.

Worksheets

- overcoming body image avoidance
- overcoming body image checking & fixing
- mirror exposure handout

15mins

Mirror exposure exercise (Individual with therapist)

- Encouragement and support to carry out exercise
- Decide on anxiety reduction level the participant would like to achieve.
- Two cards: Write "I am having a thought" and "non-judgemental stance".
- Rate anxiety on scale of 1-10.
- Stand in front of full length mirror
- Using the two thought cards, verbalise what thoughts, judgements and feelings that when viewing their body.
- Encourage the use of mindful breathing, observe and describe and non-judgemental stance while looking in mirror.
- If struggling to apply non-judgemental stance, ask them to observe and describe.
- Review anxiety level. End the exercise when reduced to the agreed level.
- Negotiate with participant to practice at home.
- Plan how to deal with raised negative body image after exposure.
- Encourage self-validating statements regarding what have achieved during the session.

15mins

Brief mindfulness exercise to let go of any feelings, thoughts, judgements.

5mins

Session 5: Over evaluation/investment in shape/weight/body and challenging negative body image thoughts

Aim: To challenge the over-evaluation/ investment in the thin ideal

Agenda:
1. Homework review
2. Self-evaluation pie chart
3. Challenge Irrational Beliefs of the Importance of 'Thinness' in Women
4. Cognitive re-structuring
5. Continuum thinking
6. Surveys
7. Homework task
8. Mirror-exposure exercise
9. Mindfulness exercise

Homework review **20mins**

The importance of the overevaluation of shape/weight is a core maintaining factor in negative body image and eating disordered behaviour.

Whilst most people judge themselves on a range of aspects of their lives, people with an eating disorder judge their self-worth on a limited set of criteria usually associated with shape & weight and other modes of self-evaluation are small. Therefore the aim of the session is to initiate a group discussion on how this maintaining factor impacts on group members' behaviour. Then introduce strategies for addressing unhelpful body image beliefs and assumptions

Negative body image thoughts can be categorised into number of thinking errors (see handout…) and are often activated in specific situations. Learning to challenging these negative thoughts, involves observing the thoughts, identifying the type of thinking error and respond with a more helpful thought.

This session will examine the common thoughts, beliefs and assumptions that people with negative body image hold. We will then look at challenging these using a variety of different strategies.

Firstly, lets look at how important our body is to us. Using an exercise called the self-evaluation pie chart…

<u>Exercises</u>

Self evaluation pie chart – each group member to complete alone whilst in group session

This task is used to allow group members to think about how they judge themselves. Introduction and prompts below & use flip chart to give an example:

"Most of us judge ourselves on aspects of our lives. What do you judge yourself on? What are the things that make you feel good about yourself if they're going well, or bad about yourself if they're not going well?....

By drawing a circle, like a pie chart, and then fit in the things that you've suggested. What do you want to start at 12 o'clock with.... and what proportion do you want allocate to that? Working clockwise.

"Looking at your pie chart, what do you think about the way you judge yourself? In what ways is it helpful or unhelpful to think like this?"

Alert to difficulties with this current method of self-evaluation:

1. The "all your eggs in one basket" dilemma. Shows that this is a highly risky strategy as if something goes wrong, will feel really bad. Give examples – workaholic who is made redundant...
   Pros/cons for basing self worth on shape & weight
   The aim is to encourage a more balanced view of self-evaluation so can cope better with disappointment or failure in one domain by identifying success or happiness in another or several others.

2. Choice of domain
   The use of eating, weight, shape as the key domain has an inherent problem that such goals are very difficult to achieve and maintain, and that they are very costly. To introduce the following ideas;

- Will always see someone who is slimmer or more attractive than they are, making it impossible to identify themselves as the best.
- This domain is particularly susceptible to the problem of "shifting goal posts", e.g. the continued downshifting of an "acceptable" weight or size.
- Focus on this domain comes at a huge personal cost (e.g. ill health)
- Focus on this domain limits the ability to succeed in other domains e.g. concentrate on work/university, maintain friendships and may even be internally inconsistent e.g. a restrictive diet can limit the ability to succeed in terms of exercise.

Overcoming limited focus of self evaluation

- Increase the importance of other domains
  Consider how would like to their life domains to be balanced in order to achieve their personal values. Consider what you used to want to do or always wanted to do, to elicit pre-existing beliefs and generate new ideas. Also look at pre-eating disorder activities and examine for evidence of high levels of perfectionism applied to all areas of life. To examine what are their talents and qualities? What else gives their life meaning and purpose?

- Continuum thinking
  Many people will place importance on their appearance but will also allow consider other domains e.g. allow themselves to feel successful even if they are not the thinnest person they know. Encourage a balanced approach to eating, weight & shape

- Develop a relationship with the body you have rather than striving to achieve the ideal one.

30mins

Strategies for modifying overevaluation of eating, weight & shape.

Challenge Irrational Beliefs of the Importance of 'Thinness' in Women

1. Who defines what is thin or fat?
2. Why is it that women strive to be thin?
3. Do you think there is a conspiracy or are there economic forces that control this look?
4. What are the costs to women to pursue this look?
5. Who benefits?
6. How do we all contribute to promoting this look?
7. What would women's lives be like if they weren't preoccupied with being slim or achieving this ideal?
8. There are some difficulties in resisting the "thin-ideal", how can these be overcome?
9. Is it a habit of thinking like this? What are your true values?
10. Are eating and body image problems the responsibility of the individual or the society?

- Discussion in pairs and then in wider group identifying overvalued beliefs and assumptions that group members hold about their shape/weight.

Cognitive restructuring

This exercise will be introduced to group members and they are asked to complete a thought challenging record for homework.

Group members will be given guidance on how to complete this during the session and an example will be used to help group members understand and clarify any questions they may have.

Using the worksheet evidence for and against a belief worksheet to identify and challenge negative body image thought, beliefs and assumptions.

1. Understand current belief using the questions below:
- Clarify if the belief is an assumption e.g. "no-one likes you when you are fat" might become "If I am fat, then people will not like me".
- Explore when and how the belief developed
- Identify a time when the group member did not think like

2. Consider the evidence in favour of the belief
- Identify and reflect on supporting evidence

3. Consider evidence against the belief using the following questions/prompts:
- "Has there ever been a time when you haven't thought like this?"
- "Has there ever been a time when this hasn't happened"
- "Do your friends or family agree with your belief that…."?

4. Identify thinking errors that might explain adherence to this belief:
   Some common thinking errors and identify specific examples within the group (give common thinking errors handout):

   Discuss how they would feel or act if they did not have these distortions

5. Develop an alternative belief

   The alternative belief is one that contradicts the current belief and be less rigid. Consider that previous evidence used to base beliefs on no longer applies or that it was for a limited time.
   Rate strength in belief from 0-100%

6. Seek evidence that allows the beliefs to be contrasted

   Monitor behaviour to determine the accuracy of belief.
   Think about how would feel without operating by these belief or rules.

Continuum thinking

Within the group session, the aim is to challenge the following:

- Black and white thinking (using steps 1-3)
- Two beliefs at a time e.g. only thin people are successful using steps 1-9)

1. Identify a common belief and current strength (0-100%) e.g. only thin people are successful
2. Think of ten people e.g. in the public eye
3. Draw one line with one end of line marked "thinnest" and the other end marked either the "least thin" or "fattest" dependent on group members' language and to place people on the appropriate place on the line.

4. Repeat step 3 with the line marked "most successful" to "least successful"
5. Reframe the current belief as a diagram saying "So the belief is that only thin people are successful. If I have that right, when we put these two lines together like this (drawing them at right angles on the flip chart), then we map your chosen ten people onto the graph, they should fall along this line (drawing a line at 45 degrees to both axes) – thin people will be successful, fatter people will be less successful and everyone else will fall along the line accordingly.

   Reflect on strength of belief, if less than 100%, it is likely that people will not fall exactly on the line. So lets give a bit of slack here, and say that people will fall very close to the line, if not exactly on it.

   How about we say that they should fall within this tight envelope around the line (drawing an ellipse to replace the diagonal line, with the tightness of the ellipse determined by the strength of the certainty of the rating). Is that fair?

   "What would it say if these people did not neatly fit this pattern (generating an alternative belief) and how strongly do you believe that?"

6. Testing the accuracy of current belief
   "Lets see how accurate this is and start by adding someone from your list" (Chosen randomly or alphabetic order).

   It will be expected that people will be scattered around the graph, rather than on the prediction line or within the ellipse. Therefore respond by "OK, what do we think about this belief? It does not appear to fit to the people you have chosen. What might be going on?

7. Encourage group members to re-rate the strength in belief and try to reframe it (e.g. did we have the right attribute to associate with thinness; did they pick the wrong ten people?). May respond by thinking that the importance of thinness is associated with a different attribute e.g. attractiveness.

8. Discuss what other attributes are reliably associated with e.g. thinness

9. Discuss that the "thinness results in attribute X" belief is not always true or feasible. But it may be that attribute X is what is being sought and look at alternative ways of achieving this, not associated with eating, weight or shape. Group to suggest alternative ways.

Surveys

This method can be used to challenge a belief by seeking other people's opinions.

Method - Identify a belief and develop an appropriate question to ask 10 other people that group member knows and survey there opinion. The survey will allow the belief to be tested, helping the group member to consider alternative interpretations.

30mins

Homework

1. Complete an ideal self-evaluation pie chart
2. Imagine writing an advert for yourself. What areas would you promote? Don't mention your looks, shape or size.
3. Challenging negative body image thoughts and beliefs using evidence for and against worksheet & common thinking errors.
4. Behavioural experiment – to test out alternative belief.

15mins

Targeted mirror exposure exercise (individual with therapist)

Decide on "hot spots" of body – most difficult parts of body
Repeat steps in session 4.

Mindfulness exercise **5mins**

Session 6: Summary and continued goals for change

Aim: To briefly summarise what the group treatment has covered in the previous five sessions and strategies the group has learnt to improve their body image. Use flip chart to outline and give brief details of main components within sessions.

Agenda:

1) Understanding body image development

- Historical & sociocultural factors

2) Understanding the maintenance of negative body image & identify targets for change.

- Body image formulation model
- Introduced body image monitoring
- **Motivation for change**

3) Psychoeducation and encouraging positive body image activities

- Function of body
- Role of physiology
- Societal attitudes to beauty
- Body image enhancement activities

4) Challenge negative body image behaviours

- Identifying and modifying negative behaviours e.g. checking, avoiding, unfair comparisons, and mislabelling emotions.

5) Challenging over-evaluation of shape and weight & negative thoughts

- Domains of self evaluation & how judge self worth
- Challenging negative thoughts & beliefs through continuum thinking, thought challenging, and testing out beliefs through behavioural experiments.

Through group discussion, members will be encouraged to reflect on what they have found helpful or unhelpful.

It is important to recognise that the treatment sessions have given the individuals skills to challenge their negative body image and group members will be encouraged to continue to apply these skills to reach their own personal goals.

95mins

Mindfulness exercise **15mins**

APPENDIX 14

HANDOUTS FOR SESSIONS 1-6

HANDOUTS FOR SESSION 1

UNDERSTANDING BODY IMAGE DEVELOPMENT

BODY IMAGE RESEARCH GROUP

Where: Cullen Centre, Meeting Room 1
When: Monday afternoons: 3-5pm
Duration: 6 weekly sessions
Session dates: Session 1: Monday 27th April, 3-5pm
Session 2: Monday 11th May, 3-5pm
Session 3: Monday 18th May, 3-5pm
Session 4: Monday 25th May, 3-5pm
Session 5: Monday 1st June, 3-5pm
Session 6: Monday 8th June, 3-5pm

Please note that there is a bank holiday on 4th May and consequently there will be no session that day.

Group Leaders: Christine Watson (Principal Researcher/Trainee Clinical Psychologist)
Lisa Ahern (Assistant Psychologist)
Ana Goncalves (Clinical Researcher)

Contact details for Christine Watson:
Cullen Centre – 0131 537 6806/6874 (Monday)
Dumfries Psychology Department – 01387 244495 (Thursday and Friday)

Introduction

Body image is a core problem for people with eating disorders and unless body image improves, there is a risk of relapse. Changing one's body image is not easy and one reason for this is that there are a range of habits people develop to try and manage their negative feelings, but in the long run actually maintain negative body image.

This treatment has been designed to specifically focus on improving negative body image prior to specific work on eating disordered behaviour. The treatment efficacy will be evaluated through a research trial to develop the knowledge base in the treatment of eating disorders.

Aims of the group

- To understand the development of negative body image.
- To understand the impact of a negative body image on thoughts, emotions, relationships and behaviour.
- To modify negative body image related thoughts and behaviours.
- To be able to consider the self as more than just an object
- To foster an acceptance of own self/body
- Mindfulness practice

Method

The treatment aims will be covered in six weekly sessions. It is an active treatment that requires changing the way you manage your feelings about your body. During the group sessions it would be helpful if you could share your experiences, listen to others and participate in group tasks. The group will also involve daily homework. You are unlikely to benefit unless you carry out the exercises recommended. We understand that this may not be easy for you, but also research and experience suggest that making certain changes and practising skills is essential for you to improve your body image. For this reason the treatment will be carefully explained and you will be asked to make a commitment. To participate in the treatment effectively, you will need to be willing to experiment with change and practice daily homework exercises.

Session overview

Session Number	Main Topic
1	Understanding negative body image and its development
2	Understanding the maintenance of negative body image & identify targets for change.
3	Psychoeducation and encouraging positive body image activities
4	Challenge negative body image behaviours & mirror exposure
5	Challenging over-evaluation of shape and weight & mirror exposure
6	Summary and relapse prevention

Group Rules

There are several group rules that are important for group members to follow whilst participating in a group treatment. This will help members to feel safe, honest and open with each other. These expectations are listed below:

- **Confidentiality**
  The group leaders are ethically and legally bound by confidentiality to not reveal any information about you or your participation in the group without your written permission unless it is determined that you are in eminent danger of harming yourself or someone else. In these cases the group leaders are required by law to take action even if it breaks confidentiality. You should also be aware that as this is a research trial the group leader will discuss the group for the purpose of supervision.

  The other members of the group are not legally bound to maintain confidentiality. However, it is essential that confidentiality be maintained by all members of the group in order to have trust and safety in the group. You are not allowed to reveal names or identifying information about any of the other members outside of the group. You may talk about your own experience in the group or things that were said to you, but not under no conditions should you talk about other members' experiences etc.

- **Commitment:**

  Each member must be committed to the group and its goals of openness, honesty and the promotion of change. Please be on time and present for each session. If you must miss a session, please notify the group leader before the session that you will be absent or late.

- **Safety:**

  It is important that the group is a safe environment where members can express themselves openly and honestly. Members are encouraged to promote this value by not intentionally harming themselves or other members, by either physical or verbal means.

- **Contact with other members outside of the group:**

  Although contact with other group members outside of the group is not prohibited, any contact you should have should be undertaken with caution. However, it is unhelpful if people are meeting outside the group in a secret way.
  It is also important that as a group you decide how to manage unexpectedly seeing another group member when out with the session to ensure confidentiality and personal boundaries.

- **Self-destructive behaviour**

  Each group member will have some self-destructive behaviour e.g. starving, bingeing, vomiting. The aim of the group is to work on stopping these behaviours through improving your body image and group members should not be encouraging others in their behaviour or describing their own behaviour in a way that might encourage others.

  We also expect group members to refrain from these behaviours within the building.

- **Crisis management**

  If you become significantly unwell during the group sessions and feel low in mood. Please contact your GP or relevant mental health profession to help support you during that time.

  The Psychiatric Emergency Team at the Royal Edinburgh Hospital can be contacted on 0131 537 6463.

Session 1 - Summary

Body Image and understanding body image development

What is body image?

Body image can be defined as the picture someone has in their mind about their appearance (i.e. size & shape) of their body and the attitude that they form towards characteristics of their body.

Thus there are three components of body image: the perceptual part, or how someone sees their body, the attitudinal part, how someone feels about how they think they look and the behavioural part, how these perceptions and attitudes influence someone's behaviour. A negative body image can be in the form of mild feelings of unattractiveness to extreme obsession with physical appearance that impairs normal functioning.

These features can be seen in perceptual distortions, body dissatisfaction for failing to meet unrealistic size and weight goals, negative mood, over investment in the importance of appearance, weight and shape, pursuit of thinness through dieting and other weight loss measures. Further problems are seen in avoiding, checking and comparing your body to others.

How does a negative body image develop?

Body image gradually forms, beginning in childhood. Many factors lead some people to view their body in a positive way, whilst others can develop upsetting and negative views.

Through the understanding my life exercise you have reviewed the development of your body image and noted how past experiences have shaped how you view your appearance in the ways you do.

It is also important to understand how your current experiences in everyday life determine how you think, feel and react to your looks.

Questions that you have considered:

- Recall critical incidents/events at that time which influenced body image
- Developmental stages significant to body image – puberty and early relationships
- Reflect on how these made you feel
- When first focused or noticed your weight/shape/appearance?
- First judge yourself by weight/shape/appearance?
- What did others do/say about your weight/shape?

Looking for exceptions

- Was there anybody who didn't criticise your weight/shape/appearance?
- Identify times when felt positive or non critical about the way you looked/ felt about body?
- What was different? How did this feel?
- What do you like about your appearance?

Additional influences

- Cultural and social messages
- Media influences
- Perfectionism
- Physical illness
- Bullying
- Sports

Homework

Complete the understanding my life and bring this to the second session to help you think about your own body image formulation.

"This is My Life – Understanding your body image development"

Instructions

This worksheet is designed to demonstrate the story of your life through your body image. Gather pictures of yourself throughout your life so far and organise them in age-ascending order. Think about what your body image was at each of these stages of your life.

In the space below attach the photos of these times in your life and next to the photos note your body image and any influential events and experiences:

The photographs will help trigger memories, thoughts and feelings. Here are a few things to think about when considering what you feel:-
Where are you positioned in relation to family/friends/peers?
Do you look happy, sad, or .....?
Are you part of the group or alone?
How were you feeling about yourself and body at the time?

Ingredients

Photos of you throughout your life
Glue
Coloured Pens

1. Early Childhood (birth to age 8)
  
Thoughts about what I look like and my physical appearance:
Influential Events and Experiences:
Interpersonal – who was around? Did they have any influence on your thoughts and feelings?

2. Later Childhood (age 8 to puberty)

Thoughts about what I look like and my physical appearance:

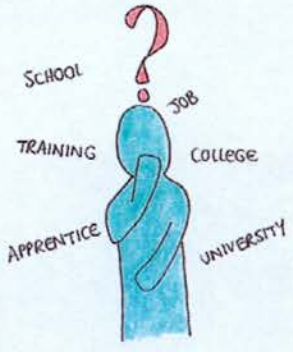
Influential Events and Experiences:

Interpersonal – who was around? Did they have any influence on your thoughts and feelings?

3. Early Adolescence (during the physical changes of puberty)
         
Thoughts about what I look like and my physical appearance:
Influential Events and Experiences:
Interpersonal – who was around? Did they have any influence on your thoughts and feelings?

4. Later Adolescence (up to age 21)

Thoughts about what I look like and my physical appearance:
Influential Events and Experiences:
Interpersonal – who was around? Did they have any influence on your thoughts and feelings?

5. Adulthood (age 21 to last year)

Thoughts about what I look like and my physical appearance:
Influential Events and Experiences:
Interpersonal – who was around? Did they have any influence on your thoughts and feelings?

Self – Reflection – *What do you think?*

Having completed this, try to write down your thoughts. Try to be very specific, a bit like a comic strip character does…..

Try to capture the *actual* words that go through your mind as you complete the tests.

_____

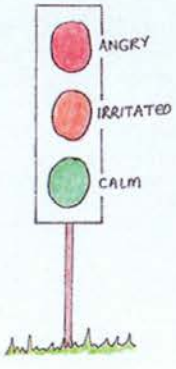
_____

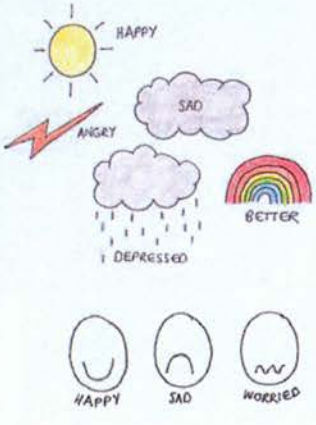
_____

_____

_____

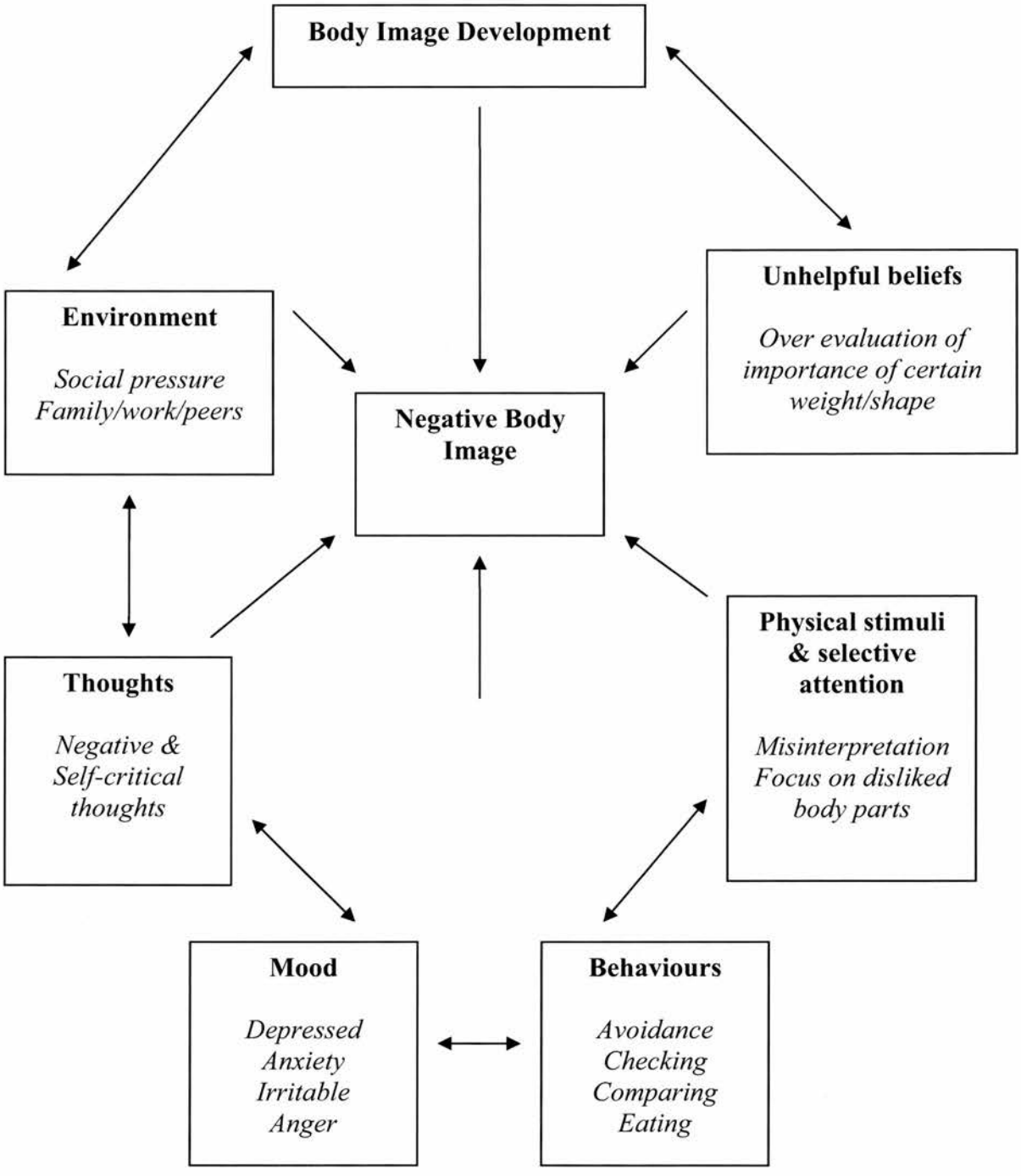
Can you describe your feelings?! If not in words, can you use pictures or symbols? Maybe colour describes your feelings? e.g. red might be anger, blue might be sad. You could use a traffic light symbol, like the example. Use the space below to explore……

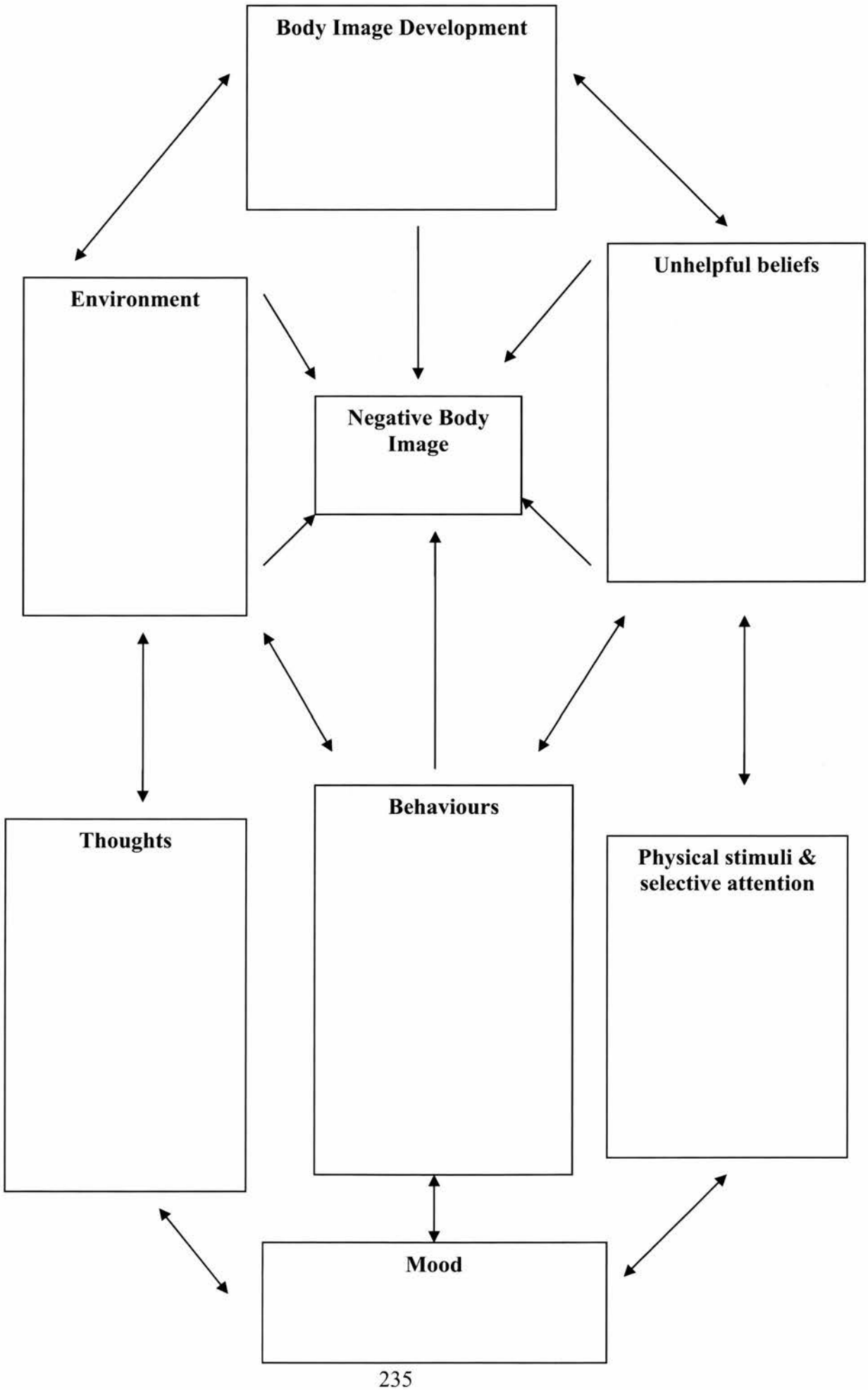




HANDOUTS FOR SESSION 2

MAINTENANCE OF NEGATIVE BODY IMAGE


Body Image Development
Environment
Social pressure
Family/work/peers
Unhelpful beliefs
Over evaluation of importance of certain weight/shape
Negative Body Image
Thoughts
Negative & Self-critical thoughts
Physical stimuli & selective attention
Misinterpretation
Focus on disliked body parts
Mood
Depressed
Anxiety
Irritable
Anger
Behaviours
Avoidance
Checking
Comparing
Eating


Body Image Development
Environment
Unhelpful beliefs
Negative Body Image
Thoughts
Behaviours
Physical stimuli & selective attention
Mood

Are you ready to change?

To get the most out of this group, you need to have made the decision for yourself that you really want to change, and that you are tired of being preoccupied with your weight, and thinking too much about the way you look, and the shape of your body.

We understand that this can sometimes be very difficult to do as some people feel as if they have two different parts to themselves that often don't agree. It can feel as if one side of you is being pulled by the body image and eating force and the other side wants to protect you from this and wants you to get well.

We will be helping you to explore the pros and cons of change, and any fears or concerns you might have. Many of us fear change from behaviour that is so familiar, and then another part is desperate to escape the tiring cycle of worrying about the way we look, restricting food, losing weight and then putting weight back on. It is sometimes helpful to write our thoughts down, to make them appear more organised, and then it is easier to deal with them one by one.

Task

Your Life

• (1) How does feeling unhappy with your body image, dieting, and binge eating, affect you?

Write a list of the ways it affects you. Thinking about your: -
- physical health
- psychological health
- social life
- family life
- romantic life
- education and career
- financial security

• (2) How would things be for you if you felt more positive about your body?

Comment on your: -
- physical health
- psychological health
- social life
- family life
- romantic life
- education and career
- financial security

How I currently manage my body image concerns

1. How would you summarise your thoughts and feelings now about your body?

2. How do you currently manage these thoughts and feelings?

3. How does this help you to manage your thoughts and feelings?

4. What are the costs for you of your current strategies?

Physical characteristics I need to feel better about:

I need to .....

I need to .....

I need to .....

Body image emotions I need to control and eliminate:

I need to .....

I need to .....

I need to .....

Physical ideals (shoulds) I need to emphasise less:

I need to .....

I need to .....

I need to .....

Negative thoughts I need to get rid of:

I need to .....

I need to .....

I need to .....

Positive thoughts I need to have more of:

I need to .....

I need to .....

I need to .....

Negative behaviours I need to get rid of:

I need to .....

I need to .....

I need to .....

Positive behaviours I need to have more of:

I need to .....

I need to .....

I need to .....

Situations I need to learn to cope with better:

I need to .....

I need to .....

I need to .....

Appearance-invested behaviours (checking/fixing) I need to change:

I need to .....

I need to .....

I need to .....

Fitness/health orientated behaviours I need to change:

I need to .....

I need to .....

I need to .....

Additional body image related areas for change:

.....
.....
.....
.....

BODY IMAGE DIARY

Record on the body image diary times when: you were thinking, negatively about your body; you avoided situations because of the way you felt about your body or you were checking your body in an inappropriate way.

Situation	**Feelings**	**Thoughts**	**Behaviour**	**Consequences**	**Alternative thoughts & behaviours**

HANDOUTS FOR SESSION 3

PSYCHOEDUCATION

Homework – week 3

Studying Media Influences

Over the following week if you are watching television or reading a magazine, take note of the fashion pages and the product marketing pages, and think about the following questions:

- What do I see in this photograph?
- What messages does the photograph give me about the way women "should look"?
- How does the photograph/image make me feel about my own body and appearance?
- What am I thinking when looking at it?
- What is the magazine trying to sell me?
- How does the magazine want me to feel?
- Who do I know that looks like this?
- What effect do the images have on my life?

Body Image enhancement exercises

Group members are encouraged to introduce some of the following body image enhancement exercises that they may be avoiding or already apply but in an unhelpful way.

- Non-judgement description of body

  Stand in front of mirror and describe your body, be aware when negative or critical comments enter your mind. Then let them go and simply describe what you see. For example, when looking at your hand – my hand has 5 fingers, nails and a few lines and creases from movement. As opposed to my fingers are fat and stumpy. The emphasis is on self-acceptance and tolerating negative feelings as they are experienced at that moment.

- Pampering and being kind to yourself
  - Long showers or baths
  - Use pampering body creams and think positive/more helpful thoughts when touching/seeing your body
  - Apply make-up, nail polish or a try a new hair style.
  - Treat yourself to a beauty treatment – for relaxation.
  - Shopping for clothes that make you feel nice and suit your shape.

- Physical activities
  - Exercise – what is its purpose? For pleasure or to burn off calories and when feeling guilty?
  - Introduce new activities that you would enjoy e.g. dance class, ice skating, horse riding, mountain biking, gentle walks in the country.
  - Less strenuous options – reading, knitting, making things, visiting museums and galleries, going to gigs and concerts.

HANDOUTS FOR SESSION 4

CHANGING BODY IMAGE BEHAVIOURS

Overcoming body checking and fixing

Using the record diary to decrease checking and fixing.
Note down your thoughts & feelings before, new behaviour and how you think & feel afterwards.

Situation	Feelings before	Thoughts before	Modified behaviour e.g. decreased checking or fixing	Feelings after	Thought after	Outcome

Overcoming body image avoidance

This worksheet will help you identify your type of body image avoidance and how much this distresses you. Subjective units of distress (SUDS) is a numerical rating from 0-100 that indicates your level of distress or anxiety related to your body image avoidance. Following this, rate from easiest to most feared aspect of body image. This will direct your graded exposure programme.

SUDS Rating	Level of distress
0	No distress – feel relaxed and calm
25-49	Mild level of anxiety – but can still cope with situation
50-64	Moderate level of distress – becoming difficult to cope with.
65-84	High level of distress & it is really difficult to cope. Start thinking how to get out of situation
85-100	Severe to extreme level of distress and you think you cannot cope. Your body response & thoughts, make you think you cannot stay in the situation any longer

List type of body image avoidance	SUDS	Gradual exposure Number from easiest to most feared

Graded exposure to avoidance

An effective way to control avoidance is to "avoid avoiding" by facing your fears. There is substantial evidence that people can overcome their anxieties by gradually exposing themselves to whatever they anxiously avoid.

Starting with the situation that causes you the least distress according to your SUDS rating, you will gradually work your way up to the most distressing body image situation.

Learning to PACE yourself

By putting together a positive plan of action you will become confident and master your avoidance.

Prepare
- Decide what you are going to do and when you are going to do it.
- It is likely that negative thoughts & feelings will come up so by having positive self statements before hand, you can cope better with any critical or negative thoughts.

Act
- Do it!
- Encourage and commend yourself for your actions

Cope
- As uncomfortable thoughts and feelings come up – draw on your coping skills and roll with any discomfort.
- Apply
  - positive statements or more helpful thoughts
  - breathing techniques
  - calming imagery

Enjoy
- Reward and praise your accomplishment

Reflect
- What did you learn?
- Did you feel different than expected?

Facing your body image avoidance

Practice, place, person avoided:

.....
.....
.....
.....

Step by step plan for facing it:

.....
.....
.....
.....

Prepare: exactly what will I do?

.....
.....
.....
.....

Act: Where? When? For how long? What will I do if I get "cold feet"?

.....
.....
.....
.....

Cope: What uncomfortable thoughts and feelings do I expect and how will I cope with them?

.....
.....
.....
.....

Enjoy: How will I reward my efforts?

.....
.....
.....
.....

Reflect: What did I learn? What were the results of facing it?

.....
.....
.....
.....

S8 *Exposure treatment*

The aim of this part of your treatment is to reduce and overcome the negative emotions you experience and give up critical negative self-judgements about your body or body image. This involves:

1. confronting feelings and perceptions that you are likely to have been avoiding;
2. actively changing your stance (thoughts and judgements) towards yourself and your body).

In order to do this, you will be actively using all the skills you have developed in mindfulness, non-judgemental stance and compassion, and drawing on your experiences from the 'Changing unhelpful habits' worksheet.

This exercise is going to involve viewing yourself in a full-length mirror.

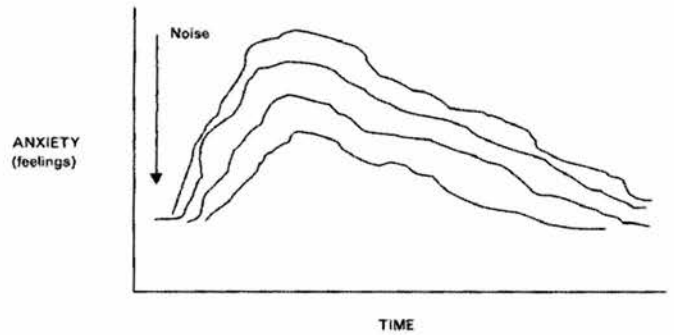
1. Confronting feelings and perceptions that you are likely to have been avoiding

The basic principle of this element of your treatment is exposing you to 'stimuli' that trigger negative thoughts and feelings until they reduce and your capacity to tolerate these feelings increases. This principle is called **habituation**. Using the mirror, we will be exposing you to your thoughts, feelings and judgements about your body.

This may sound scary, so to illustrate the principle of habituation we'll use a simple example. Imagine you hear a really loud noise right now. Your response would probably be an immediate startled response (e.g. 'Oh my goodness what's that?!') and your anxiety could be quite high. The anxiety would stay high until you realised that the noise did not prove any threat to you, or signal any imminent danger. At this point your anxiety and thoughts would tail off, and fade.

Now imagine that you hear the noise a second time; initially, your startle response would be quite high, but as you remember your previous experience it would be less sharp and would last a shorter time (e.g. 'Oh

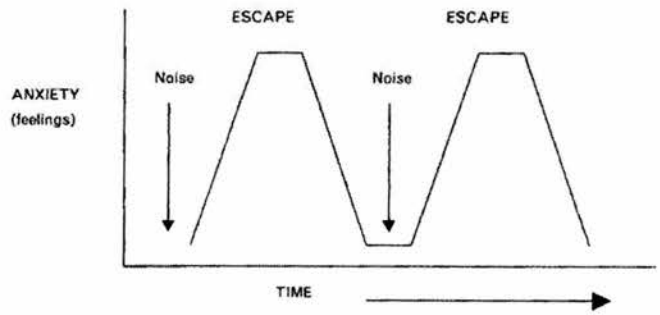
it's just that sound again'). This pattern would continue, until hearing the noise produced very little response at all (see the anxiety/noise/time graph below).



This is the basic process by which **exposure** works. The more frequently you expose yourself to the thing that makes you anxious, the more you get used to it and the more your anxiety should decrease. Research shows that, provided exposure continues for long enough, your anxiety will always eventually reduce.

Relating this to the work you have done so far, through the checking and avoiding behaviours that you have previously identified, you have been *avoiding* facing your thoughts and feelings about your body. For exposure to work you will need to actively confront the negative emotions that you have previously been avoiding. These emotions could be anxiety, disgust, shame or a combination of these. They are made up of thoughts, feelings, perceptions and judgements.

Another crucial point is to *stay* with your negative emotion. If you escape too early from experiencing the emotion – as, for example, by fleeing from the room in the case of a sudden noise – you would not learn that the noise was not a threat and therefore every time you heard the noise, your anxiety response would be the same. You may feel better in the short term if you escape, but you will be equally afraid next time you hear the noise (see anxiety/escape/time graph below).



Avoidance is similar to escape in that it effectively reduces your distress in the short term but in the long term perpetuates the problem and prevents you from learning other coping strategies. So, by avoiding a confrontation with your thoughts and feelings about your body (through checking and avoiding behaviours or compulsive exercise), you are 'escaping' from experiencing negative emotions and therefore preventing them from naturally decreasing.

The important point is to persevere with the 'exposure' until the negative emotions start to lessen, and to be prepared to go on until they do. Everyone needs a different amount of time for this. Rating your distress on a 10-point scale or as a percentage score out of 100 can be helpful.

2. Actively changing your stance (thoughts and judgements) towards yourself and your body

In addition to exposing yourself to the distress (i.e. negative emotions) you feel at looking at your body, you also need to address the thoughts, beliefs and judgements that occur at that time. In order to do so, you will need to use the building blocks that you have been developing in your treatment so far. To effectively change your stance towards your body, you will need to access your skills in both **mindfulness** and **non-judgemental** stance and your experiences of taking on difficult challenges.

To illustrate the importance of exposure to negative emotions and to challenging judgements and thoughts, consider the following example:

Imagine that Anna, a recruitment consultant, is getting ready for a date. She has been asked out by Ben, a man she works with and has liked for a while. She has been looking forward to the evening for a long time and has bought a new outfit especially for the occasion. On the night she is filled with anxiety; what if he doesn't like what she is wearing? What if they have nothing to talk about? What if he thinks she looks fat? She stands in front of the mirror and looks at herself in her outfit; her head is immediately full of thoughts and judgements about her body and her appearance. 'My stomach looks massive in this dress. I look really fat. I look awful.' Her anxiety is so high that she decides it would be best to phone Ben and cancel their date. She stays in all night in front of the television; her anxiety has been relieved in the short term. However, her anxiety begins to rise again at the thought of seeing Ben at work on Monday morning.

Now, imagine the situation again. Anna has been asked out by Ben, and is standing in front of the mirror in her special outfit full of thoughts of how fat and awful she looks. However, this times she decides to use a mindful approach. She observes and describes her thoughts: 'I am having a thought that I look fat, I am having a thought that I look awful'. She tries to utilise a non-judgemental approach when looking at herself and knows that if she avoids this situation it will maintain her anxieties about going out on a date. She rates her anxiety on a scale of 1 to 10; it is a 9. She decides to face her fears and orders a taxi. When she arrives at the bar where she is meeting Ben, she notices her mind is full of judgements and her anxiety increases to 10. However, as the date progresses, she checks in on her anxiety and notices that it is going down; it moves to a 7 and then by the end of the date it has reduced to a 5. Anna is really pleased that she faced her anxieties, and arranges to see Ben again.

As you can see from this example, overcoming avoidance of negative emotional states means we need to *both*:

- confront what we've been avoiding;
- become aware of our negative thoughts, judgements or beliefs and either tolerate them mindfully or challenge them.

Exercise

1. Rate your anxiety on a scale of 1 to 10.
2. Wearing minimal clothing, look in a full-length mirror with an open and aware mind and heart.
3. Rate your anxiety again on a 1 to 10 scale.
4. Holding the two thought and judgement cards, one in either hand, try to verbalise any thoughts or judgements that come into your mind, holding up whichever card seems to correspond.
5. If you have persistent critical judgements, try to use the non-judgemental stance card.
6. If you struggle, think about the non-judgemental stance line. Where might your thought go on that line?
7. Just doing 'observe and describe' without judging is often difficult for most body parts other than the face. You can try to make brief observations, e.g. my thighs are curved, or you may need to make radically accepting statements such as 'This is my stomach. This is how it is.'
8. Rate your anxiety again. It is really important to stay with the exercise until your anxiety has reduced sufficiently for the exposure to be beneficial.

HANDOUTS FOR SESSION 5

CHALLENGING NEGATIVE THOUGHTS AND BELIEFS

Guidance for completing "evidence for and against a belief" worksheet

Use the worksheet to identify and challenge negative body image thought, beliefs and thinking errors.

1. **Identify the negative thought, belief or rule**
- Rate strength in thought or belief (0-100%)
- Factors to consider
  - when and how the belief developed
  - Identify a time when the you did not think like

2. **Consider the evidence in favour of the thought, belief or rule**
  - Identify and reflect on supporting evidence

3. **Consider evidence against the thought, belief or rule**
  - "Has there ever been a time when you haven't thought like this?"
  - "Has there ever been a time when this hasn't happened"
  - "Do your friends or family agree with your belief that…."?

4. **Identify thinking errors**
- Use the common thinking errors handout to note down what type of thinking error you are making.

5. **Develop an alternative/more helpful thought, belief or rule**
  - Come up with a more helpful belief or thought
  - Rate strength in belief from 0-100%
  - Factors to consider
    - alternative belief is one that contradicts the current belief
    - be less rigid
    - previous evidence used to base beliefs on may no longer apply or was present for a limited time only.

6. **Seek evidence to support the new thought, belief or rule**
  - Monitor behaviour to determine the accuracy of belief & note down what happens when applying the more helpful belief or thought.

Type of thinking error	Example of negative thoughts
All or nothing/ black and white thinking e.g. ignoring the middle ground *Beauty or Beast*	"My life is meaningless unless I can look perfect"
Selective abstraction e.g. focusing on a single detail rather than on a situation as a whole and drawing a negative conclusion as a result	" I was really happy two years ago and that is because I was thinner then"
Arbitrary inference e.g. drawing conclusions despite inadequate or contrary evidence	"When she said I looked well, she meant I had put on weight"
Catastrophizing e.g. overestimating the chances of danger	"If I gain weight, my life will be over"
Over-generalising e.g. making broad generalisations on the basis of a single incident	" No one will ever want to go out with me because my thighs are too big"
Personalising e.g. blaming myself for something which is not my fault *The blame game*	"We lost the deal at work because I look fat today"
Mental filter - focusing on negatives e.g. looking on the dark side and ignoring positives or strengths *The magnifying glass*	Immediately finding less liked parts of body or appearance. Ignoring more accepted parts of appearance.
Beauty Bound e.g. cannot do certain things because of your current appearance	"I can't buy any new clothes until I've lost a few pounds"
Emotional Reasoning e.g. taking feelings as facts *Moody Mirror*	"I feel fat, therefore I must be fat" "In a bad mood or stressed out – start looking at your appearance and finding faults"
Jumping to conclusions e.g. predicting the future and mind reading *Mind misreading*	'People are staring at me because I'm so fat and ugly'.
Living by fixed rules e.g. fretting about how things ought to be; overusing the words should, must and can't	"I **must** exercise 5 times a week"
Perfectionism e.g. expecting yourself to perfect all the time	"I must look perfect all the time"
Labelling and mislabelling e.g. label self on basis of one incident	"I'm a failure as my jeans are tighter today"
Double standards e.g. how would you view someone else in my situation	"See a similar sized friend as attractive or slim, but do not see your self as these things"
Negative predictions e.g. expecting the worst to happen but not allowing yourself to find out what does happen *Misfortune telling*	" I can't go to the party because, no one will talk to me as I look fat today"
Superstitious thinking e.g. believing in the cause-effect relationship of non-contingent events	"If I lose weight, all my problems will be over"
Unfair comparisons e.g. assessing your appearance against an unrealistic or extreme standards	"I wish I looked like X"

Challenging body image thoughts, beliefs and rules

Use this worksheet to identify negative body image beliefs and assumptions and then challenge using the following steps:

Belief *Rate strength 0-100%*	**Evidence for the thought/ belief**	**Evidence against the thought/ belief**	**Type of thinking error**	**Alternative thought/ belief** *Rate strength 0-100%*	**Collect evidence to support alternative thought/ belief**

Behavioural experiment recording sheet

Belief to be tested (Rate belief 0-100%)	**Experiment:** What will I do to test the belief? When will I do it?	**Prediction:** What exactly do I think will happen? How will I know whether it has happened or not? (Rate belief 0-100%)	**Alternative Prediction:** What else might happen? (Rate belief 0-100%)	**Outcome:** What actually happened? Was the original prediction correct?	**Re-rate cognition:** On balance, what is my view now? How do I rate the beliefs above in the light of the experiment?	**Plan:** What can I do now to further test the belief?

Week 5 – Challenging negative thoughts and beliefs

Homework

1. Complete an ideal self-evaluation pie chart
2. Imagine writing an advert for yourself. What areas would you promote? Don't mention your looks, shape or size.
3. Challenging negative body image thoughts and beliefs using evidence for and against worksheet & common thinking errors.
4. Behavioural experiment – to test out alternative belief.

HANDOUTS FOR SESSION 6

SUMMARY AND RELAPSE PREVENTION

Session 6: Summary of body image group and continued goals for change

Aim: To briefly summarise what the group treatment has covered in the previous five sessions and strategies the group has learnt to improve their body image.

Agenda: To review key topics discussed at sessions 1-5

1) Body Image and understanding body image development

What is body image?

Body image can be defined as the picture someone has in their mind about their appearance (i.e. size & shape) of their body and the attitude that they form towards characteristics of their body.

Thus there are three components of body image: the perceptual part, or how someone sees their body, the attitudinal part, how someone feels about how they think they look and the behavioural part, how these perceptions and attitudes influence someone's behaviour. A negative body image can be in the form of mild feelings of unattractiveness to extreme obsession with physical appearance that impairs normal functioning.

These features can be seen in perceptual distortions, body dissatisfaction for failing to meet unrealistic size and weight goals, negative mood, over investment in the importance of appearance, weight and shape, pursuit of thinness through dieting and other weight loss measures. Further problems are seen in avoiding, checking and comparing your body to others.

How does a negative body image develop?

Body image gradually forms, beginning in childhood. Many factors lead some people to view their body in a positive way, whilst others can develop upsetting and negative views.

Through the understanding my life exercise you have reviewed the development of your body image and noted how past experiences have shaped how you view your appearance in the ways you do.

It is also important to understand how your current experiences in everyday life determine how you think, feel and react to your looks.

Questions that you have considered:

- Recall critical incidents/events at that time which influenced body image
- Developmental stages significant to body image – puberty and early relationships
- Reflect on how these made you feel
- When first focused or noticed your weight/shape/appearance?
- First judge yourself by weight/shape/appearance?
- What did others do/say about your weight/shape?

Looking for exceptions

- Was there anybody who didn't criticise your weight/shape/appearance?
- Identify times when felt positive or non critical about the way you looked/ felt about body?
- What was different? How did this feel?
- What do you like about your appearance?

Additional influences

- Cultural and social messages
- Media influences
- Perfectionism
- Physical illness
- Bullying
- Sports

2) Understanding the maintenance of negative body image & identify targets for change.

At session two we introduced a model to explain that negative body image had developed due to specific experiences early on in life and was then maintained by environmental factors, thoughts, beliefs, mood and behaviours.

The following factors can maintain negative body image.

1. **Environment**

General social pressures
- media
- culture

Group member-specific social pressures
- Family
- Work
- Peers

2. **Behaviours**

Body Avoidance
- Situations when feel self-conscious e.g. shopping, sport, exercise, intimate relationships, social situations

Avoidance decreases your distress in the short term but does not allow you to see the situation differently. It also prevents you from learning that feared consequences do not occur.
It can also magnify the body image concerns by reinforcing a group members belief and does not allow them to deal with any feared consequences should they occur.

Body Checking

Frequent checking of aspects of appearance or weight
Examples
- studying and scrutinising appearance in mirror
- frequent weighing
- measuring body dimensions
- pinching folds of skin
- seeking reassurance from others about appearance

Checking will give you some relief in the short term, but will then increase focus on areas of dissatisfaction. It can also contribute to a belief that checking helps prevent feared consequences (e.g. weight gain).

Comparison

Comparing oneself to others takes many forms. You may compare yourself to magazine pictures, selectively focusing on people who are more "perfect" than you are or you may examine in others, the parts that you dislike in yourself and making comparison comments to them. On the hand, some people can look at broad "defects" in others' bodies in order to feel better about your own perceived defects.

Identify times when more likely to compare self to others. Is there a particular pattern to this behaviour. For example, who compare against and conclusions drawn from this behaviour. How often and where more likely to compare? Assess magazine & media usage for comparisons.

How does this feedback into thoughts about self and body image?
Further behavioural experiments to broaden your attentional focus

- whilst waiting for a bus or in a queue, look at a range of people passing by focusing on an aspect of their body shapes (their smiles, their behaviour)
- Compare every 3rd person of similar age
- Look at all aspects of other people's appearance as opposed to focusing on one particular part
- Scrutinise attractive people

3. Eating disorder related behaviours

From our discussions we noticed how body image concerns can trigger various types of eating disorder behaviours. For example, dieting, bingeing, purging, taking laxatives, diuretics and excessive exercise.

4. Negative thoughts

We discussed how group members can have frequent negative and self-critical thoughts about body. These thoughts can influence checking and avoidance behaviours and thus feedback into each other.

By reviewing the body image thinking error handout, we noticed how there are certain types of thoughts e.g. mindreading, all or nothing, living by fixed rules, jumping to conclusions.

We found that self critical thoughts can be distressing and often lead to further negative thoughts or to unhelpful behaviours.

5. Misinterpreting Physical Stimuli & selective attention.

We discussed how certain physical stimuli may be interpreted as fatness or weight gain. For example, the sensation of body wobble and premenstrual fluid retention. These processes/experiences are part of normal body function and it is helpful to have a healthier attitude to these stimuli. Increased attention to disliked body parts, can create further anxiety and dislike.

6. Dysfunctional beliefs

It is thought that dysfunctional/unhelpful beliefs & appearance assumptions underlie negative thoughts about body image. These beliefs accumulate to an over-evaluation of the importance of weight and shape. Therefore, any perceived failures in this area will cause significant distress and maladaptive coping strategies. Through our group discussions we, identified some of these beliefs.

Examples of some beliefs may include the following:

- only thin people are successful
- If I looked liked I wished, my life would be better
- I have to look perfect to gain respect
- Only thin people have self-control

Tasks completed

- Own body image formulation
- Introduced body image monitoring
- Motivation for change exercises

3) Psychoeducation and encouraging positive body image activities

At the third session we discussed the following topics to help challenge unhelpful societal and cultural messages as well as reviewing important physiological information and thinking about our bodies as a tool, as opposed to an object.

Understanding the functions of the body

The aim here is to help broaden a person's attitude to their body by becoming less focused on the body as an object and have a more balanced perspective. In doing so, it is hoped that group members would start to see their body as a vital instrument that tells a story about their life and possesses invaluable skills, functions and abilities.

Discussion questions:-

- What do you use your body for?
- What is its purpose?
- How does it achieve that?
- How has your life shaped your body?
- What innate abilities does your body have?
- What could you not do if your body was different?
- Who do you use your body with other people?
- How does your body interact with your environment?
- What messages does your body give you?
- How does your body change?

The role of physiology

Set point theory

The hypothesis of set point theory suggests that body weight/shape is genetically influenced and that our minimum weight cannot be significantly altered over the long term without having detrimental consequences.

Thus eating a healthy regular diet and engage in reasonable exercise, your body will gravitate to a particular weight and natural fluctuations of 1-2kg per week will occur. By moving away from a healthy regime using eating disorder behaviours, this is difficult to maintain and has negative consequences.
Therefore following a healthy diet can lead to an increase or decrease in weight, but promote an acceptance of this weight being "meant to be".

The need for body fat for healthy biological functioning

- Importance of minimum level of body fat to function
- Women have a higher body fat than men. 25% compared to 10-15%.
- Lower levels of fat reduce resistance to disease, muscle weakness, irritability and can affect fertility
- Body fat levels increase rapidly during adolescence in young women of normal weight (body fat is approximately 16% at the start of adolescence and around 25% by the end)
- This increase is accumulated around the breasts, thighs and bottom – leading to a more womanly shape and laying down fat stores for optimum pregnancy
- Whereas in men, body fat is more centrally distributed and there is less dramatic change for a young man to deal with.

<u>The role of societal attitude & media towards appearance and beauty</u>

We discussds how fashion magazines, television advertisements and shows, and films promote cultural "glorification of thinness" by equating it with attractiveness, happiness and success, while at the same time linking fatness with such negative attributes as laziness, ugliness and failure.

What is the impact of the messages?

Many girls and women who cannot achieve the standards set by the media may experience shame and a sense of not being good enough. Without supportive parents and peers, many girls or adolescents may be unable to ignore images of ultra-thin models gracing media related pages.

How do these messages fit with the changes that happen to our bodies in puberty?

Idealised images of women's bodies have changed over time from Marilyn Munroe to current icons whom are usually medically underweight and often have eating disorders.

There have always been pressures on women to change their body shape (e.g. by use of corsets in Victorian Europe) and across cultures (e.g. by foot binding of women in China). Reflect on recent cultural practices e.g. cosmetic surgery, dieting, suntanning.

How do these particular influences impact on you?

It is difficult to manage the competing pressures to be thin and the natural urges to eat. We are bombarded by images of food as a source of pleasure (M&S adverts!) or a symbol of closeness, sharing and celebration.

What could you do differently in order to not let magazines or watching TV/films make you feel negatively about your body?

4) Challenge negative body image behaviours

Following completing of your body image diary, you identified a number of unhelpful behaviours e.g. checking, avoiding, unfair comparisons, and mislabelling emotions. Through our discussions we identified strategies to change these behaviours.

Strategies for changing negative body image behaviours

- **Body Checking**

Identify and categorise type of shape checking e.g. studying self in mirror, weighing or pinching skin, measuring body parts, wearing certain clothes.

Examine your reasons for body checking – why do you do this? Does it help? Does it make you feel worse?

- Identify realistic goals
- Anticipate negative thoughts and feelings & work out a plan to deal with these.
- Either stop checking behaviours or gradually decrease and monitor the consequences of changing your behaviour.
- You can set up two conditions:
  (1) body checking as normal and (2) as little checking as possible
  - Run these experiments on two separate days
  - Then monitor selected outcomes e.g. mood, weight, thoughts
  - How do you feel now?
  - What is the outcome, what did you learn?

- **Mirror use**

Self-monitor the frequency &purpose
What looking for?
What person does?
Does it achieve what the person hopes?
How look/ feel after?

How do we know what we look like?
Should we believe it?
What we see in mirror depends to a large extent on how we look
Scrutiny is prone to result in magnification – if you look, you'll find something you don't like
Contrast with accidental reflections e.g. shop windows

- **Appearance fixing**

Self monitor type and triggers to fixing and grooming appearance
Duration of fixing and grooming
How helpful is this? How feel if didn't do this?
Goal – to gradually reduce the time spent on fixing and grooming

- **Comparison**

Self-monitoring
Question how helpful is this to you?
Gradually reduce frequency of comparing
Behavioural experiments
- Compare every 3rd person of similar age.
- Scrutinise attractive people

Note down thoughts and feelings

- **Avoidance**

Self monitoring – type, frequency and triggers to avoidance
e.g. avoiding seeing reflection, wearing certain clothes to cover up or hide away, photos being taken, doing certain activities, social occasions, certain people, physical intimacy.

How helpful is this? Impact on thoughts & feelings?
Set goals - graded exposure with behavioural experiments

- **Feeling fat "moody mirror" - mislabelling emotions**

Self monitor:
- Identify triggers
- Changes in intensity of emotions

Questions to ask yourself
- What else am I feeling right now?
- What else is going on?
- Are there others reasons for change in emotional state?

- **Mirror work**

We also applied mirror exposure in two sessions to help you re-learn how you look at yourself in the mirror.

Main aims:

- Rate your anxiety (0-10) and then monitor this as your go through the mirror work
- Have a realistic idea of what you would like your anxiety to reduce to.
- Observe and describe what you see, with non-judgemental comments
- Try to take in your whole body and not focus on areas that make you feel uncomfortable about
- Review your anxiety level
- Praise yourself for your achievements and practice

5) Challenging over-evaluation of shape and weight & negative thoughts

Aims:

- Understand our domains of self evaluation & how judge self worth
- Challenging negative thoughts & beliefs through continuum thinking, thought challenging, and testing out beliefs through behavioural experiments.

The importance of the overevaluation of shape/weight is a core maintaining factor in negative body image and eating disordered behaviour.

Whilst most people judge themselves on a range of aspects of their lives, people with an eating disorder judge their self-worth on a limited set of criteria usually associated with shape & weight and other modes of self-evaluation are small. Therefore the aim of the session is to initiate a group discussion on how this maintaining factor impacts on group members' behaviour. Then introduce strategies for addressing unhelpful body image beliefs and assumptions

Negative body image thoughts can be categorised into number of thinking errors (see handout) and are often activated in specific situations. Learning to challenging these negative thoughts, involves observing the thoughts, identifying the type of thinking error and respond with a more helpful thought.

This session examined the common thoughts, beliefs and assumptions that people with negative body image hold.

In this session we examined how we evaluated ourselves and looked at thought challenging strategies to identify more helpful thoughts.

Exercises

Self evaluation pie chart

This task is used to allow group members to think about how they judge themselves.

"Most of us judge ourselves on aspects of our lives. What do you judge yourself on? What are the things that make you feel good about yourself if they're going well, or bad about yourself if they're not going well?....

By drawing a circle, like a pie chart, and then fit in the things that you've suggested. What do you want to start at 12 o'clock with.... and what proportion do you want allocate to that? Working clockwise.

"Looking at your pie chart, what do you think about the way you judge yourself? In what ways is it helpful or unhelpful to think like this?"

Alert to difficulties with this current method of self-evaluation:

1. The "all your eggs in one basket" dilemma. Shows that this is a highly risky strategy as if something goes wrong, will feel really bad. Examples – workaholic who is made redundant...

   Pros/cons for basing self worth on shape & weight

   The aim is to encourage a more balanced view of self-evaluation so can cope better with disappointment or failure in one domain by identifying success or happiness in another or several others.

2. Choice of domain

   The use of eating, weight, shape as the key domain has an inherent problem that such goals are very difficult to achieve and maintain, and that they are very costly. To introduce the following ideas;

   - Will always see someone who is slimmer or more attractive than they are, making it impossible to identify themselves as the best.
   - This domain is particularly susceptible to the problem of "shifting goal posts", e.g. the continued downshifting of an "acceptable" weight or size.
   - Focus on this domain comes at a huge personal cost (e.g. ill health)
   - Focus on this domain limits the ability to succeed in other domains e.g. concentrate on work/university, maintain friendships and may even be internally inconsistent e.g. a restrictive diet can limit the ability to succeed in terms of exercise.

Overcoming limited focus of self evaluation

- *Increase the importance of other domains*

  Consider how you would like to your life domains to be balanced in order to achieve your personal values. Consider what you used to want to do or

always wanted to do, to elicit pre-existing beliefs and generate new ideas. Also look at pre-eating disorder activities and examine for evidence of high levels of perfectionism applied to all areas of life. To examine what are your talents and qualities? What else gives your life meaning and purpose?

- *Continuum thinking*
  Many people will place importance on their appearance but will also allow consider other domains e.g. allow themselves to feel successful even if they are not the thinnest person they know. Encourage a balanced approach to eating, weight & shape by being more flexible and challenge all or nothing thinking.

- It is important to develop a relationship with the body you have rather than striving to achieve the ideal one.

Strategies for modifying overevaluation of eating, weight & shape.

Challenge Irrational Beliefs of the Importance of 'Thinness'

1. Who defines what is thin or fat?
2. Why is it that women or men to strive to be slim?
3. Do you think there is a conspiracy or are there economic forces that control this look?
4. What are the costs to people who pursue this look?
5. Who benefits?
6. How do we all contribute to promoting this look?
7. What would our lives be like if they weren't preoccupied with being slim or achieving this ideal?
8. There are some difficulties in resisting the "thin-ideal", how can these be overcome?
9. Is it a habit of thinking like this? What are your true values?
10. Are eating and body image problems the responsibility of the individual or the society?

Cognitive restructuring

Using the evidence for and against a belief worksheet to identify and challenge negative body image thought, beliefs and assumptions.

1. Understand current belief using the questions below:
   - Clarify if the belief is an assumption e.g. "no-one likes you when you are fat" might become "If I am fat, then people will not like me".
   - Explore when and how the belief developed
   - Identify a time when you did not think like

2. Consider the evidence in favour of the belief
   - Identify and reflect on supporting evidence

3. Consider evidence against the belief using the following questions/prompts:
   - "Has there ever been a time when you haven't thought like this?"
   - "Has there ever been a time when this hasn't happened"
   - "Do your friends or family agree with your belief that…."?

4. Identify thinking errors that might explain adherence to this belief:
   Some common thinking errors and identify specific examples within the group (give common thinking errors handout):

   Discuss how they would feel or act if they did not have these distortions

5. Develop an alternative belief

   The alternative belief is one that contradicts the current belief and be less rigid. Consider that previous evidence used to base beliefs on no longer applies or that it was for a limited time.
   Rate strength in belief from 0-100%

6. Seek evidence that allows the beliefs to be contrasted

   Monitor behaviour to determine the accuracy of belief.
   Think about how would feel without operating by these belief or rules.

Surveys

This method can be used to challenge a belief by seeking other people's opinions.

Method - Identify a belief and develop an appropriate question to ask 10 other people that group member knows and survey there opinion. The survey will allow the belief to be tested, helping the group member to consider alternative interpretations.

Helpsheet for change:How I need to help myself now

Physical characteristics I need to feel better about:
How I have improved:
.....
.....
.....

I still need to:
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.....
.....

Negative body image emotions I need to control and reduce:
How I have improved:
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I still need to:
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Physical Ideal I need to emphasis less:
How I have improved:
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I still need to:
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Negative thoughts I need to eliminate:
How I have improved:
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I still need to:
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Positive thoughts I need to have more of:
How I have improved:
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I still need to:

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Negative beliefs I need to eliminate:
How I have improved:

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Positive beliefs I need to have more of:
How I have improved:

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I still need to:

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Situations I need to learn to handle better:
How I have improved:

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I still need to:

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Checking behaviours I need to change:
How I have improved:

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I still need to:

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Avoidant behaviours I need to change:
How I have improved:

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I still need to:

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Comparison thoughts & behaviours I need to change:
How I have improved:

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I still need to:

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Appearance-preoccupied rituals I need to change:
How I have improved:

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I still need to:

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Fitness/health orientated behaviours I need to change:
How I have improved:

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I still need to:

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Other things I still need to change to improve my body image:

How I have improved:

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I still need to:

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Mindfulness

Mindfulness is a quality of *present moment awareness*. It is about *being in touch* with ourselves, with other people, with our environment and with reality. It is a concept and approach to living which has been explored in many ancient religious and philosophical traditions from around the world, but is one which still has enormous relevance in our lives today. Over the past 10 or so years, it has been integrated into methods of stress management, and has been taught alongside meditation and relaxation to assist people in dealing with a range of health and life-style difficulties arising out of our hectic lives.

What is unmindfulness?

It is sometimes easier to have a sense of what mindfulness is by looking at its opposite more familiar state of being: that of unmindfulness.

During our stressful lives, our attention is usually dispersed. We are usually busy juggling a number of tasks and pre-occupations at the same time, and none of our actions or thoughts receive our full attention. We are usually leaping stressfully from one thing to the next, like a monkey in a tree, grabbing at things that interest us or demand our attention, then drifting on to something else, being distracted, day-dreaming, being caught up in our thoughts and worries about what happened yesterday and what we need to do tomorrow, only giving things half of our attention, not hearing fully what is said to us, pre-occupied with our own issues and concerns. This is our ordinary state of mind and we can spend a good part of our lives like this, not being fully present and therefore missing most of the moments in which we live.

The state of unmindfulness is a kind of alienated awareness, but one which is unfortunately very familiar to us. In this way, we can live our lives on automatic pilot, relatively ungrounded, cut-off, out of touch with our selves, our bodies and emotions. It is sometimes as if we are living in our heads and our bodies are just vehicles for getting us around. Our stressful lives certainly contribute to this way of being, but when it becomes our habitual state, it can also be associated with a number of stress related health problems. Learning to cultivate the opposite of these ways of living our lives can be beneficial in so many ways, and may be a valuable means of changing our lives into something more wholesome.

So, what is mindfulness?

Mindfulness is a natural state which we have all felt at some times in our lives. It is more likely to arise when we are doing something we really enjoy doing and we have all the time in the world to do it. Mindfulness can be experienced in a walk in the countryside, watching a beautiful sunset, sipping a cappuccino in a sunny plaza on holiday, playing a musical instrument, riding a horse, dancing, being with a loved one. It can arise spontaneously when we are doing anything in a positive state of mind with a definite focus.

Some of the qualities which come with mindfulness are a sense of brightness, clarity of purpose, expansiveness, creativity, playfulness, calm. There is a quality of wakefulness and harmony. We are in touch with ourselves, in tune with whatever we are doing, in harmony with where we are and the people with us. We are grounded in the present moment.

Sometimes, when mindfulness arises it can feel as if we are seeing things for the first time with a freshness that can take us by surprise. This quality of mind has been referred to as *"beginner's mind"*, and has some of the qualities of wonder and appreciation that a child can have in experiencing new things. When we walk past a tree, we are not satisfied with the concept of "tree" that we hold in our minds ("I know what trees look like"), instead, we really see that particular tree with its blossoms, gnarled bark and unique individuality. In this way, mindfulness can help us to engage more fully with nature, with its sheer impact and beauty, and can shake us from our habitual thinking, awakening a sense of awe and wonder. Even the most ordinary things can be seen with new eyes and we can appreciate the uniqueness of all things.

Mindfulness enables us to slow down and to find places of stillness and quiet within ourselves. We can find a steadiness of purpose instead of being tossed about and reacting to every passing mood, desire and chaos about us.

Mindfulness can be cultivated

Mindfulness is a quality which can be cultivated in our lives like a new skill. It is a practice which can become an essential focus in our lives. We are fortunate in having access to many methods which have been tried and tested for centuries across many traditions throughout the world, and these methods still have great practical relevance for us today.

Mindfulness is about learning to pay attention in a particular way: with purpose and a will to be in the present moment. It is not a forced concentration (like doing the tax returns), but rather like the concentration required to catch a feather which is falling in front of us - a gentle focus in which we do not forget ourselves or blank out the background. Mindfulness can be applied to many aspects of our experience: (i) to ourselves - our bodies and breath, our emotions and thinking ; (ii) to other people; (iii) to objects in the world around us, including nature, and pieces of art.

It is useful to develop practice situations in which we can encourage ourselves to develop this quality of focus. One of the oldest practices is one of following the breath, also known as the mindfulness of breathing. This will be discussed below along with a number of practical exercises which can help us to apply mindfulness in everyday situations in our lives.

Mindfulness of breathing

The breath is always with us and is the thread which connects every moment of our lives. It can bring us in touch with our bodies and our emotions. We do not need to direct it - breathing happens by itself, and it can be an excellent focus for our

c) Mindful breathing and the half-smile:

When we are practicing mindful breathing it can be helpful sometimes to allow our facial muscles to relax into a half-smile (this is a smile of composed contentment, and not a smirk or beam of communication to others). This subtle half-smile can also be useful when we are facing something challenging or distressing for us. It can communicate to us a sense of positivity and coping. Try practicing mindful breathing with a half-smile when you first wake up in the morning, when you have a free moment, when you are feeling irritated, when you are stuck in a traffic jam, when you are late, or when you are thinking of someone who has upset you.

d) Mindfulness meditation on the breath

If we use mindfulness of breathing as a meditation practice, it is important that we set up conditions for 10-20 minutes of personal space in which we will not be disturbed. We will need to pay attention to our posture, and ensure that we are sitting in an upright position, with our backs straight but not rigid, arms and legs unfolded and our bodies relatively symmetrical. It can help if we shut our eyes, if this feels comfortable. We may wish to begin with a body awareness practice in which we scan through our bodies with our awareness, from our feet, to our heads, letting go of any areas of tension and discomfort. We can then bring our awareness to our breath and follow a few whole breaths through our bodies. In developing a mindful focus, it can help if we practice counting our breaths, from one to ten. This can help us to stay focused on the breath despite the distractions of our mind. Try counting after each out-breath: breath in, breath out, count "one"; breath in, breath out, count "two"; breath in, breath out, count "three"... Continue until you get to the count of ten and then start again at one. Each time you get distracted, start again at the count of one. If you feel you have achieved a degree of focus, try dropping the counting and just follow the sensations of the breath; in and out, perhaps focusing upon the rise and fall of your abdomen, perhaps the sensations of the breath as it enters and leaves the nostrils. When you are ready to finish your practice, slowly bring your awareness back to the room, gently move your body and prepare to reengage with your life.

Mindfulness of the body

It can be helpful to develop a mindful awareness of our bodies, bringing our attention to our posture, being aware of what position we are in and what our bodies are doing. This could include a body awareness scan, noticing areas of tension and letting them go. It could involve trying to ground ourselves in the present moment by bringing our awareness to our feet as they touch the earth, and noticing parts of the body in contact with the furniture we rest upon. We could bring our attention to whatever tasks we are engaged in and notice how our bodies connect to those tasks through our senses: our sense of touch, taste, smell, sight and hearing.

Any exercise, if practiced sensibly, can bring us into mindful awareness of our bodies. The practice of yoga and T'ai Chi can be particularly helpful in fostering a mindful body awareness. Even when we are walking, instead of focusing too rigidly upon our intended destination, we can allow our awareness to focus upon the sensations in the body and limbs as we move.

Exercises

a) Mindfulness and our body senses:

We can use mindfulness of the senses to ground ourselves at particularly stressful times. Take a few moments to stop and check in with yourself and your surroundings. Take a mindful breath and be aware of where you are. Make a conscious check-in with your surroundings using all of your senses. Notice what you can **see**, *and name or describe a few things to yourself (notice objects, colours, etc.). Now, notice what you can* **hear** *and name or describe a few of these sounds (notice any sounds further away from you, closer to you, and even those from your own body). Notice what you can* **feel** *with your sense of touch and name or describe a few of these (what your hands are in contact with, the parts of your body which are resting against something, the sensation of clothes against your skin, etc.). Can you notice any* **tastes** *in your mouth? Name a few things in your awareness. And do you notice any* **smells**? *Try to name and describe a few. Take another full breath and prepare to continue with whatever you were doing.*

b) Mindful body awareness:

From time to time throughout the day, practice bringing awareness to your body. Ground yourself back in the present moment by following a full breath, bringing awareness to your posture and to where your feet touch the ground. Bring awareness to your feet and any other parts of your body in contact with the floor, or pieces of furniture. Notice how your body is being supported. Feel your breath moving in your abdomen, and let your mind come back to the present moment for a while. This practice takes only a few moments each time we check in with ourselves, but can be a valuable method of managing stressful days when we are likely to lose touch with ourselves.

c) Mindfulness and the full body scan

To practice mindfulness with a full body scan, you will require some undisturbed time for some 10-20 minutes. Practice lying down in a comfortable place, on the bed or on the floor, remembering that the purpose is to foster awareness and not to fall asleep. Make sure that you will be warm enough and cover yourself with a blanket if necessary. Close your eyes and feel the rising and falling of your breath in your body. Take a few moments to have a sense of your body as a whole, from head to toe, the outline of your skin, the weight of your body with the sense of gravity bearing down upon it. Notice the points where your body is in touch with the surfaces of the bed or floor. Bring your attention to the soles of your feet, and let them soften and relax. Imagine that your breath is moving through to your feet and that a warm light of awareness, like a shaft of sunlight is allowing them to relax. Let the breath and the light of awareness touch your whole feet, ankles, calves and thighs, allowing the muscles to soften and become heavy. Imagine a sense of space in your joints and your muscles letting go of tension, falling away from the bones. Let your awareness include your buttocks and notice any holding of energy here. Let your awareness spread to your abdomen, lower and upper back, chest, neck, shoulders, arms, etc. Try to develop an awareness of your spine, gently curving through your body, and the point at which it meets the skull. Have a sense of the solid frame of your body. Bring your awareness to your hands, noticing the energy that is stored there, in the palm, thumb and fingers. Notice the warmth of your hands. And bring awareness to your face, noting any tension in the muscles around the mouth, jaw and eyes. Notice how sensitive your face feels to the temperature of the air in the room. Allow your face to soften with your awareness. Bring awareness to your breathing and notice how the body tenses and relaxes as it comes and goes. Pay attention to the breath as it is felt in the body and try to maintain this awareness with an overall sense of your body. Be aware of the quality of your experience and note any emotional tones present without judging them. When you are ending your practice, start by slowly moving the body, perhaps wriggling your toes, making sure not to jar yourself back into ordinary awareness.

d) Walking mindfulness

When practicing walking mindfulness, our attention is on the process of walking. We can focus upon the sensations in the soles of the feet as they are placed and lifted, with the weight of our bodies shifting, the process of moving, lifting, stretching, placing. We are feeling all the sensations of walking - in our feet, our legs, in our carriage and gait. We can be aware of the temperature of the outside air on our faces and hands and the warming of our bodies from the exertion. We can practice this awareness at any pace, but it helps if we are not rushing to get anywhere. The aim is to be as present as we can with every step. If we drift off into some internal reverie or get distracted by something, we just notice, and bring our attention back to the walking. Walk with awareness of walking and awareness of the breath, perhaps measuring your breath by your footsteps for a while.

e) Eating mindfulness

Eating is an activity we engage in a few times every day. It can be a useful opportunity for mindfulness practice (although also perhaps difficult or challenging if you have issues about food). For most of us, such an exercise can enhance our sense of enjoyment and appreciation of the food we eat. It can help us to retune into our sense of hunger and satiety, ensuring that we do not overeat. Mindful eating can be very useful if we do have a tendency to overeat.

Choose a meal that you can eat with mindful awareness. Make sure that you are not going to be distracted by radio and television, and make the effort to sit with your meal at a table. It can help, if you choose, to lay the table and decorate it with flowers or candles. This helps to make the meal something special and may help you to focus more upon your meal. Sit down with your plate or bowl and observe what you are about to eat. Notice the colours and textures and the ways in which the meal presents itself to you. Notice any fragrances coming from the food and notice any anticipation you may have for eating it. You may find it helpful to reflect for a while upon where your meal has come from: all the people and animals involved across many parts of the world in its production, transportation, preparation, etc. Notice how you feel as you prepare to eat, paying attention to the process of lifting the food to your mouth, tasting, chewing, swallowing. At what point does that mouthful disappear from your awareness? Notice how you respond to the food with all of your senses. Keep your attention upon the activity of eating, mouthful by mouthful. Notice any sense of pleasure, hunger, dissatisfaction, contentment. Notice how these change as you complete your meal. Notice at what point you know that you have finished. And when it is over, take a breath, notice how you feel, and then let go of the meal.

f) Mindfulness with thoughts and feelings

This practice requires a lot of concentration and you should only try to do this for a few minutes at first. Practice sitting with body awareness and awareness of the breath. Allow yourself to become aware of your mind, noticing the process of thinking, the arising of thoughts and images, like passing clouds. Notice them coming and going and try to be like the spectator standing at the gate, not getting involved or caught up in them (imagine that your mind is a non-stick pan - nothing will stick to it!). Notice when you have thoughts about the past, or thoughts about the future. Notice when you get distracted, or your mind wanders, notice when you start judging or evaluating. Notice thoughts involving desire, wanting, grasping, clinging. Notice thoughts about dislike, anger, aversion, rejection. Notice the stream of random neutral thoughts, or thoughts about doing things or planning to do things. Be aware of the feeling tones which go along with these thoughts: positive, negative or neutral. Notice the overall feeling tone of your experience. Let the thoughts and feelings just come and go and try not to change or influence them. Push nothing away and cling to nothing. Just watch the mental activities of your mind go past, like clouds in the sky. Eventually come back to an awareness of the breath and let go of your attention on the mind.

g) Mindfulness with sound

Practice sitting with body awareness and awareness of the breath, and bringing your attention to the sounds around you: those which you can hear outside, sounds which are within the building or room in which you are in, the sounds of your own body, breathing, moving, etc. Just notice the sounds which meet your senses, without actively listening for sounds or straining your ears. Hear the quality of the sounds and the quality of the silences between them. Try not to name the sounds or let your mind take you off into a distracted reverie.

Try practicing with music, breathing in the sounds and letting them flow with the out-breath. Hear each note and the moments of stillness or silence. Let your whole self participate in the experience of listening to the music.

Mindfulness practice in every day life

Anything in our lives can be an opportunity to practice mindfulness, but it can be useful to identify a number of helpful triggers to remind ourselves to come back to the present moment .

The following situations may be helpful as mindfulness triggers. When we encounter them we can practice following a breath mindfully, perhaps practicing a half-smile, bringing awareness to our bodies, and reconnecting to where we are and what we are doing. This only needs to take a few moments, but such moments of mindful awareness can have a calming and grounding influence in our lives. Here are just a few examples. See if you can come up with some situations which are useful in your own life.

Mindfulness triggers

Passing through a door way
Stopping at traffic lights
Waiting for the kettle to boil
Pausing before you answer the telephone
Sitting with a cup of tea or coffee
Feeling angry or irritated
On wakening
Lying down before sleep
Stroking the cat

Useful triggers for mindfulness in my own life

Mindfulness triggers give us the chance to catch up with ourselves with a single breath and simple check-in or tune-in with how we are, where we are and what we are doing.

Mindfulness "Dots"

A useful reminder for mindfulness triggers can be to use coloured sticky "dots", which can be placed in locations where we will see them and remember to come back to ourselves and the breath in a mindful way. It can be helpful to place the dots in places and on objects that we may often approach with un-mindfulness. When we see the dots, we can remember to take a breath, feel our feet on the ground, be aware of our posture, observe what we sense around ourselves, and perhaps follow three whole breaths through our bodies. The dots can remind us to find a moment of stillness in our lives and to reconnect with ourselves in a positive way.

Everyday life also gives us ample opportunities to practice mindfulness with more extended periods of time, in which we can choose to bring mindful awareness to any of the everyday ordinary activities we perform usually on automatic pilot and without a great deal of awareness. This can transform mundane tasks into something much more pleasurable, and offer a chance to switch off from the stresses of rushing and trying to get things over with, or doing things with our minds on something else. Instead, we can practice being truly present in whatever we are doing.

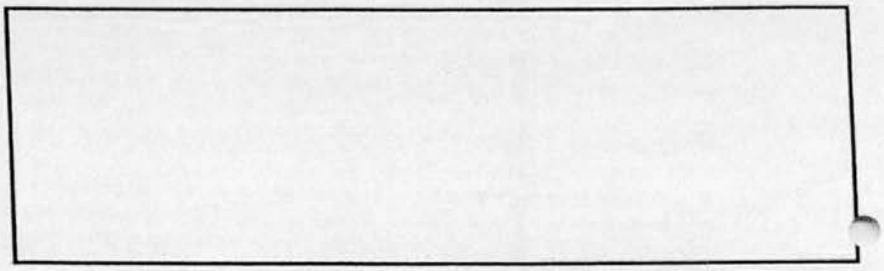
Tasks giving opportunity for mindfulness practice

The following are some examples of activities we can choose to perform with mindful awareness. Unlike the mindfulness triggers they involve practices which can endure for a number of minutes, or for more extended periods of time. See if any of the examples would fit into your own life, or come up with some examples of your own.

Chopping vegetables for a meal
Eating a meal
Preparing and drinking a cup of tea or coffee
Taking a shower or bath
Hand-washing clothes

Doing the washing up
Cleaning the kitchen floor
Taking an early morning walk
Listening to music
Having a conversation

Everyday things for mindfulness practice in my life



A day of mindfulness

We may occasionally have the rare and precious opportunity to have some time to ourselves when we are not pressurized with demands and expectations, and we can dedicate ourselves to a day of mindfulness! This could be an ordinary quiet day at home, or a day away to somewhere special. We may be able to set up a bit of time like a retreat. The important thing is that we do not try to do too much and what we do do we try to do with mindfulness. It will usually be more appropriate for us to experience some time alone, so we do not shatter our mindfulness with chatter and busyness. It can help if we decide to keep the radio and television off, and even restrict how much we absorb ourselves in books and music. We can put the telephone on answering mode so we will not be disturbed. We are setting up time for being with ourselves in a way that we do not usually have time for, free from our usual demands, obligations and pressures. It is free time which we are not going to rush to fill. We may want to engage in some simple and focused activities which will not make us lose touch with ourselves: perhaps some walking; gentle exercise such as yoga; we may wish to write a journal, write letters to close friends, read poetry, spend time with nature. We may wish, simply to do nothing and do whatever is the most comfortable way we can be with ourselves.

A day of mindfulness may sound very relaxing, but in practice, it can be very difficult, as we are so unused to being in touch with ourselves for any period of time. It may often be easier to experience more extended mindfulness practice like this in the context of an organised retreat. Otherwise, it is important that we are not too ambitious too soon. Even having an hour to ourselves to practice mindfulness can be enormously beneficial. One minute in every hour for being mindful can also make a difference.

10

Principles of mindfulness practice

These are qualities which are the essence of mindfulness and ones which can be developed through mindfulness practice. Many of them are radical and may seem quite alien to our everyday lives and world views..

- **"Simple but not easy"**

Mindfulness seems simplistic, but it is not easy. It requires effort and discipline. Whilst it can open up more fulfilling dimensions to our lives it can also get us in touch with things we may have tried to ignore, including unpleasant emotions and experiences. We may find we have a lot of resistance to its practice and find it frustrating that the mind so readily drifts off and loses focus. The aim is not to judge this, but to try again and again to come back to the breath and the point of focus. The point is to simply keep practicing mindfulness, and not to have any goal to aim for.

- **"Stopping"**

Mindfulness call for us to stop in our tracks and to stand aside from the hectic flow of our lives for a while. It gives us an opportunity to catch up with ourselves and to take stock of what is happening. It enables us to break the habitual cycle of our problems and find new and more creative approaches to life's demands. We are stopping for a while in the present moment of reality in which we are alive, instead of letting it pass by unnoticed.

- **"This is it - nothing special!"**

Mindfulness puts us in touch with the most basic aspects of our lives. It is about facing and accepting the reality we find ourselves in. In the present moment there is just this experience, without goals, direction or expectations - there is nowhere to go and nothing to aim for. This is it! The state of mindfulness is nothing special, it is just about feeling what you feel, knowing your mind and knowing what you are doing. It is not about being in an altered state of mind (even if it seems unfamiliar), it is not about "trancing out" or about having an empty mind.

- **"Waking up"**

Mindfulness calls us to wake up and pay attention to the present moment. It breaks us out of our habitual states of awareness which may be dull, hectic or unfocused. It calls us to ask ourselves from time to time, "Where am I right now? What am I doing?" and "Where is my mind? Am I awake?" Whatever we are experiencing just now, we are not going to miss it.

- **"Keep the breath in mind"**

The breath is always part of our experience and can keep us connected to the present moment, wherever we are and whatever we are doing. Awareness of the breath can be incorporated into any mindfulness practice, and can be used as an anchor to bring our awareness back whenever it wanders.

- **"Practice"**

Mindfulness can be cultivated and practiced, but the practice is not for any goal or performance, but for its own sake. The practice is often merely making the choice, and

having the intention of acting mindfully, doing the best we can. It is having the willingness to be open.

- **"Acceptance"**

Through the practice of mindfulness we will see the world as it is (we smell the roses and smell the garbage!), and this can require radical qualities of acceptance, in a world in which we cannot always or often change the way things are or our experiences of reality. This does not mean a passive resignation but a position of tolerance and acceptance that there is suffering and joy in all aspects of life. Acceptance is an acknowledgment of what is.

- **"Non-doing"**

This does not mean that we are without purpose, or unfocused. Non-doing is a quality of balanced, effortless activity when we are fully participating in something, but not in a driven or goal-oriented manner. Non-doing is a challenge in our culture of competitiveness and frantic busyness which even invade our leisure time. Mindfulness practice requires a sense of non-doing and non-striving to enable us to get in touch with ourselves.

- **"Patience"**

Mindfulness practice is the practice of patience and both will develop alongside one another. It is a practice of not trying to get anywhere, and just letting things unfold in their own time. It is what is needed when we are teaching a child or waiting for fruit to ripen on the tree. It is the opposite of impatience, irritation, frustration or anger. It is a quality which we can develop for ourselves, for others and for the world.

- **"Letting go"**

Mindfulness is about letting go. Letting go of our expectations, our pre-conceptions, our ideas , desires or views, if they are at odds with the way reality unfolds to us. It is about stopping wishing we were someone else, somewhere else, or wishing that our reality was somehow different to the way it is. Letting go is the quality of acceptance and non-clinging (like the monkey who grasps the biscuit in the jar, and cannot get its hand out unless he releases his grip). Letting go is letting things be as they are.

- **"Non-judging"**

This is about pure mindful experiencing without the mind making its usual commentary of comparisons, evaluations and judgments against what we regard as an ideal or as right. It is about not pushing away, rejecting or criticising unpleasant experiences and not about grasping or holding on to desirable experiences. It is just experiencing whatever is there: a view of the mountains, an unpleasant smell, a pain in the knee, a feeling of hunger, a pleasant day-dream. Just like a blanket spread under a tree will accept everything that falls upon it. We just observe, just describe and participate.

- **"Trust"**

Mindfulness practice is about developing trust in the unfolding of all things. It is about trusting our own thoughts and feelings and developing a sense of intuition, a gut-feeling which tells us what is needed in a given situation. It is about developing a *"wise mind"* and listening to what it tells us.

- **"Choosing simplicity"**

This is about choosing a way of life which is the opposite of attempting to squeeze new experiences out of every day, cramming every free corner with activities, goals, achievements and pleasures. It is about simplifying our lives, slowing down, being less hungry for experience and choosing less chaos and complexity in our everyday living. Mindfulness practice can lead us towards focusing more towards our basic needs, and the choice of saying "no" to other unnecessary duties and experiences.

- **"One thing in the moment"**

This simplicity can be expressed by practicing one thing at a time (even though it can be useful to multi-task at certain times). When we are eating, we can practice just focusing upon eating; when we are washing, we are just washing and aware of what we are doing; when we walk we just walk; when we water the plants we just water the plants; when we are thinking, we just think. We aim to give everything all of attention. Whilst we may not be able to practice this all of the time, we can feel more centred and calm, if we choose to practice this with some of our activities.

- **"Interconnectedness and Process"**

We can come to experience through the practice of mindfulness that all things are connected and that everything is in the process of change. If we chose to focus upon a simple flower and reflect upon its coming into being, we will see that in some complicated way, everything had to be present for it to arise: the soil, the climate, the nutrients of dying creatures and plants, the sunlight, the alignment of the planets, the cycling of water, the people who prepared the land, the iron ore which make the trowel and cutters which cut the flower, the lorries which transported it, etc. etc. We can trace the same process with every meal that we eat, the clothes that we wear.., we will find that we are connected in so many ways to so many people and circumstances across the whole of our world and that our actions have consequences for everything to which we are connected.

What is more, everything is in flux, in the process of being born, developing, flourishing and dying, in an endless cycle, from the smallest of beings to the stars in the universe. As we watch each moment with mindfulness, we become aware of the same processes in our own bodies, in our thoughts and emotions. Everything changes and nothing stays the same for long. Mindfulness practice may put us in touch with some of these realities and lead to a greater appreciation of ourselves, our relationships and the world around us.

Recommended Reading and Resources

In compiling this information sheet on Mindfulness, I have drawn upon the wisdom of those who have trodden this way before, and attempted to make mindfulness practice accessible to us all. In particular, Thich Nhat Hanh, a Vietnamese Buddhist monk, whose many books have enormous popularity in the West, and Jon Kabat Zinn, who has brought the use of mindfulness into stress programs in a range of settings, from hospitals to prisons. I would thoroughly recommend their books below. I have also drawn from the work of Marsha Linehan and John Teasdale, who have integrated mindfulness approaches with Cognitive Behavioural Therapy.

"The Miracle of Mindfulness: a manual on meditation", **Thich Nhat Hanh,** Rider Books, 1991.

"Wherever You Go, There You Are: Mindfulness Meditation for Everyday Life", **Jon Kabat Zinn,** Hyperion, 1995

"Full Catastrophe Living: How to cope with stress, pain and illness using mindfulness meditation", **Jon Kabat Zinn,** Piatkus, 1990.

Dr. Charlotte Procter
Cullen Centre, 2005

APPENDIX 15

EATING DISORDER EXAMINATION

EATING QUESTIONNAIRE

Instructions: The following questions are concerned with the past four weeks (28 days) only. Please read each question carefully. Please answer all of the questions. Thank you.

Questions 1 to 12: Please circle the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days) only.

	On how many of the past 28 days	No days	1-5 days	6-12 days	13-15 days	16-22 days	23-27 days	Every day
1	Have you been deliberately trying to limit the amount of food you eat to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
2	Have you gone for long periods of time (8 waking hours or more) without eating anything at all in order to influence your shape or weight?	0	1	2	3	4	5	6
3	Have you tried to exclude from your diet any foods that you like in order to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
4	Have you tried to follow definite rules regarding your eating (for example, a calorie limit) in order to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
5	Have you had a definite desire to have an empty stomach with the aim of influencing your shape or weight?	0	1	2	3	4	5	6
6	Have you had a definite desire to have a totally flat stomach?	0	1	2	3	4	5	6
7	Has thinking about food, eating or calories made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?	0	1	2	3	4	5	6
8	Has thinking about shape or weight made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?	0	1	2	3	4	5	6
9	Have you had a definite fear of losing control over eating?	0	1	2	3	4	5	6
10	Have you had a definite fear that you might gain weight?	0	1	2	3	4	5	6
11	Have you felt fat?	0	1	2	3	4	5	6
12	Have you had a strong desire to lose weight?	0	1	2	3	4	5	6

Questions 13-18: Please fill in the appropriate number in the boxes on the right. Remember that the questions only refer to the past four weeks (28 days).

Over the past four weeks (28 days) .....

13 Over the past 28 days, how many times have you eaten what other people would regard as an unusually large amount of food (given the circumstances)?	.....
14 ..... On how many of these times did you have a sense of having lost control over your eating (at the time that you were eating)?	.....
15 Over the past 28 days, on how many **DAYS** have such episodes of overeating occurred (i.e., you have eaten an unusually large amount of food and have had a sense of loss of control at the time)?	.....
16 Over the past 28 days, how many times have you made yourself sick (vomit) as a means of controlling your shape or weight?	.....
17 Over the past 28 days, how many times have you taken laxatives as a means of controlling your shape or weight?	.....
18 Over the past 28 days, how many times have you exercised in a "driven" or "compulsive" way as a means of controlling your weight, shape or amount of fat, or to burn off calories?	.....

Questions 19 to 21: Please circle the appropriate number. Please note that for these questions the term "binge eating" means eating what others would regard as an unusually large amount of food for the circumstances, accompanied by a sense of having lost control over eating.

19 Over the past 28 days, on how many days have you eaten in secret (ie, furtively)? ..... Do not count episodes of binge eating	No days	1-5 days	6-12 days	13-15 days	16-22 days	23-27 days	Every day
	0	1	2	3	4	5	6
20 On what proportion of the times that you have eaten have you felt guilty (felt that you've done wrong) because of its effect on your shape or weight? ..... Do not count episodes of binge eating	None of the times	A few of the times	Less than half	Half of the times	More than half	Most of the time	Every time
	0	1	2	3	4	5	6
21 Over the past 28 days, how concerned have you been about other people seeing you eat? ..... Do not count episodes of binge eating	Not at all		Slightly		Moderately		Markedly
	0	1	2	3	4	5	6

Questions 22 to 28: Please circle the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days).

	Over the past 28 days	**Not at all**		**Slightly**		**Moderate -ly**		**Markedly**
22	Has your weight influenced how you think about (judge) yourself as a person?	0	1	2	3	4	5	6
23	Has your shape influenced how you think about (judge) yourself as a person?	0	1	2	3	4	5	6
24	How much would it have upset you if you had been asked to weigh yourself once a week (no more, or less, often) for the next four weeks?	0	1	2	3	4	5	6
25	How dissatisfied have you been with your weight?	0	1	2	3	4	5	6
26	How dissatisfied have you been with your shape?	0	1	2	3	4	5	6
27	How uncomfortable have you felt seeing your body (for example, seeing your shape in the mirror, in a shop window reflection, while undressing or taking a bath or shower)?	0	1	2	3	4	5	6
28	How uncomfortable have you felt about others seeing your shape or figure (for example, in communal changing rooms, when swimming, or wearing tight clothes)?	0	1	2	3	4	5	6

What is your weight at present? (Please give your best estimate.) .....

What is your height? (Please give your best estimate.) .....

If female: Over the past three-to-four months have you missed any menstrual periods? .....

If so, how many? .....

Have you been taking the "pill"? .....

THANK YOU

APPENDIX 16

EATING DISORDER EXAMINATION – SCORING INSTRUCTIONS

EATING DISORDER EXAMINATION QUESTIONNAIRE - "EDE-Q"

Introduction

The EDE-Q is a self-report version of the Eating Disorder Examination, the well-established investigator-based interview (Fairburn and Cooper, 1993). It is scored in the same way as the EDE. Its performance has been compared with that of the EDE: in some respects it performs well, but in others it does not (see papers below).

Investigators are welcome to use the EDE-Q free of charge on three conditions:

1. It is understood that it is an instrument in evolution rather than a final version.
2. It is understood that it is under copyright.
3. In any publication the following citation is used for the instrument:

   Fairburn C. G., Beglin S. J. The assessment of eating disorders: Interview or self-report questionnaire? *International Journal of Eating Disorders* 1994; 16:363-370.

Scoring

The EDE and EDE-Q generate two types of data. First, they provide frequency data on key behavioural features of eating disorders in terms of number of episodes of the behaviour and in some instances number of days on which the behaviour has occurred. Second, they provide subscale scores reflecting the severity of aspects of the psychopathology of eating disorders. The subscales are Restraint, Eating Concern, Shape Concern and Weight Concern. To obtain a particular subscale score, the ratings for the relevant items (listed below) are added together and the sum divided by the total number of items forming the subscale. If ratings are only available on some items, a score may nevertheless be obtained by dividing the resulting total by the number of rated items so long as more than half the items have been rated. To obtain an overall or 'global' score, the four subscales scores are summed and the resulting total divided by the number of subscales (i.e. four). Subscale scores are reported as means and standard deviations.

Subscale Items:

Restraint

1 Restraint over eating
2 Avoidance of eating
3 Food avoidance
4 Dietary Rules
5 Empty stomach

Eating concern

7 Preoccupation with food, eating or calories
9 Fear of losing control over eating
19 Eating in secret
21 Social eating
20 Guilt about eating

Shape concern

6 Flat stomach

8 Preoccupation with shape or weight
23 Importance of shape
10 Fear of weight gain
26 Dissatisfaction with shape
27 Discomfort seeing body
28 Avoidance of exposure
11 Feelings of fatness

Weight concern
22 Importance of weight
24 Reaction to prescribed weighing
8 Preoccupation with shape or weight
25 Dissatisfaction with weight
12 Desire to lose weight

Community norms
The data below are from a community-based sample of 243 young women assessed using the EDE and EDE-Q (see Fairburn and Beglin, 1994).

Measure	**Mean**	**SD**	**N**
EDE interview			
Global EDE (4 subscales)	0.932	0.805	243
Restraint subscale	0.942	1.093	243
Eating Concern subscale	0.266	0.593	243
Shape Concern subscale	1.339	1.093	243
Weight Concern subscale	1.181	0.929	243

EDE Q			
Global EDE-Q (4 subscales)	1.554	1.213	241
Restraint subscale	1.251	1.323	241
Eating Concern subscale	0.624	0.859	241
Shape Concern subscale	2.149	1.602	241
Weight Concern subscale	1.587	1.369	241

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APPENDIX 17

BODY SHAPE QUESTIONNAIRE

Body Shape Questionnaire

I would like to know how you have been feeling about your appearance over the PAST FOUR WEEKS. Please read each question carefully and put a circle in the box that you feel most applies to you. Please answer all the questions.

Over the past FOUR WEEKS:

	Never	Rarely	Sometimes	Often	Very often	Always
1. Has feeling bored made you brood about your shape?	1	2	3	4	5	6
2. Have you been so worried about your shape that you have been feeling that you ought to diet?	1	2	3	4	5	6
3. Have you thought that your thighs, hips or bottom are too large for the rest of you?	1	2	3	4	5	6
4. Have you been afraid that you might become fat (or fatter)?	1	2	3	4	5	6
5. Have you worried about your flesh not being firm enough?	1	2	3	4	5	6
6. Has feeling full (e.g. after eating a large meal) made you feel fat?	1	2	3	4	5	6
7. Have you felt so bad about your shape that you have cried?	1	2	3	4	5	6
8. Have you avoided running because your flesh might wobble?	1	2	3	4	5	6
9. Has being with thin people made you feel self-conscious about your shape?	1	2	3	4	5	6
10. Have you worried about your thighs spreading out when sitting down?	1	2	3	4	5	6
11. Has eating even a small amount of food made you feel fat?	1	2	3	4	5	6
12. Have you noticed the shape of other people and felt that your own shape compared unfavourably?	1	2	3	4	5	6

13. Has thinking about your shape interfered with your ability to concentrate (e.g. whilst watching television, reading, listening to conversations)?	1	2	3	4	5	6
14. Has being naked, such as when taking a bath, made you feel fat?	1	2	3	4	5	6
15. Have you avoided wearing clothes which make you particularly aware of the shape of your body?	1	2	3	4	5	6
16. Have you imagined cutting off fleshy area of your body?	1	2	3	4	5	6
17. Has eating sweets, cakes, or other high calorie food made you feel fat?	1	2	3	4	5	6
18. Have you not gone out to social occasions (e.g. parties) because you have felt bad about your shape?	1	2	3	4	5	6
19. Have you felt excessively large and rounded?	1	2	3	4	5	6
20. Have you felt ashamed of your body?	1	2	3	4	5	6
21. Has worry about your shape made you diet?	1	2	3	4	5	6
22. Have you felt happiest about your shape when your stomach has been empty (e.g. in the morning?)	1	2	3	4	5	6
23. Have you thought that you are the shape you are because you lack self-control?	1	2	3	4	5	6
24. Have you worried about other people seeing rolls of flesh around your waist or stomach?	1	2	3	4	5	6
25. Have you felt that it is not fair that other people are thinner than you?	1	2	3	4	5	6
26. Have you vomited in order to feel thinner?	1	2	3	4	5	6
27. When in company have you worried about taking up too much room (e.g. sitting on a sofa, a bus seat)?	1	2	3	4	5	6
28. Have you worried about your flesh being dimply?	1	2	3	4	5	6
29. Has seeing your reflection (e.g. in a mirror, or a shop window) made you feel bad about your shape?	1	2	3	4	5	6

30. Have you pinched an area of your body to see how much fat there is?	1	2	3	4	5	6
31. Have you avoided situations where people could see your body (e.g. communal changing rooms or swimming pools)	1	2	3	4	5	6
32. Have you taken laxatives in order to feel thinner?	1	2	3	4	5	6
33. Have you been particularly self-conscious about your shape when in the company of others?	1	2	3	4	5	6
34. Has worry about your shape made you feel you ought to exercise?	1	2	3	4	5	6

APPENDIX 18

APPEARANCE SCHEMAS INVENTORY-REVISED

The Beliefs about Appearance Questionnaire
(ASI-R Short Form)

The statements below are beliefs that people may or may not have about their physical appearance and its influence on life. Decide on the extent to which you personally **disagree or agree** with each statement and enter a number from 1 to 5 in the space on the left. There are no right or wrong answers. Just be truthful about your personal beliefs.

1	2	3	4	5
Strongly Disagree	**Mostly Disagree**	**Neither Agree or Disagree**	**Mostly Agree**	**Strongly Agree**

_____ 1. I spend little time on my physical appearance.

_____ 2. When I see good-looking people, I wonder about how my own looks measure up.

_____ 3. I try to be as physically attractive as I can be.

_____ 4. I have never paid much attention to what I look like.

_____ 5. I seldom compare my appearance to that of other people I see.

_____ 6. I often check my appearance in a mirror just to make sure I look okay.

_____ 7. When something makes me feel good or bad about my looks, I tend to dwell on it.

_____ 8. If I like how I look on a given day, it's easy to feel happy about other things.

_____ 9. If somebody had a negative reaction to what I look like, it wouldn't bother me.

_____ 10. When it comes to my physical appearance, I have high standards.

_____ 11. My physical appearance has had little influence on my life.

_____ 12. Dressing well is not a priority for me.

(continued on the next page)

1	2	3	4	5
Strongly Disagree	**Mostly Disagree**	**Neither Agree or Disagree**	**Mostly Agree**	**Strongly Agree**

_____ 13. When I meet people for the first time, I wonder what they think about how I look.

_____ 14. In my everyday life, lots of things happen that make me think about what I look like.

_____ 15. If I dislike how I look on a given day, it's hard to feel happy about other things.

_____ 16. I fantasize about what it would be like to be better looking than I am.

_____ 17. Before going out, I make sure that I look as good as I possibly can.

_____ 18. What I look like is an important part of who I am.

_____ 19. By controlling my appearance, I can control many of the social and emotional events in my life.

_____ 20. My appearance is responsible for much of what's happened to me in my life.

APPENDIX 19

BODY CHECKING QUESTIONNAIRE

Body Checking Questionnaire

Please circle the number which best describes how often you engage in these behaviours at the **PRESENT TIME**

		Never	Rarely	Some-times	Often	Very often
1	I check to see if my thighs spread when I'm sitting down	1	2	3	4	5
2	I pinch my stomach to measure fatness	1	2	3	4	5
3	I have special clothes which I try on to make sure they still fit	1	2	3	4	5
4	I check the diameter of my wrist to make sure it's the same size as before	1	2	3	4	5
5	I check my reflection in glass doors or car windows to see how I look	1	2	3	4	5
6	I pinch my upper arms to measure fatness	1	2	3	4	5
7	I touch underneath my chin to make sure I don't have a "double chin"	1	2	3	4	5
8	I look at others to see how my body size compares	1	2	3	4	5
9	I rub (or touch) my thighs whilst sitting to check for fatness	1	2	3	4	5
10	I check the diameter of my legs to make sure they're the same size as before	1	2	3	4	5
11	I ask others about their weight or clothing size so I can compare my own weight/size	1	2	3	4	5
12	I check to see how my bottom looks in the mirror	1	2	3	4	5
13	I practice sitting and standing in various positions to see how I would look in each position	1	2	3	4	5
14	I check to see if my thighs rub together	1	2	3	4	5
15	I try to elicit comments from others about how fat I am	1	2	3	4	5
16	I check to see if my fat jiggles	1	2	3	4	5
17	I suck in my gut to see what it is like when my stomach is completely flat	1	2	3	4	5
18	I check to make sure my rings fit in the same way as before	1	2	3	4	5
19	I look to see if I have cellulite on my thighs when I am sitting	1	2	3	4	5
20	I lie down on the floor to see if I can feel my bones touch the floor	1	2	3	4	5
21	I pull my clothes as tightly as possible around myself to see how I look	1	2	3	4	5
22	I compare myself to models on TV or in magazines	1	2	3	4	5
23	I pinch my cheeks to measure fatness	1	2	3	4	5

APPENDIX 20

BODY CHECKING COGNITIONS QUESTIONNAIRE

Body Checking Cognitions Scale

Below is a list of some common reasons, beliefs or thoughts people have that lead them to check their bodies. Please read each item carefully and place a tick in the box to indicate how often the statement applies to you. Please answer all the questions.

		Never	Rarely	Some-times	Often	Very often
1	Body checking today allows me to decide how much/little I can eat tomorrow.					
2	I think body checking will reassure me about my size.					
3	I think body checking will help to calm me down when I feel anxious about my shape or weight.					
4	Body checking helps me to control my weight.					
5	Body checking is a good thing for me to do.					
6	Body checking stops me from losing control of what I eat.					
7	Body checking makes me feel better.					
8	By body checking I can tell how much weight I have put on.					
9	Body checking helps to confirm what the scales say.					
10	I have to body check to see where the weight is going.					
11	I keep checking in the hope that one day I will be happy with the way I look.					
12	If I stop body checking my weight will shoot up.					
13	Body checking is the most accurate way to tell what I look like.					
14	I have to check that my body is hidden in the way I like before I leave the house.					
15	If I resist body checking, I will feel worse.					
16	I think checking my body will tell me how I feel.					
17	I can't remember what I look like if I don't check.					
18	I think body checking will make me more comfortable around other people.					
19	Body checking tells me when I need to do more exercise.					

APPENDIX 21

BODY IMAGE AVOIDANCE QUESTIONNAIRE

Body Image Avoidance Questionnaire

Please circle the number which best describes how often you engage in these behaviours at the **PRESENT TIME**

		Always	Usually	Often	Some times	Rarely	Never
1	I wear baggy clothes	5	4	3	2	1	0
2	I wear clothes I do not like	5	4	3	2	1	0
3	I wear darker colour clothing	5	4	3	2	1	0
4	I wear a special set of clothing e.g. "my fat clothes"	5	4	3	2	1	0
5	I restrict the amount of food I eat	5	4	3	2	1	0
6	I only eat fruits, vegetables and other low calorie foods	5	4	3	2	1	0
7	I fast for a day or longer	5	4	3	2	1	0
8	I do not go out socially if I will be "checked out"	5	4	3	2	1	0
9	I do not go out socially if the people I am with will discuss weight	5	4	3	2	1	0
10	I do not go out socially if the people I am with are thinner than me	5	4	3	2	1	0
11	I do not go out socially if it involves eating	5	4	3	2	1	0
12	I weigh myself	5	4	3	2	1	0
13	I am inactive	5	4	3	2	1	0
14	I look at myself in the mirror	5	4	3	2	1	0
15	I avoid physical intimacy	5	4	3	2	1	0
16	I wear clothes that will divert attention from my weight	5	4	3	2	1	0
17	I avoid going clothes shopping	5	4	3	2	1	0
18	I don't wear "revealing" clothes (e.g. swimwear, shorts)	5	4	3	2	1	0
19	I get dressed up or made up	5	4	3	2	1	0

APPENDIX 22

BODY IMAGE GROUP FEEDBACK FORM

Body Image Research Group- feedback form

Many thanks for attending the body image research group. As part of evaluating the efficacy of the study, I am interested in comparing your body image concerns before and after the group. In addition, to your views on the sessions that you have attended to guide future clinical practice.

Body Image Concerns at beginning of treatment

How would you describe your *body image concerns* at the beginning of the group?

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.....

What *factors* had contributed to the development of negative body image?

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.....

What were the *triggers* for negative body image?

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.....

Please can you describe typical body image *negative thoughts and beliefs* that you had at the beginning of treatment?

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.....
.....
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.....

Please can you describe typical body image *behaviours* that you had at the beginning of treatment?

.....
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.....
.....
.....
.....

Session 1 - Body image and understanding body image development

Attended Did not attend

1. Please rate the content of the session

Excellent Good Average Poor

2. Was the session helpful in understanding or coping with your negative body image?

Very helpful helpful not so helpful not helpful

3. What did you find the most useful?

.....
.....
.....

4. Are there any parts that you did not find useful? If so, please describe

.....
.....
.....

5. How did you find the homework activities and worksheets?

.....
.....
.....

6. Are there any ways in which this sessions could be improved or topics that you would like more information or more time to discuss?

.....
.....
.....

Session 2 - Understanding the maintenance of negative body image & identify targets for change.

Attended Did not attend

1. Please rate the content of the session

Excellent Good Average Poor

2. Was the session helpful in understanding or coping with your negative body image?

Very helpful helpful not so helpful not helpful

3. What did you find the most useful?

.....
.....
.....

4. Are there any parts that you did not find useful? If so, please describe

.....
.....
.....

5. How did you find the homework activities and worksheets?

.....
.....
.....

6. Are there any ways in which this sessions could be improved or topics that you would like more information or more time to discuss?

.....
.....
.....

Session 3- Psychoeducation and encouraging positive body imageactivities

Attended Did not attend

1. Please rate the content of the session

Excellent Good Average Poor

2. Was the session helpful in understanding or coping with your negative body image?

Very helpful helpful not so helpful not helpful

3. What did you find the most useful?

.....
.....
.....

4. Are there any parts that you did not find useful? If so, please describe

.....
.....
.....

5. How did you find the homework activities and worksheets?

.....
.....
.....

6. Are there any ways in which this sessions could be improved or topics that you would like more information or more time to discuss?

.....
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.....

Session 4 - Challenge negative body image behaviours

Attended Did not attend

1. Please rate the content of the session

Excellent Good Average Poor

2. Was the session helpful in understanding or coping with your negative body image?

Very helpful helpful not so helpful not helpful

3. What did you find the most useful?

.....
.....
.....

4. Are there any parts that you did not find useful? If so, please describe

.....
.....
.....

5. How did you find the homework activities and worksheets?

.....
.....
.....

6. Are there any ways in which this sessions could be improved or topics that you would like more information or more time to discuss?

.....
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.....

Session 5 - Challenging over-evaluation of shape and weight & negative thoughts

Attended Did not attend

1. Please rate the content of the session

Excellent Good Average Poor

2. Was the session helpful in understanding or coping with your negative body image?

Very helpful helpful not so helpful not helpful

3. What did you find the most useful?

.....
.....
.....

4. Are there any parts that you did not find useful? If so, please describe

.....
.....
.....

5. How did you find the homework activities and worksheets?

.....
.....
.....

6. Are there any ways in which this sessions could be improved or topics that you would like more information or more time to discuss?

.....
.....
.....

Session 6 – Summary session of body image group

Attended Did not attend

1. Please rate the content of the session

Excellent Good Average Poor

2. Was the session helpful in understanding or coping with your negative body image?

Very helpful helpful not so helpful not helpful

3. What did you find the most useful?

.....
.....
.....

4. Are there any parts that you did not find useful? If so, please describe

.....
.....
.....

5. How did you find the homework activities and worksheets?

.....
.....
.....

6. Are there any ways in which this sessions could be improved or topics that you would like more information or more time to discuss?

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.....

Opinions on group treatment

What did it feel like to be in a group? What did you think about being in a group?

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What did you find the most helpful or like about being in a group?

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What did you find the least helpful or did not like about being in a group?

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Did the therapists give you enough time to talk and think about your problems in the context of each session?

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End of treatment – review

Now that you have completed the group, I am interested in gaining more information regarding your current thoughts, feelings and behaviours associated with your body image. Please answer the questions below:

How do you now feel about your body image?

.....
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.....
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.....
.....

Please can you describe typical body image *thoughts and beliefs* that you have at the end of treatment?

.....
.....
.....
.....
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.....

Please can you describe any body image *behaviours* that you have at the end of treatment?

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What strategies have you found the most helpful to try and improve your body image?

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What strategies have you found the least helpful?

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What have you learnt about yourself during this group treatment?

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Have you identified any further treatment goals? If so, please describe.

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What strategies or alternative views will you continue to use?

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.....
.....

Many thanks for taking time to complete this feedback form and I wish you all the best in your efforts to improve your body image

APPENDIX 23

SCORING INSTRUCTIONS FOR BODY IMAGE MEAURES

Scoring guide & norms for Body Image Measures

Body Shape Questionnaire

Scoring scale: 1-6
Score over 100 indicates negative body image

Sample population	Mean scores	Standard deviation
Clinical – bulimia	139.9	22.5
Non-clinical – community	81.5	28.4

The beliefs about Appearance Questionnaire (ASI-R Short Form)

Scoring range: 1-5 Strongly disagree to Strongly agree

Subscales (* reversed scored items)
Composite ASI-R Score: mean of 20 items
Self-Evaluative Salience (12 items): 2, 5*, 7, 8, 9*, 11*, 13, 14, 15, 16, 19, 20
Motivational Salience (8 items): 1*, 3, 4*, 6, 10, 12*, 17, 18

Sample population	**ASI-R Composite**	**ASI-R Self Evaluative Salience Factor**	**ASI-R Motivational Salience Factor**
Females	3.47 (.57)	3.30 (.73)	3.71 (.67)
Males	3.20 (.67)	2.96 (.75)	3.57 (.74)

Body Image Checking Questionnaire

Scoring scale: 1-5

Subscales
Overall appearance -3, 5, 8, 11, 12, 13, 15, 17, 21, 22
Specific body parts – 1, 2, 6, 10, 14, 16, 19
Idiosyncratic checking – 4, 7, 18, 20, 23

Sample population	Mean scores	Standard deviation
Clinical	82.1	18
Non-clinical	56.0	16
High BSQ scorers	74.1	15
Low BSQ scorers	49.0	11
Dieters	71.7	17
Non-dieters	54.2	16

Body Checking Cognitions Scale

Scoring scale 1-5.
Higher score indicates greater level of beliefs that most frequently underlie body checking behaviours.

Subscales
Object verification (6 items): 8, 9,10, 11, 13, 19
Reassurance (4 items): 2, 3, 5, 7
Safety beliefs (5 items): 14, 15, 16, 17, 18
Body control (4 items): 1, 4, 6, 12

Add scores for total and each subscale, then divide by item number to derive mean score.
Compare scores to sample populations below

Sample population	**Clinical – Mean & SD**	**Non-clinical - Mean & SD**
Total Score	3.05 (1.03)	2.07 (.67)
Object verification	3.32 (1.09)	2.33 (.85)
Reassurance	2.90 (1.15)	2.19 (.88)
Safety beliefs	2.80 (1.10)	1.79 (.79)
Body control	3.13 (1.27)	2.02 (.89)

Body Image Avoidance Questionnaire

Scoring scale: 0-5. Max score 5x19 = 95

Subscales
Clothing – 1,2, 3, 4, 13, 15, 16, 17, 18
Social Activities – 8, 9, 10, 11
Eating restraint – 5,6, 7
Grooming & weighing – 12, 14, 19

Sample population	Mean scores	Standard deviation
Clinical	40.17	10.9
Non-clinical	30.67	12.7

APPENDIX 24

ETHICAL CORRESPONDENCE AND APPROVAL

Lothian NHS Board

Deaconess House
148 Pleasance
Edinburgh
EH8 9RS
Telephone 0131 536 9000
Fax 0131 536 9009
www.nhslothian.scot.nhs.uk

NHS Lothian

Lothian Local Research Ethics Committee 02
Telephone: 0131 536 9061
Facsimile: 0131 536 9346

19 May 2008

Miss Christine Watson
Trainee Clinical Psychologist
NHS Dumfries and Galloway
Department of Psychological Services and Research
Nithbank Hospital
Dumfries
DG2 7FE

Dear Miss Watson

Full title of study: **An evaluation of a stand alone cognitive behavioural body image group treatment for patients diagnosed with bulimia nervosa and eating disorder not otherwise specified.**

REC reference number: **08/S1102/22**

The Research Ethics Committee reviewed the above application at the meeting held on 14 May 2008.

Documents reviewed

The documents reviewed at the meeting were:

Document	*Version*	*Date*
Application	5.5	
Investigator CV		16 April 2008
Protocol	1	16 April 2008
Summary/Synopsis	1	16 April 2008
Letter from Sponsor		16 April 2008
Compensation Arrangements		20 July 2007
Questionnaire: Body Image Avoidance	Validated	
Questionnaire: Body Checking	Validated	
Questionnaire: The Beliefs about Appearance	Validated	
Questionnaire: Body Shape	Validated	
Questionnaire: EDE-Q5.2	Validated	
Questionnaire: Body Checking Cognitions Scale	Validated	
Letter of invitation to participant	1	09 March 2008
GP/Consultant Information Sheets	Option 1 (1)	10 April 2008
Participant Information Sheet: Participant	1	10 April 2008
Participant Consent Form: Participant	1	10 April 2008
Treatment Protocol	1	09 March 2008

Participant Data Sheet	1	09 March 2008
Honorary Contract		12 February 2008
GP Letter	Option 2 (1)	10 April 2008
Michael Power CV		

Provisional opinion

The Committee would be content to give a favourable ethical opinion of the research, subject to receiving a complete response to the request for further information set out below.

Further information or clarification required

The Committee agreed to offer a favourable ethical opinion of the research, subject to receiving a complete response to the request for further information below. The full Committee would consider the response and confirm their final opinion:

- **The Committee were not comfortable with the level of coercion in your Project. They felt it was not appropriate to imply that by taking part in your research they would get treated quicker. They suggested that you and your supervisor should consider revising you project to include one of the following options.**
  - **Find out who was coming up on the waiting list and randomise ½ to take part in your study and ½ receive standard treatment.**
  - **Do a before and after study on waiting list patients without the wait for standard therapy group.**
- **Please confirm that all data stored on a laptop will be fully anonymised.**
- **Provide re-assurance that the CBT you provide will not change the efficacy of any future treatment.**
- **Use the standard format of the Consent Form which can be found at http://www.nres.npsa.nhs.uk/docs/guidance/info_sheet_and_consent_form_guidance.pdf**
- **The committee were concerned regarding the quantity of questionnaire the participants are asked to complete and that some of them were gender specific. Consider reducing the number of questionnaires given to specific people.**
- **A13: As discussed at the meeting it is not appropriate to change this question to state that you will do a blood test at the Cullen Centre if you had not stated it in the original application. Please amend the GP letter accordingly. If you wish to add this please submit a substantial amendment form after final approval has been given.**

When submitting your response to the Committee, please send revised documentation where appropriate underlining or otherwise highlighting the changes you have made and giving revised version numbers and dates.

The Committee will confirm the final ethical opinion within a maximum of 60 days from the date of initial receipt of the application, excluding the time taken by you to respond fully to the above points. A response should be submitted by no later than 16 September 2008.

Membership of the Committee

The members of the Committee who were present at the meeting are listed on the attached sheet.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

08/S1102/22	**Please quote this number on all correspondence**

Professor Peter Hayes
Chair

Enclosures: *List of names and professions of members who were present at the meeting and those who submitted written comments.*

Copy to: *Paul McGuire*

Lothian Local Research Ethics Committee 02

Attendance at Committee meeting on 14 May 2008

Committee Members:

Name	*Profession*	*Present*	*Notes*
Miss Sharon Cameron	Expert (Nursing)	Yes	
Mrs O M A Chiswick	Expert (Nursing)	Yes	
Miss Laura Ellis	Expert - Research Nurse	No	
Professor Peter Hayes	Expert (Medicine) (Chair)	Yes	
Dr Calum MacKellar	Lay	No	
Mr Lindsay Murray	Expert (Research)	Yes	
Mr Andy Neustein	Lay	Yes	
Mr J Oliphant	Expert (Nursing)	No	
Mrs V Prosser	Lay	Yes	
Mr Thomas Russell	Expert - Consultant Neurosurgeon	No	
Ms Tzyvia Rye	Expert (Medical Research)	Yes	
Professor Gerda Siann	Expert (Psychiatry)	No	
Reverend Donald Stephen	Lay	Yes	
Mr W O D Walker	Lay	Yes	

NHS

Date:	Wed, 25 Jun 2008 11:44:41 +0100
From:	"Baird, Lyndsay" <Lyndsay.Baird@nhslothian.scot.nhs.uk> | | Show headers
Subject:	FW: LREC REFERENCE: 08/S1102/22

To:
[redacted]<cwatson@nhs.net>

Hi Christine

Sorry for the delay, please see below Prof Hayes response.

Regards
Lyndsay

From: Campbell, Vanessa
Sent: 25 June 2008 11:46
To: Baird, Lyndsay
Subject: RE: LREC REFERENCE: 08/S1102/22

Hi Lyndsay

Prof Hayes says if her 'treatment' is not a substitute for standard then do hers first, assessing before and after, and then patients go on to standard treatment.

Kind regards

Vanessa

-----Original Message-----
From: Baird, Lyndsay
Sent: 27 May 2008 09:45
To: Campbell, Vanessa
Subject: LREC REFERENCE: 08/S1102/22

Hi Vanessa

Can you ask Professor Hayes to give the researcher some further clarification on how to proceed with this point?

- **Do a before and after study on waiting list patients without the wait for standard therapy group.**

  She is not clear what this is asking her to do. Can you clarify whether it is a before and after on her treatment only and participants do not receive standard treatment. She noted that this would not be possible as her treatment was a stand alone part of the standard treatment.

I have also attached the letter that was sent out for his information.

I am on holiday until 9th June 2008 as discussed on the phone this morning I will pick this up with the researcher when I return.

With thanks
Lyndsay

2nd July 2008

Lothian Local Research Ethics Committee 02
Deaconess House
148 Pleasance
Edinburgh
EH8 9RS

Dear Committee,

Full Title of study: An evaluation of a stand alone cognitive behavioural body image group treatment for patients diagnosed with bulimia nervosa and eating disorder not otherwise specified.

REC reference number: 08/S1102/22

I am writing in response to your letter dated 19th May 2008 requesting further information.

The committee suggested two possible options for the research design. After consideration and discussion with my academic supervisor, Professor Mick Power, I do not feel these options are possible for the following reasons.

The first option suggests comparing two different dependent variables and this is not the aim of the research study. Standard cognitive behavioural treatment offered at the Cullen Centre is in an individual format and in its broadest form examines motivation to change, attitudes to eating, diet and purging behaviour, function of eating disorder, emotion regulation, problem solving, self esteem, anxiety management and body image. The proposed research study will focus solely on body image using the cognitive behavioural model within a group format and therefore this option is not viable.

The second option suggests comparing the treatment group at pre and post time points with no control group. The research design initially proposed by the chief investigator included a waiting list control group in accordance with the minimum methodology criteria for Cochrane Systematic Reviews. This only includes studies with a randomised control design commonly applied in clinical trials. The type of control groups that are typically used in research trials are placebo, alternative treatment or a waiting list control groups. Therefore the chief investigator feels it is imperative to apply a randomised controlled design to compare the efficacy of the body image group and the best possible control group is the waiting list option. However, I must highlight that the body image group will be repeated on several occasions and therefore these participants will be allocated a place in the next available group.

To summarise: the new proposed research design means that ALL participants will receive the intervention, half within one month of contact and the other half after an extended baseline period of approximately 3 months, which will provide the control comparison data. **Professor Power would like to note that this research design has**

been acceptable to the Lothian Ethics Committee for two previous psychotherapy intervention studies in which he has been involved.

Once participants have completed the research group treatment, they will continue to remain on the Cullen Centre waiting list for routine psychological treatment and in the care of their GP.

In relation to your request for reassurance that the research treatment will not change the efficacy of any future treatment, it is difficult to give complete reassurance give the nature of individual responses to psychological treatment. According to the Quality Improvement Scotland guidelines (NHS QIS 2006) for Eating Disorders, Cognitive Behavioural Therapy for Bulimia Nervosa (CBT-BN) is the recommended treatment for Bulimia Nervosa. It is anticipated that participants will be able to understand their negative body image within a cognitive behavioural model and therefore can generalise this knowledge and skills learned to their future routine psychological treatment. However, it is important to note that eating disorders are a difficult group to treat and we still do not have a treatment approach with a one hundred percent success rate. As Wilson and Fairburn (2002) found that 50% of patients with bulimia nervosa will relapse and therefore require further psychological treatment. Despite a relapse, these patients are accepted for further treatment and a decision will be made at that time which psychological model would be the most effective treatment to prevent future relapse.

I can confirm that all data stored on a laptop will be fully anonymised. All identifying information will be on paper copy and stored in an NHS department's locked filing cabinet.

The questionnaires selected for this study have been specifically chosen to measure the efficacy of treatment components and corresponding hypotheses. It is with regret that there is not one single questionnaire to measure the multi-dimensional nature of body image and therefore the chief investigator does not feel able to reduce the number of measures. However, the Body Shape Questionnaire and Body Image Avoidance questionnaire have been modified to include gender neutral items. Please see attached copies.

As requested, I have amended the research protocol, consent form, participant information sheet and GP letters accordingly (see underlined text for changes), please find version 2 dated 2nd July 2008 enclosed.

I do hope you will consider this research proposal and understand my reasons for following this methodology. I shall look forward to hearing from you.

Yours sincerely

Christine Watson
Chief Investigator
Trainee Clinical Psychologist

Lothian NHS Board

Deaconess House
148 Pleasance
Edinburgh
EH8 9RS
Telephone 0131 536 9000
Fax 0131 536 9009
www.nhslothian.scot.nhs.uk

NHS
Lothian

Lothian Local Research Ethics Committee 02
Telephone: 0131 536 9061
Facsimile: 0131 536 9346

18 July 2008

Miss Christine Watson
Trainee Clinical Psychologist
NHS Dumfries and Galloway
Department of Psychological Services and Research
Nithbank Hospital
Dumfries
DG2 7FE

Dear Miss Christine Watson

Full title of study: **An evaluation of a stand alone cognitive behavioural body image group treatment for patients diagnosed with bulimia nervosa and eating disorder not otherwise specified.**

REC reference number: **08/S1102/22**

Thank you for your letter of 02 July 2008, responding to the Committee's request for further information on the above research, and enclosing the following revised documents:

Document	*Version*	*Date*
Protocol: Not Applicable	2	01 July 2008
Questionnaire: Body Image Avoidance		
Questionnaire: Body Shape		
Letter of invitation to participant: Not Applicable	2	02 July 2008
GP/Consultant Information Sheets: Not Applicable	2 (Option1)	02 July 2008
Participant Information Sheet: Participant	2	02 July 2008
Participant Consent Form: Participant	2	02 July 2008
Response to Request for Further Information: Not Applicable		02 July 2008
GP/Consultant Information sheet	2 (Option 2)	02 July 2008

The further information and revised documentation has been considered on behalf of the Committee by Lothian Research Ethics Committee 2.

The Committee was satisfied with the responses to matters adequately addressed from previous letter.

However, the Committee would be grateful for a more complete response on the following points:

Point 1 - "Level of coercion."

- It should be clear to participants that this study is for a PhD, that you are currently and clinical trainee and not yet a clinician. This should be at the beginning of the information

- You should not refer to your research as 'treatment' as this is confusing. It should be clearer, e.g. study group.

Point 5 - "Questionnaires"

- Confirm that all the questionnaires have been validated and standardised.

Point 6 - "GP Letter"

- Confirm arrangements in place with GP regarding physical health tests and monitoring.

Any further revised document submitted should be given a revised version number and date.

The 60 day clock for issue of a final ethical opinion on this application will re-start when the Committee has received a response on the outstanding points.

08/S1102/22	**Please quote this number on all correspondence**

Miss Lyndsay Baird
Committee Co-ordinator

Email: lyndsay.baird@lhb.scot.nhs.uk

Copy to: *Paul McGuire*

22nd July 2008

Lothian Local Research Ethics Committee 02
Deaconess House
148 Pleasance
Edinburgh
EH8 9RS

Dear Committee,

Full Title of study: An evaluation of a stand alone cognitive behavioural body image group treatment for patients diagnosed with bulimia nervosa and eating disorder not otherwise specified.

New Title of Study: An evaluation of a stand alone cognitive behavioural body image group for patients diagnosed with bulimia nervosa and eating disorder not otherwise specified.

REC reference number: 08/S1102/22

I am writing in response to your letter dated 18th July 2008 requesting a more complete response to the following points:

Point 1 – "Level of coercion"

The participant invitation letter and information sheet have been revised (Version 3, dated 22/7/08) to include these suggestions. May I also highlight that I will receive regular clinical supervision from Dr Patricia Graham, Clinical Psychologist, ANITT/Cullen Centre, regarding the practice of the body image groups. My academic work is also under supervision of Professor Mick Power, University of Edinburgh.

Furthermore, I have revised the research study title and it will now be referred to as "body image group". I hope this title is satisfactory and does not cause any confusion to participants.

Point 5 - "Questionnaires"

I can confirm that all questionnaires have been validated and standardised. Please refer to my answer for question A48 in my original application for reliability and validity data.

Point 6 – " GP Letter"

I can confirm that arrangements have been made for participants to have a physical health examination, if indicated at my assessment, carried out at the Cullen Centre (see letter Option 2, Version 3, dated 22/7/08).

For participants whose presentation does not indicate the need for a physical health examination, their GP will be informed of their involvement of the study and asked to continue to monitor their physical health, as per routine clinical practice whilst they are waiting for routine treatment at the Cullen Centre (see letter Option 1, Version 3, dated 22/7/08).

If a participant is found at any stage of the study to have a physical health abnormalities associated with their eating disorder, the GP letters indicate that they should continue to follow Cullen Centre routine practice i.e the patients physical health should be monitored within their GP practice whilst they are waiting for routine psychological treatment.

I shall look forward to hearing from you.

Yours sincerely

Christine Watson
Chief Investigator
Trainee Clinical Psychologist

Enc. Participant Invitation letter (Version 3, dated 22/7/08)
Participant Information Sheet (Version 3, dated 22/7/08)
Consent Form (Version 3, dated 22/7/08)
GP letter option 1 & 2 (Version 3, dated 22/7/08)

Lothian NHS Board

Deaconess House
148 Pleasance
Edinburgh
EH8 9RS
Telephone 0131 536 9000
Fax 0131 536 9009
www.nhslothian.scot.nhs.uk

NHS
Lothian

Lothian Local Research Ethics Committee 02
Telephone: 0131 536 9061
Facsimile: 0131 536 9346

19 August 2008

Miss Christine Watson
Trainee Clinical Psychologist
NHS Dumfries and Galloway
Department of Psychological Services and Research
Nithbank Hospital
Dumfries
DG2 7FE

Dear Miss Watson

Full title of study: **An evaluation of a stand alone cognitive behavioural body image group treatment for patients diagnosed with bulimia nervosa and eating disorder not otherwise specified.**

REC reference number: **08/S1102/22**

Thank you for your letter of 22 July 2008, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information was considered at the meeting of the Sub-Committee of the REC held on 13 August 2008.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission at NHS sites ("R&D approval") should be obtained from the relevant care organisation(s) in accordance with NHS research governance arrangements. Guidance on applying for NHS permission is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	*Version*	*Date*
Application	5.5	
Investigator CV		16 April 2008
Protocol	2	01 July 2008
Summary/Synopsis	1	16 April 2008
Letter from Sponsor		16 April 2008
Compensation Arrangements		20 July 2007
Questionnaire: Body Checking Cognitions Scale	Validated	
Questionnaire: Body Image Avoidance	Validated	
Questionnaire: Body Checking	Validated	
Questionnaire: The Beliefs about Appearance	Validated	
Questionnaire: Body Shape	Validated	
Questionnaire: EDE-Q5.2	Validated	
Letter of invitation to participant	2	22 July 2008
GP/Consultant Information Sheets	3 - Option 1	22 July 2008
GP/Consultant Information Sheets	2 (Option1)	02 July 2008
Participant Information Sheet: Participant	2	22 July 2008
Participant Consent Form: Participant	3	22 July 2008
Response to Request for Further Information		22 July 2008
GP/ Consultant Information Sheet	3 - Option 2	22 July 2008
Treatment Protocol	1	09 March 2008
Participant Data Sheet	1	09 March 2008
Honorary Contract		12 February 2008
Michael Power CV		

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Now that you have completed the application process please visit the National Research Ethics Website > After Review

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

We would also like to inform you that we consult regularly with stakeholders to improve our service. If you would like to join our Reference Group please email referencegroup@nres.npsa.nhs.uk.

08/S1102/22	**Please quote this number on all correspondence**

With the Committee's best wishes for the success of this project

Professor Peter Hayes
Chair

Email: lyndsay.baird@nhslothian.scot.nhs.uk

Enclosures: "After ethical review – guidance for researchers"
Site approval form

Copy to: *Paul McGuire*

Lothian Local Research Ethics Committee 02

LIST OF SITES WITH A FAVOURABLE ETHICAL OPINION

For all studies requiring site-specific assessment, this form is issued by the main REC to the Chief Investigator and sponsor with the favourable opinion letter and following subsequent notifications from site assessors. For issue 2 onwards, all sites with a favourable opinion are listed, adding the new sites approved.

REC reference number:	08/S1102/22	**Issue number:**	0	**Date of issue:**	19 August 2008
Chief Investigator:	Miss Christine Watson				
Full title of study:	An evaluation of a stand alone cognitive behavioural body image group treatment for patients diagnosed with bulimia nervosa and eating disorder not otherwise specified.				

This study was given a favourable ethical opinion by Lothian Local Research Ethics Committee 02 on 13 August 2008. The favourable opinion is extended to each of the sites listed below. The research may commence at each NHS site when management approval from the relevant NHS care organisation has been confirmed.

Principal Investigator	*Post*	*Research site*	*Site assessor*	*Date of favourable opinion for this site*	*Notes* [1]
Miss Christine Watson	Trainee Clinical Psychologist	The Cullen Centre, Royal Edinburgh Hospital.	Lothian Local Research Ethics Committee 02	13/08/2008	

Approve[illegible] REC:

..... . (Signature of ~~Chair~~/Co-ordinator)
(delete a

..... . (Name)

(1) *The notes column may be used by the main REC to record the early closure or withdrawal of a site (where notified by the Chief Investigator or sponsor), the suspension of termination of the favourable opinion for an individual site, or any other relevant development. The date should be recorded.*

The Cullen / Edinburgh
Traumatic Stress Centre
Royal Edinburgh Hospital
Tipperlinn House
Tipperlinn Road
Edinburgh EH10 5HF
Telephone 0131 537
6806 / 6874
Fax 0131 537 6104

NHS
Lothian

Date: 27th November 2008

Lothian Local Research Ethics Committee 02
Deaconess House
148 Pleasance
Edinburgh
EH8 9RS

Dear Committee,

Full Title of study: An evaluation of a stand alone cognitive behavioural body image group for patients diagnosed with bulimia nervosa and eating disorder not otherwise specified.

REC reference number: 08/S1102/22

Further to ethical approval being given in August 2008, I am writing to submit a notice of substantial amendment.

Please find enclosed relevant documentation.

I shall look forward to hearing from you.

Yours sincerely

Christine Watson
Chief Investigator
Trainee Clinical Psychologist

Enc. Participant Invitation letter (Version 4, dated 24/11/08)
Participant Information Sheet (Version 4, dated 24/7/08)
Consent Form (Version 3, dated 24/7/08)

Lothian NHS Board

Lothian Research Ethics Committee
02
Deaconess House
148 Pleasance
Edinburgh
EH8 9RS
Telephone 0131 536 9000
Fax 0131 536
www.nhslothian.scot.nhs.uk

NHS Lothian

Miss Christine Watson
Trainee Clinical Psychologist
NHS Dumfries and Galloway
Department of Psychological Services and Research
Nithbank Hospital
Dumfries
DG2 7FE

Date 07 January 2009
Our Ref
Enquiries to Lyndsay Baird
Extension 89061
Direct Line 0131 536 9061
Email lyndsay.baird@nhslothian.scot.nhs.uk

Dear Miss Watson

Study title: **An evaluation of a stand alone cognitive behavioural body image group treatment for patients diagnosed with bulimia nervosa and eating disorder not otherwise specified.**
REC reference: **08/S1102/22**
Amendment number: **1**
Amendment date: **24 November 2008**

The above amendment was reviewed at the meeting of the Committee held on 6 January 2009.

Ethical opinion

Please provide reassurance that taking part does not slow down their treatment.

The members of the Committee present gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

Approved documents

The documents reviewed and approved at the meeting were:

Document	Version	Date
Protocol	4	24 November 2008
Participant Information Sheet	4	24 November 2008
Participant Consent Form	4	24 November 2008
Notice of Substantial Amendment (non-CTIMPs)	1	24 November 2008
Covering Letter		27 November 2008

R&D approval

All investigators and research collaborators in the NHS should notify the R&D office for the relevant NHS care organisation of this amendment and check whether it affects R&D approval of the research.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

08/S1102/22:	**Please quote this number on all correspondence**

Miss Lyndsay Baird
Committee Co-ordinator

E-mail: lyndsay.baird@nhslothian.scot.nhs.uk

Copy to: *Paul McGuire,*
R&D office for NHS care organisation at lead site

The Cullen / Edinburgh
Traumatic Stress Centre
Royal Edinburgh Hospital
Tipperlinn House
Tipperlinn Road
Edinburgh EH10 5HF
Telephone 0131 537
6806 / 6874
Fax 0131 537 6104

Date: 12th January 2009

Lothian Local Research Ethics Committee 02
Deaconess House
148 Pleasance
Edinburgh
EH8 9RS

Dear Committee,

Full Title of study: An evaluation of a stand alone cognitive behavioural body image group for patients diagnosed with bulimia nervosa and eating disorder not otherwise specified.

REC reference number: 08/S1102/22

Further to ethical approval being given on 12th January 2009 to my notice of substantial amendment dated 24th November 2008, I am writing to confirm that participation in this study will not delay a patient's routine treatment at the Cullen Centre.

Yours sincerely

Christine Watson
Chief Investigator
Trainee Clinical Psychologist

c.c Research & Development Office, Queen's Medical Research Institute, 47 Little France Crescent, Edinburgh. EH16 4TJ. R&D ID NO: 2008/P/PSY/10

APPENDIX 25

RESEARCH AND DEVELOPMENT CORRESPONDENCE AND APPROVAL

University Hospitals Division

Queen's Medical Research Institute
47 Little France Crescent, Edinburgh, EH16 4TJ

NHS Lothian

RESEARCH & DEVELOPMENT
Room E1.12
Tel: 0131 242 3330
Fax: 0131 242 3343
Email: R&DOffice@luht.scot.nhs.uk

Director: Professor Heather A Cubie

RGT/SM/ack-let/2008/P/PSY/10

21st April 2008

Miss Christine Watson
Trainee Clinical Psychologist
Department of Psychological Services
Nithbank
Dumfries
DG1 2SA

Dear Miss Watson

ACKNOWLEDGEMENT OF RECEIPT OF NEW PROJECT

We acknowledge receipt of a project entitled: *An evaluation of a stand alone cognitive behavioural body image group treatment for patients diagnosed with bulimia nervosa and eating disorder not otherwise specified.*
This project has been entered onto the R&D database and given the following number **2008/P/PSY/10**. Please use this number in all further communications.

The following documents were received:

NRES /IRAS form Parts A& B
SSI form
Protocol
Patient Information Sheet and Consent forms

This set of documents is sufficient for preliminary review and validation. The project is scheduled for Scientific and Risk Assessment on **Thursday, 1st May 2008.** If there are queries from us, a member of the R&D Governance staff will be in touch by email or telephone before then.

Yours sincerely

Sandra Muir
R&D Administrative Assistant

2008/P/PSY/10 - "An evaluation of a cognitive behavioural image group".

Addison, Anne [Anne.Addison@luht.scot.nhs.uk]

Sent: 02 July 2008 09:53

To: <cwatson@nhs.net>

Cc: Addison, Anne [Anne.Addison@luht.scot.nhs.uk]

Dear Christine

This study is being held in pending at the R&D office until we hear further from you about your decision to submit an amendment, as suggested by ethics in their letter to you dated 19th May 2008. Do you intend to make changes to the GP letter and also to arrange for the blood tests to be done at the Cullen Centre? Management approval will not be given from this office until the issue around blood samples at the Cullen Centre is resolved. We look forward to hearing from you.

If you have any questions, please do not hesitate to contact the office.

Best wishes,

Anne

Mrs Anne Addison
Research Governance Officer
ACCORD (Academic and Clinical Central Office for Research & Development)
NHS Lothian
St.John's Hospital
Howden Road West
Livingston EH54 6PP
Direct Line: (Tues, Thurs) - 01506 523820
Direct Line: (Mon, Wed, Fri) - 0131 242 3330
Fax: 01506 522201
Email: anne.addison@luht.scot.nhs.uk <mailto:anne.addison@luht.scot.nhs.uk>

University Hospitals Division

Queen's Medical Research Institute
47 Little France Crescent, Edinburgh, EH16 4TJ

NHS Lothian

HAC/JB/approval/2e

22 August 2008

RESEARCH & DEVELOPMENT OFFICE
Room E1.12
Tel: 0131 242 3330
Fax: 0131 242 3343
Email:R&DOffice@luht.scot.nhs.uk

Director: Professor Heather A Cubie

Miss Christine Watson
NHS Dumfries and Galloway
Department of Psychological Services and Research
Nithbank Hospital
Dumfries
DG2 7FE

Dear Miss Watson

MREC No:	**N/A**
CRF No:	**N/A**
LREC No:	**08/S1102/22**
R&D ID No:	**2008/P/PSY/10**
Title of Research	An evaluation of a stand alone cognitive behavioural body image group treatment for patients diagnosed with bulimia nervosa and eating disorder not otherwise specified
Protocol No/Acronym:	**Version 1, Dated 16th April 2008**

The above project has undergone an assessment of risk to NHS Lothian and review of resource and financial implications. I am satisfied that all the necessary arrangements have been set in place and that all Departments contributing to the project have been informed.

I note that this is a single centre study co-sponsored by **NHS Lothian and the University of Edinburgh.**

On behalf of the Chief Executive and Medical Director, I am happy to grant management approval from NHS Lothian to allow the project to commence, subject to the approval of the appropriate Research Ethics Committee(s) having also been obtained. You should note that any substantial amendments must be notified to the relevant Research Ethics Committee and to R&D Management with approval being granted from both before the amendments are made.

Please note that under Section A, Q35, NHS Lothian provides indemnity for negligence for NHS and Honorary clinical staff for research associated with their clinical duties. It is not empowered to provide non-negligent indemnity cover for patients. NHS Lothian does not provide indemnity against negligence for healthy volunteer studies. This is the personal responsibility of both NHS and honorary employees and is usually arranged with a medical defence organisation or through the University of Edinburgh.

This letter of approval is your assurance that NHS Lothian is satisfied with your study. As Chief Investigator or local Principal Investigator, you should be fully committed to your responsibilities within the Research Governance

List of Reviewed Documents

Document	Version	Date
Locked Rec Parts A&B Signed by Chief Investigator	AB/124513/1	
Locked Site-Specific Information Form signed by Principal Investigator	C/124513/199383/1	
Sponsorship Letter		16/04/2008

Treatment Protocol	1	09/03/2008
Summary	1	16/04/2008
Questionnaires – 5 in total	Validated	
Letter to participant	2	22/07/2008
GP/Consultant Information Sheet	3	22/07/2008
GP/Consultant Information Sheet	2	22/07/2008
Participant Information Sheet	2	22/07/2008
Participant Consent Form	3	22/07/2008

Yours sincerely

Professor Heather A Cubie
R&D Director

Enc **Research Governance Certificate** ✓ **(to be signed and returned)**
Tissue Policy (if applicable) ☐
MTA (if applicable) ☐ **(to be signed and returned by the recipient of Tissue)**

Copies ***Administrators, Research Ethics Committee***
Professor Mick Power, Professor of Clinical Psychology, School of Health in Social Sciences, Clinical Psychology, The University of Edinburgh, Medical School, Teviot Place, Edinburgh, EH8 9AG

Request for: Notification of Amendments for Study:

Dear Miss Watson

Study Title: An Evaluation of a stand alone cognitive behavioral body image group treatment for patients diagnosed with bulimia nervosa and eating disorder not otherwise specified

REC No: 08/S1102/22
R&D No: 2008/P/PSY/10 Please quote this number in correspondence

We have received from Lothian Research Ethics committee a letter in regard to an amendment to the above Study. However upon checking our file's we don't seem to have details of the amendment.

I was wondering if it would be possible for you to forward to us a copy of the Following paper work:

- Notification of substantial amendment Number 1 Dated 24 November 2008
- Patient Information Sheet Version 4 Dated 24 November 2008
- Protocol Version 4 Dated 24 November 2008
- Patient Consent form Version 4 Dated 24 November 2008
- Covering Letter Dated 27 November 2008

Thank you very much for your help in this matter. If you have any queries please feel free to contact me.

Kind Regards

Susan Grandison
Administrative Assistant
Research & Development Office
Queen's Medical Research Institute
Tel: 0131 242 3332

University Hospitals Division

Queen's Medical Research Institute
47 Little France Crescent, Edinburgh, EH16 4TJ

NHS Lothian
Director: Professor David Newby
RESEARCH & DEVELOPMENT OFFICE
Room E1.12
Tel: 0131 242 3330
Fax: 0131 242 3343
Email:R&DOffice@luht.scot.nhs.uk

TM/SG/app-lrecamend

12 January 2009

Miss Christine Watson
Trainee Clinical Psychologist
NHS Dumfries and Galloway
Department of Psychological Services and Research
Nithbank Hospital
Dumfries
DG2 7FE

Dear Miss Watson

LREC No: 08/S1102/22
R&D Project ID No: 2008/P/PSY/10
Title of Research An evaluation of a stand alone cognitive behavioural body image group treatment for patients diagnosed with bulimia nervosa and eating disorder not otherwise specified.

I am writing in reply to recent correspondence in relation to the following amendment(s) to the above project.

Amendment: No: 1 dated 24 November 2008

To add a second arm to the study of participants waiting for routine treatment at the Cullen centre

- ***Participant Consent Form V 4*** ***dated 24 November 2008***
- ***Participant Information Sheet V 4*** ***dated 24 November 2008***
- ***Protocol V 4*** ***dated 24 November 2008***

We have now received a copy of the amendment(s) and assessed any consequential changes in NHS Lothian resource use. I confirm that NHS Lothian management approval is extended to cover the specific changes intimated. You should be aware that approval for this amendment must also be received from Lothian Research Ethics Committee before it is implemented

Dr Tina McLelland
R&D Governance Manager
Direct Tel: 0131-242-3340
Email tina.mclelland@nhs.net

APPENDIX 26

PARAMETRIC ASSUMPTIONS DATA ANALYSIS

Tables of skewness, kurtosis and z scores for normality testing

Formula applied for skewness and kurtosis = <1.96 are normally distributed (Field, 2009, page 139)

$$Z\ Skewness = \frac{S-0}{SE\ skewness} \qquad Z\ Kurtosis = \frac{S-0}{SE\ kurtosis}$$

Body Image Group- Eating Disorder measure

Pre –measures	EDE-global	EDE- restraint	EDE- eating concern	EDE-shape concern	EDE-weight concern
Skewness	-.89	-.43	-.58	-1.31	-1.01
Standard error of skewness	.637	.637	.637	.637	.637
Z skewness	-1.40	-.67	-.91	-2.06	-1.58
Kurtosis	-.87	-1.04	-1.23	.17	-.75
Standard error of kurtosis	1.232	1.232	1.232	1.232	1.232
Z kurtosis	-.71	-0.84	-1.00	.13	-.61

Post –measures	EDE-global	EDE- restraint	EDE- eating concern	EDE-shape concern	EDE-weight concern
Skewness	-.93	-.12	-.23	-1.20	-1.03
Standard error of skewness	.637	.637	.637	.637	.637
Z skewness	-1.46	-.19	-.36	-1.88	-1.62
Kurtosis	-.26	-.10	-.30	.14	-.30
Standard error of kurtosis	1.232	1.232	1.232	1.232	1.232
Z kurtosis	-.21	-.08	-.24	.11	-.24

Body image group – body image measures

Pre –measures	BSQ	ASI-R	BCQ	BIAQ	BCCS-Total score	BCCS – Object verification	BCCS — Reassurance	BCCS – Safety beliefs	BCCS-Body control
Skewness	-1.03	-.65	-.28	.08	0.02	-.54	0.05	-.76	-0.10
Standard error of skewness	.637	.637	.637	.637	.637	.637	.637	.637	.637
Z skewness	-1.62	-1.02	-0.44	.13	0.03	-0.84	0.08	-1.19	-0.16
Kurtosis	-.39	.15	-1.06	-.90	-.35	.12	-.42	.12	-.88
Standard error of kurtosis	1.232	1.232	1.232	1.232	1.232	1.232	1.232	1.232	1.232
Z kurtosis	-0.31	0.12	-0.86	-0.73	-0.28	0.09	-0.34	0.10	-0.71

Post –measures	BSQ	ASI-R	BCQ	BIAQ	BCCS-Total score	BCCS – Object verification	BCCS — Reassurance	BCCS – Safety beliefs	BCCS-Body control
Skewness	-.92	1.15	-.49	.34	.13	-.40	.00	-.03	.34
Standard error of skewness	.637	.637	.637	.637	.637	.637	0.637	.637	.637
Z skewness	-1.44	1.81	-.77	-0.30	0.20	-0.63	-0.64	-0.05	0.53
Kurtosis	-.31	0.09	-1.33	-0.39	.36	0.33	-.11	-0.70	-.39
Standard error of kurtosis	1.232	1.232	1.232	1.232	1.232	1.232	1.232	1.232	1.232
Z kurtosis	-0.25	0.06	-1.08	-0.32	0.29	0.27	-0.09	-0.57	-0.32

Waiting list control group – eating disorder measures

Pre –measures	EDE-global	EDE- restraint	EDE- eating concern	EDE-shape concern	EDE-weight concern
Skewness	-.38	-.54	-.60	-1.16	-.89
Standard error of skewness	.550	0.550	.550	.550	.55
Z skewness	-0.70	-0.98	-1.09	-2.11	-1.62
Kurtosis	-.61	-.348	-.19	.32	.61
Standard error of kurtosis	1.063	1.063	1.063	1.063	1.063
Z kurtosis	-0.67	-0.33	-0.18	0.30	0.58

Post –measures	EDE-global	EDE- restraint	EDE- eating concern	EDE-shape concern	EDE-weight concern
Skewness	.01	-.68	-.12	-.93	-.84
Standard error of skewness	.550	.550	.550	.550	.550
Z skewness	0.02	-1.24	-0.22	-1.69	-1.53
Kurtosis	-.63	-.24	.005	-.24	.24
Standard error of kurtosis	1.063	1.063	1.063	1.063	1.063
Z kurtosis	-.59	-.22	0.05	-0.23	0.23

Waiting list control group – body image measures

Pre –measures	BSQ	ASI-R	BCQ	BIAQ	BCCS-Total score	BCCS – Object verification	BCCS — Reassurance	BCCS – Safety beliefs	BCCS-Body control
Skewness	-.95	.05	0.66	.01	.32	.48	.05	.16	0.10
Standard error of skewness	.550	.550	.550	.550	.550	.550	.550	.550	.550
Z skewness	-1.72	.89	1.2	.02	.58	.87	.10	.29	.18
Kurtosis	.96	-.50	-1.33	-1.02	-.70	.24	-1.05	-.79	-.31
Standard error of kurtosis	1.063	1.063	1.063	1.063	1.063	1.063	1.063	1.063	1.063
Z kurtosis	.90	-0.47	-1.25	-.10	-.66	.23	-.99	-.74	-.29

Post –measures	BSQ	ASI-R	BCQ	BIAQ	BCCS-Total score	BCCS – Object verification	BCCS — Reassurance	BCCS – Safety beliefs	BCCS-Body control
Skewness	-1.03	.09	.36	.002	.01	-.31	-.25	0.01	-.13
Standard error of skewness	.550	.550	.550	.550	.550	.550	.550	.550	.550
Z skewness	-1.87	.16	.65	.004	0.02	-.56	-.45	0.02	-0.24
Kurtosis	1.27	-.68	-1.5	-1.53	-1.44	-.90	-.77	-1.80	-1.21
Standard error of kurtosis	1.063	1.063	1.063	1.063	1.063	1.063	1.063	1.063	1.063
Z kurtosis	1.19	-.64	-1.41	-1.44	-1.35	-.85	-.72	-1.70	-1.14

Homogeneity of Variance Analysis

		Levene Statistic	df1	df2	Sig.
pre BSQ	Based on Mean	3.273	1	27	.082
	Based on Median	1.204	1	27	.282
	Based on Median and with adjusted df	1.204	1	22.225	.284
	Based on trimmed mean	2.754	1	27	.109
pre ASI-R Composite	Based on Mean	.418	1	27	.523
	Based on Median	.340	1	27	.564
	Based on Median and with adjusted df	.340	1	25.816	.565
	Based on trimmed mean	.353	1	27	.557
pre BICQ -Total score	Based on Mean	.035	1	27	.853
	Based on Median	.030	1	27	.864
	Based on Median and with adjusted df	.030	1	26.985	.864
	Based on trimmed mean	.036	1	27	.850
pre BCCQ- total	Based on Mean	.159	1	27	.693
	Based on Median	.183	1	27	.672
	Based on Median and with adjusted df	.183	1	24.485	.672
	Based on trimmed mean	.154	1	27	.698
pre BCCQ - object verification	Based on Mean	.310	1	27	.583
	Based on Median	.217	1	27	.645
	Based on Median and with adjusted df	.217	1	26.833	.645
	Based on trimmed mean	.300	1	27	.588
pre BCCQ - reassurance	Based on Mean	.016	1	27	.900
	Based on Median	.020	1	27	.888
	Based on Median and with adjusted df	.020	1	24.428	.889
	Based on trimmed mean	.016	1	27	.900
pre BCCQ - safety beliefs	Based on Mean	.444	1	27	.511
	Based on Median	.360	1	27	.553
	Based on Median and with adjusted df	.360	1	26.788	.554
	Based on trimmed mean	.498	1	27	.486
pre BCCQ - body control	Based on Mean	1.578	1	27	.220
	Based on Median	1.569	1	27	.221
	Based on Median and with adjusted df	1.569	1	25.068	.222
	Based on trimmed mean	1.578	1	27	.220
pre BIAQ - total	Based on Mean	1.937	1	27	.175
	Based on Median	1.838	1	27	.186
	Based on Median and with adjusted df	1.838	1	23.318	.188
	Based on trimmed mean	1.974	1	27	.171

		Levene Statistic	df1	df2	Sig.
post BSQ	Based on Mean	2.540	1	27	.123
	Based on Median	2.190	1	27	.151
	Based on Median and with adjusted df	2.190	1	24.354	.152
	Based on trimmed mean	2.450	1	27	.129
post ASI-R Composite	Based on Mean	.127	1	27	.724
	Based on Median	.007	1	27	.935
	Based on Median and with adjusted df	.007	1	21.242	.935
	Based on trimmed mean	.074	1	27	.788
post BICQ -Total score	Based on Mean	.015	1	27	.905
	Based on Median	.001	1	27	.976
	Based on Median and with adjusted df	.001	1	26.987	.976
	Based on trimmed mean	.011	1	27	.917
post BCCQ-total	Based on Mean	.159	1	27	.693
	Based on Median	.123	1	27	.728
	Based on Median and with adjusted df	.123	1	26.027	.728
	Based on trimmed mean	.170	1	27	.684
post BCCQ - object verification	Based on Mean	.005	1	27	.945
	Based on Median	.001	1	27	.980
	Based on Median and with adjusted df	.001	1	26.442	.980
	Based on trimmed mean	.009	1	27	.926
post BCCQ - reassurance	Based on Mean	2.034	1	27	.165
	Based on Median	1.796	1	27	.191
	Based on Median and with adjusted df	1.796	1	26.840	.191
	Based on trimmed mean	2.052	1	27	.163
post BCCQ - safety beliefs	Based on Mean	1.637	1	27	.212
	Based on Median	.544	1	27	.467
	Based on Median and with adjusted df	.544	1	25.540	.468
	Based on trimmed mean	1.630	1	27	.213
post BCCQ - body control	Based on Mean	.061	1	27	.806
	Based on Median	.012	1	27	.914
	Based on Median and with adjusted df	.012	1	25.711	.914
	Based on trimmed mean	.052	1	27	.821
post BIAQ - total	Based on Mean	1.478	1	27	.235
	Based on Median	1.462	1	27	.237
	Based on Median and with adjusted df	1.462	1	22.505	.239
	Based on trimmed mean	1.471	1	27	.236

		Levene Statistic	df1	df2	Sig.
pre EDE global	Based on Mean	9.318	1	27	.005
	Based on Median	2.509	1	27	.125
	Based on Median and with adjusted df	2.509	1	15.839	.133
	Based on trimmed mean	7.866	1	27	.009
pre EDE restraint	Based on Mean	.681	1	27	.416
	Based on Median	.759	1	27	.391
	Based on Median and with adjusted df	.759	1	26.891	.391
	Based on trimmed mean	.707	1	27	.408
pre EDE eating concern	Based on Mean	1.258	1	27	.272
	Based on Median	.334	1	27	.568
	Based on Median and with adjusted df	.334	1	25.060	.569
	Based on trimmed mean	1.151	1	27	.293
pre EDE shape concern	Based on Mean	3.762	1	27	.063
	Based on Median	1.024	1	27	.321
	Based on Median and with adjusted df	1.024	1	19.750	.324
	Based on trimmed mean	2.878	1	27	.101
pre EDE weight concern	Based on Mean	10.363	1	27	.003
	Based on Median	3.081	1	27	.091
	Based on Median and with adjusted df	3.081	1	16.695	.098
	Based on trimmed mean	8.839	1	27	.006

		Levene Statistic	df1	df2	Sig.
post EDE global	Based on Mean	4.598	1	27	.041
	Based on Median	3.328	1	27	.079
	Based on Median and with adjusted df	3.328	1	19.187	.084
	Based on trimmed mean	4.240	1	27	.049
post EDE restraint	Based on Mean	.039	1	27	.845
	Based on Median	.005	1	27	.944
	Based on Median and with adjusted df	.005	1	26.395	.944
	Based on trimmed mean	.026	1	27	.872
post EDE eating concern	Based on Mean	.818	1	27	.374
	Based on Median	.600	1	27	.445
	Based on Median and with adjusted df	.600	1	26.286	.446
	Based on trimmed mean	.851	1	27	.364
post EDE shape concern	Based on Mean	4.097	1	27	.053
	Based on Median	1.461	1	27	.237
	Based on Median and with adjusted df	1.461	1	17.424	.243
	Based on trimmed mean	3.497	1	27	.072
post EDE weight concern	Based on Mean	9.206	1	27	.005
	Based on Median	3.415	1	27	.076
	Based on Median and with adjusted df	3.415	1	15.501	.084
	Based on trimmed mean	8.650	1	27	.007

One way ANOVA to test for differences between body image group and control at baseline

		Sum of Squares	df	Mean Square	F	Sig.
pre EDE restraint	Between Groups	.006	1	.006	.003	.960
	Within Groups	63.555	27	2.354		
	Total	63.561	28			
pre EDE eating concern	Between Groups	1.892	1	1.892	1.634	.212
	Within Groups	31.255	27	1.158		
	Total	33.148	28			
pre BSQ	Between Groups	1248.736	1	1248.736	.760	.391
	Within Groups	44351.471	27	1642.647		
	Total	45600.207	28			
pre ASI-R Composite	Between Groups	1.050	1	1.050	4.964	.034
	Within Groups	5.709	27	.211		
	Total	6.759	28			
pre BICQ -Total score	Between Groups	1181.666	1	1181.666	2.582	.120
	Within Groups	12358.196	27	457.711		
	Total	13539.862	28			
pre BCCQ- total	Between Groups	1.431	1	1.431	1.529	.227
	Within Groups	25.271	27	.936		
	Total	26.702	28			
pre BIAQ - total	Between Groups	510.589	1	510.589	2.378	.135
	Within Groups	5797.549	27	214.724		
	Total	6308.138	28			