

**A Feasibility Study of a Cognitive-Behavioural Therapy  
Group for Domain-Specific Self-Esteem and its Impact on  
Global Self-Esteem, Depression, Anxiety and Psychological  
Wellbeing**

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**UCL Doctorate in Clinical Psychology**

**Thesis declaration form**

I confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

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## **OVERVIEW**

Part one of the thesis reviews the literature to determine if Cognitive Behavioural Therapy (CBT) aimed at improving self-esteem in adults is effective. The review supports the effectiveness of CBT for self-esteem delivered individually and through a specific group programme; Competitive Memory Training (COMET). The evidence for the effectiveness of psychoeducation workshops is promising but requires further evaluation. There was less support for the effectiveness of group CBT and the possible reasons for this are discussed.

Part two is an empirical study investigating the feasibility and acceptability of a CBT group for domain-specific self-esteem. The study also sought to determine if the intervention was effective for improving global self-esteem, depression, anxiety and psychological wellbeing. The study was a joint project with Ciping Goh (2018). The study provided evidence for the feasibility and effectiveness of the intervention, in a student sample. The intervention was deemed acceptable as measured by recruitment and retention rates and qualitative participant feedback. The group appeared effective at improving global self-esteem, depression and wellbeing. No change in anxiety was observed. The intervention would benefit from a more methodologically rigorous randomised design.

Part three summarises my reflections on carrying out part one and two of the research. It discusses my reasons for choosing the topic area, the methodological dilemmas encountered, the impact the qualitative findings had on previously held beliefs and finally, how the intervention could potentially be used to encourage populations who are underrepresented in clinical and research settings to access support.

## **IMPACT STATEMENT**

Low self-esteem has been linked with a variety of social problems including unemployment, violence, substance abuse and mental health difficulties. Yet, there are relatively few interventions focused directly on improving it.

The study findings indicate that a short-term Cognitive Behaviour Therapy (CBT) group for domain-specific self-esteem has a beneficial impact on global self-esteem, depression and psychological wellbeing in a university student population. This suggests that the intervention could be used transdiagnostically, which would diminish the need for multiple treatment protocols and improve efficiency.

This is the first study to examine a CBT intervention for domain-specific self-esteem. The four session group showed similar effects to group interventions for global self-esteem, which are usually longer in length, suggesting the current intervention may be a more cost-effective alternative. The short-term nature of the intervention also makes it suitable for implementation in the National Health Service (NHS), which is under increasing pressure to deliver more treatments with fewer resources. As the group programme is manualised it could be facilitated by Psychological Wellbeing Practitioners (PWPs), as part of a stepped care programme, which fits within the Improving Access to Psychological Therapy (IAPT) framework.

Qualitative feedback also suggested that participants found the group beneficial for improving self-compassion, illustrated through reductions in self-blame and increased kindness. One may tentatively hypothesise that as participant's feelings of worthiness (global self-esteem) increased it became easier for participants to extend compassion towards the self. However, as self-compassion was not measured in this study it is not possible to determine the nature of this relationship and it would be beneficial to examine this quantitatively in future research.

Although further research would be required, the study may offer important findings regarding the underutilisation of mental health services, which is a current issue across the globe. The intervention recruited a large proportion of Asian participants, who are often underrepresented in psychology services. One explanation for this may be due to the use of language. It is possible that 'self-esteem' is more acceptable to an Asian population than other terms commonly used for mental health difficulties.

The intervention would now benefit from a more methodologically rigorous randomised design to compare the current intervention with a control group and to investigate the effectiveness of the intervention on an alternative population.

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## **Part One: Literature Review**

Cognitive Behavioural Treatments for Self-Esteem in Adults

## **1. ABSTRACT**

**Aims:** This systematic review aimed to investigate whether cognitive-behavioural interventions aimed at improving self-esteem in adults are effective.

**Method:** Three databases were searched for relevant literature using terms related to self-esteem, CBT and randomised controlled trials (RCTs). The data were analysed using a narrative synthesis.

**Results:** Seventeen articles met the inclusion criteria, the majority of which had high quality methodology. The studies provided support for the effectiveness of individually delivered CBT and a specific CBT programme, COMET, on self-esteem and showed that they both performed better than TAU and waitlist controls. The evidence for the effectiveness of CBT delivered as a psychoeducational workshop was promising but requires further evaluation. Group CBT had mixed results and due to methodological limitations further research is required. Only one study compared CBT with an active treatment (psychodynamic therapy) and found no differences between the groups, therefore it was not possible to conclude whether CBT was better at improving self-esteem than other active treatments. Ten studies also provided support for the effectiveness of CBT for self-esteem on depression.

**Conclusion:** CBT appears effective for the treatment of self-esteem and CBT aimed at self-esteem can also be beneficial for depression. However, further research is needed, particularly comparing CBT with other active treatments.

## **2. INTRODUCTION**

### **2.1. Defining Self-Esteem**

A recent review documented 66 different terms with the prefix ‘self’ (Leary & Tangney, 2003). To categorise the plethora of descriptions Harter (2012) distinguished between descriptive concepts, such as self-representation, and evaluative concepts, such as self-esteem. The current review solely uses the term self-esteem, although this may encompass other self-evaluative terminology, for example self-worth.

Despite self-esteem being one of the oldest constructs in psychology it continues to lack an agreed definition. The first definition came from William James (1890) who defined it as a competence, determined by the gap between an individual’s goals and their ability to reach them. Rosenberg (1979) defined self-esteem as a feeling of worthiness and that one is good enough as a person. Mruk (2006) argued that these unidimensional factors were too simplistic for understanding complex human processes and constructed the two-factor theory. This theory defines self-esteem as a relationship between competence and worthiness and sees it as a connection between what one does in the world and how one feels about oneself.

The above definitions could all be criticised for ignoring the role of social influences. Cooley (1902) emphasised the importance of an individual’s perception of others’ appraisals for the way that an individual thinks about themselves, termed the “looking-glass self”.

### **2.2. Stability of Self-Esteem**

Some definitions of self-esteem view it as a stable trait that is “enduring over time and across situations” (Fennell, 1997, p2), whilst others see it as fluctuating in response to situational and contextual influences (Harter, 2012). There is now

general consensus that there are varying levels of self-esteem reflected in terms such as trait and state or global and domain (Brown & Marshall, 2006). Global self-esteem refers to an individual's global evaluation and is the focus of the majority of literature (Brown, Dutton, & Cook, 2001); therefore global self-esteem will be the focus of the current review.

It is simplistic to conclude that even global self-esteem remains entirely stable throughout one's life. Although longitudinal research suggests individuals who report higher self-esteem in childhood will also report higher self-esteem in adulthood (Trzesniewski et al, 2006), it seems self-esteem follows an age-related trajectory. A large study investigating individuals aged 9-90 concluded that self-esteem is higher in childhood and adulthood and declines during adolescence and old age (Robins, Trzesniewski, Tracy, Gosling, & Potter, 2002). This trajectory appeared consistent across genders, ethnicities and socioeconomic status (Robins et al, 2002) and is supported by a developmental perspective (Harter, 2012).

Adulthood was chosen as the focus of this review because it represents both an apex and a period of stability for self-esteem, yet is often absent from self-esteem theories which commonly focus on childhood and adolescence. However, general theories of development can be helpful for understanding self-esteem in adulthood. Erikson (1968) suggests that in adulthood individuals are more likely to be productive at work, whilst also nurturing the next generation; potentially flourishing beliefs of competence and worthiness. Furthermore, unlike adolescents who predominantly use social comparison to inform self-esteem (Harter, 2012), adults rely less on external reinforcement and more on internal beliefs, which may contribute to improved self-esteem regulation skills (Crocker & Wolfe, 2001).

### **2.3. Why does self-esteem matter?**

Self-esteem research suggests that high self-esteem promotes happiness and wellbeing (Baumeister, Campbell, Krueger, & Vohs, 2003), secure relationships

(Murray, 2005) and enhanced ability to recover from illness (Stinson et al, 2008). It has also been linked with better mental health, due to its protective function (Seligman, 1995). In contrast, low self-esteem has been connected with a multitude of negative outcomes including risky health behaviours such as drug and alcohol abuse, needle sharing, not using condoms, violence and aggression, and mental health problems (Mann, Hosman, Schaalmalma, & Vries, 2004). It has most extensively been linked with depression and although low self-esteem is itself a symptom of depression, many theorists explore the view that it is also a risk factor for depression (Beck, 1967).

As the majority of research on self-esteem is correlational it cannot imply causality. One way of addressing this is through laboratory studies, which have shown that experimentally lowering self-esteem can lead to increases in depression, anxiety and hostility (Wilson & Krane, 1980). However, it is difficult to evaluate the impact on real world outcomes by using laboratory studies. Therefore the best way of indicating a possible causal role of self-esteem is through prospective studies. Friederike-Sowislo and Orth (2013) conducted a meta-analysis of longitudinal studies and found the effect of self-esteem on depression ( $\beta=-.16$ ) was significantly stronger than the effect of depression on self-esteem ( $\beta=-.08$ ), providing support for self-esteem as a risk factor for depression.

Longitudinal studies have also suggested that low self-esteem has a causal role and is highly prevalent in people with disordered eating (Vohs et al, 2001). Theorists have suggested that cognitive misrepresentations are common in people with anorexia, who often have an array of accomplishments and abilities but are unaware of their capabilities and can feel incompetent (Baumeister et al, 2003). It was initially suspected that this may be due to coexisting depression. However studies have shown the relationship persists even when depression is controlled for (Silverstone, 2010). The influence of self-esteem on body image has proved so

significant that it has led to interventions for eating disorders focused primarily on improving self-esteem (Vickers, 1993).

Low self-esteem has also been linked with both negative and positive symptoms of schizophrenia (Jones, Hans, Moskvina, Kingdon, & Turkington, 2010). An experimental study found that increasing negative views of the self, led to increases in paranoia (Freeman et al, 2014a). However, after controlling for depression Jones et al (2010) found that the effects of self-esteem on positive symptoms diminished. They hypothesised that positive symptoms emerge as a defence against threats to self-esteem. Thus, if positive symptoms are successful there would be no observed relationship, because normal levels of self-esteem are maintained. In support, Schneider and Turkat (1975) found that high self-esteem can be defensive, rather than genuine. However, others found that low self-esteem was significantly associated with positive symptoms even when depression was controlled for (Barrowclough, Tarrier, Humphreys & Andrews, 2003). Either way self-esteem appears to be correlated with symptoms of psychosis.

#### **2.4. Evolution of Cognitive-Behavioural Therapy**

If high self-esteem is protective against negative outcomes, interventions aimed at improving self-esteem may be useful. Although self-esteem interventions have been written from several perspectives, including humanistic (Frey & Carlock, 1989) and developmental (Harter, 2012), the majority are based on cognitive-behavioural therapy (CBT), which will be the focus of this review.

Behaviour therapy is often viewed as the primary precursor to CBT. Developed in the 1950s, it emphasised the importance of targeting observable behaviours and assumed all behaviour was learnt from the environment, through conditioning (Skinner, 1953; Wolpe, 1958). Laboratory studies demonstrated that classical conditioning was effective in increasing self-esteem, by using computer programmes that repeatedly paired self-relevant information with smiling faces

(Baccus, Baldwin & Packer, 2004). However, behaviour therapy's focus on observables meant constructs such as self-esteem generally receded from psychological interest, as they were deemed immeasurable (Mruk, 2006), and it was criticised for ignoring what goes on in a person's mind (Dobson & Dozois, 2010).

This led to the development of cognitive therapy in the 1960s which emphasised the importance of maladaptive cognitions in the augmentation of emotional difficulties and assumed alleviation of these difficulties required cognitive as well as behavioural processes (Beck, 1967). The 'cognitive revolution' reignited interest in the self as a construct (Harter, 2012). It introduced schemas, which refer to cognitive structures that constitute an individual's beliefs and biases, including self-schemas which referred specifically to evaluative beliefs about the self (Brinich & Shelley, 2002). One of the first cognitive theories of self-esteem was Epstein's (1980) cognitive experiential self-theory. Epstein (1980) posited that humans operate by two information-processing systems; a rational system (deliberate and effortful) and an experiential system (automatic and rapid). Based on these systems he argued that people have two assessments of self-worth: implicit and explicit. Epstein (1980) suggested that implicit self-worth was automatic and non-conscious, whilst explicit self-worth was a conscious self-evaluation. The self-esteem literature predominantly focuses on explicit self-esteem as it can be easily measured through self-report questionnaires, although Raedt, Schacht, Franck and Houwer (2006) argued that implicit self-esteem is important because explicit self-esteem can be influenced by demand characteristics and self-schemas may not always be consciously accessible or reportable.

In the 1990s there was a 'third wave' development of CBT, which emphasised psychological acceptance and mindfulness. However, as these approaches to symptom distress are radically different to that of traditional CBT they will not be discussed in this review.

## **2.5. CBT for Self-esteem**

The core philosophy of CBT is that it is an individual's interpretation of events which cause difficulties and what we do as a result of these cognitions has a powerful influence on our mood (Westbrook, Kennerley & Kirk, 2007). According to principles of CBT negative self-esteem is maintained by unhelpful interpretations, for example, over generalising single negative events, ignoring positive information and drawing negative conclusions about the self that are unsupported by the evidence as a whole (Robson, 1988).

Fennell (1997) developed the most commonly used model of CBT for self-esteem, which states that people develop global negative beliefs about themselves through a combination of temperamental factors and negative life experiences, for example, neglect, abuse or absence of sufficient warmth, affection and praise. In some circumstances these beliefs are activated and trigger negative thoughts, affect, physiological symptoms and behaviour, creating a negative self-maintaining cycle. The model led to an intervention which focuses on identifying and testing the self-critical thoughts that drive the cycle, using cognitive challenging and behavioural experiments (Fennell, 1997). There has been little empirical validation of the model but one randomised-controlled trial, comparing individual CBT based on Fennell's (1997) model with a waitlist control, found significant improvements in self-esteem, depression and general psychological functioning in the CBT group (Waite, McManus & Shafran, 2012).

## **2.6. Evidence for the Effectiveness of Generic Models of CBT**

CBT is one of the most extensively researched forms of psychotherapy. A large systematic review summarised the results of 16 meta-analyses and found large effect sizes for the impact of CBT across a range of psychiatric diagnoses, including depression, generalised anxiety disorder, social phobia and post-traumatic stress disorder (Butler, Chapman, Forman & Beck, 2006). However, there is an absence in

the literature of a review investigating the effectiveness of CBT for self-esteem. The most relevant review investigated group and individual CBT for self-esteem amongst depressed adolescents and found CBT was more effective when compared to a wait-list control (Taylor & Montgomery, 2007). Given the abundance of research suggesting an association between low self-esteem and an array of negative outcomes (for example, Mann et al (2004), this review seems pertinent.

### **3. AIMS OF THIS REVIEW**

1. Are CBT interventions aimed at improving self-esteem in adults effective?
2. Do CBT interventions aimed at improving self-esteem have positive impacts on any other psychological outcomes, for example, depression?

### **4. METHOD**

The search strategy and reporting for this systematic review was based on an adapted version of the PRISMA statement (Moher et al., 2009). The eligibility criteria and review methodology were written in advance of the systematic search, to reduce bias.

#### **4.1. Inclusion & Exclusion Criteria**

##### Intervention

- (1) CBT with a primary focus on self-esteem

CBT was used as a broad term to encompass any interventions that were based on either cognitive and/or behavioural principles. It did not include ‘third wave’ CBT, as these approaches to symptom distress are different to that of traditional CBT.

- (2) Interventions led by a therapist in person or via the internet or telephone.

Studies reporting self-help were excluded.

##### Population

- (3) Adults aged 18-65 years recruited from community or mental health populations.

Studies investigating self-esteem within the following contexts were excluded:

- (a) Learning disabilities or autism spectrum disorders
- (b) Lifestyle factors, for example smoking or drinking
- (c) Medical disorders, for example cancer or pain
- (d) Interventions aimed at relatives or carers

The reasons for the above exclusions were twofold: to investigate a more homogenous group to enable more specific conclusions to be reached and to reduce the abundance of literature.

### Outcome

- (4) Use of at least one measure of self-esteem.

### Design

- (5) Randomised Controlled Trials (RCTs).

RCTs were the sole focus of this review because in an RCT “it is reasonable to conclude that any benefits observed are due to the effects of the treatment and not due to confounding factors” (Chambless & Hollon, 1998, p. 7), unlike in other research designs. Thus, non-randomised controlled trials, pretest-posttest designs and case studies were excluded.

### **4.2. Search Strategy**

In order to identify relevant articles the databases Psychinfo, Medline and Web of Science were searched using combinations of three terms: self-esteem, CBT and RCT (Table 1). The synonyms of self-esteem were identified by entering ‘self-esteem’ as a search criteria and conducting a thesaurus search. This identified synonyms which were then used in a new search. This process was repeated until no new synonyms were identified. Articles were included in the results of the search if they had one search term from each category.

The search was limited to research published after 1997, as this is when the first CBT model of self-esteem was published (Fennell, 1997), and up to 2017, covering a period of 20 years. The search was completed on 15<sup>th</sup> August 2017. The

search was limited to articles written in English, peer reviewed and investigating adults aged 18-65 years. The search yielded 1, 610 publications, of which 1, 297 remained when duplicates were removed.

**Table 1: Database Search Terms**

Self-esteem	CBT	RCT
Self-esteem	CBT	RCT
Self-belief	Cognitive behavio?r* therapy	Randomi* control* trial
Self-concept	Cognitive therapy	Clinical trial
Self-worth	Behavio?r* therapy	
Self-efficacy		

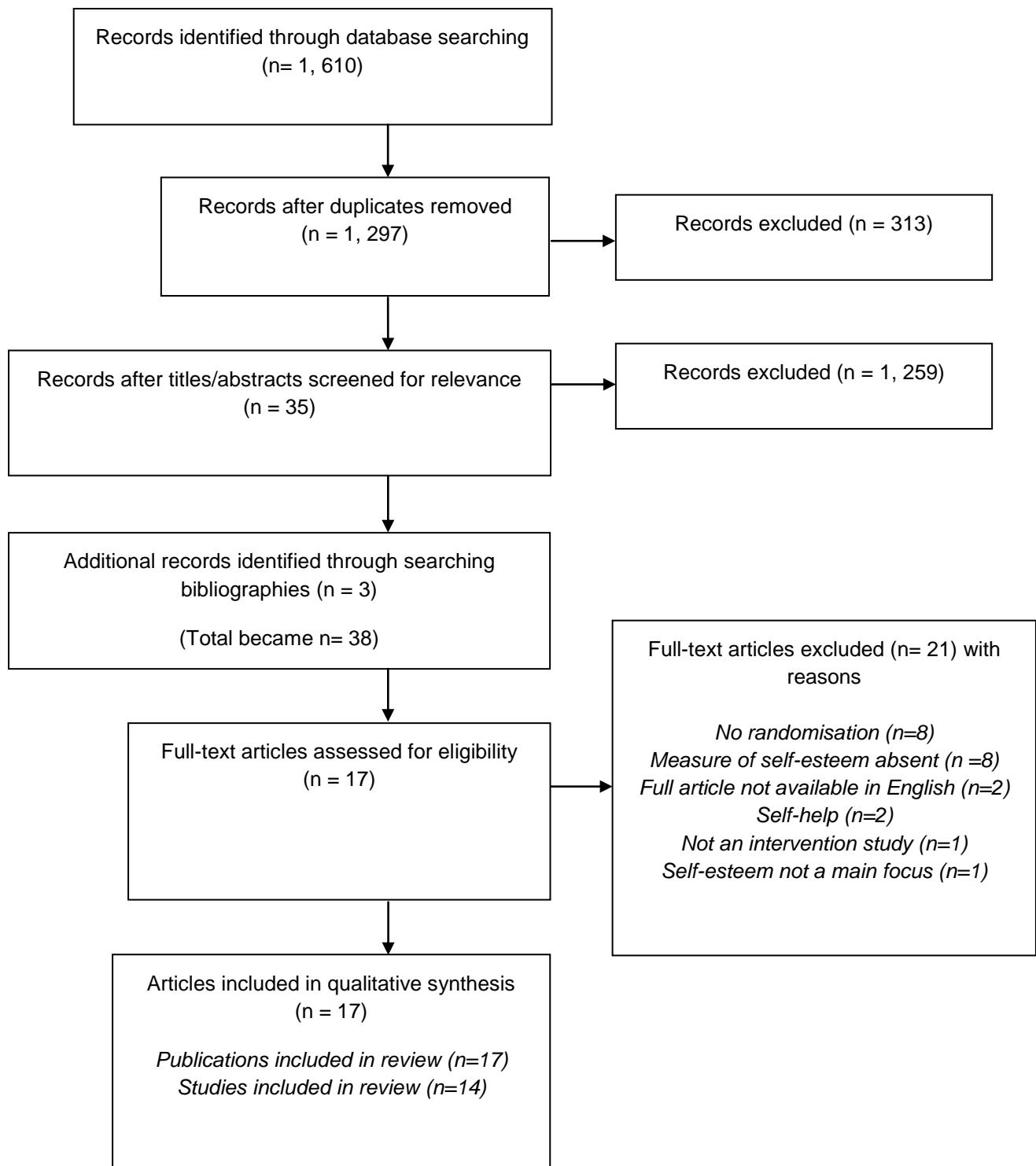
*Note: An asterisk indicates that search terms were truncated so that any variant of the term would be included.*

Initially, the titles and/or abstracts of these studies were screened. If the title/abstract suggested that the study did not meet the inclusion and exclusion criteria then it was excluded. This left 35 potentially relevant papers and a hand-search of reference lists of relevant publications and review articles identified an additional three studies, bringing the total to 38. At this stage exclusion reasons were documented (Figure 1). Following the full review 17 publications met the inclusion and exclusion criteria and were included in the narrative synthesis.

The review articles were predominantly checked for inclusion/exclusion criteria by ED. If it was unclear whether the study met inclusion criteria, it was discussed with a second trainee clinical psychologist (CG) and a joint decision was made.

#### **4.3. Data Extraction and Synthesis of Results**

The York Centre for Systematic Review Guidelines (University of York, 2008) was used to guide data extraction and synthesis. Due to the range of study aims, diagnoses and measures of psychological symptomatology a narrative synthesis (University of York, 2008) was deemed to be the most appropriate way of analysing the data.



**Figure 1: PRISMA Flowchart (Moher et al, 2009)**

## **5. RESULTS**

Seventeen publications, detailing 14 studies, were selected for review (Figure 1).

Three publications presented follow-up data of included studies.

### **5.1. Overview of Studies**

All of the studies investigated interventions based on cognitive and/or behavioural principles for self-esteem, ranging in duration from 6 to 30 hours. All studies reported on interventions led by a therapist in person; no interventions were facilitated via the internet or telephone. Studies were published between 1999 and 2014.

In total there were 1376 participants, with sample sizes ranging from 12 to 459. Male participants ( $n = 413$ ) made up approximately 30% of the sample. Nine studies did not record ethnicity but for those where ethnicity was recorded White participants ( $n = 474$ ) made up 69% of the sample. The mean age of participants was 35. Age range could not be calculated as it was only reported in four articles.

Three studies compared CBT with waitlist controls, three with no treatment, seven with treatment as usual (TAU) and one study compared CBT with an active treatment (psychodynamic therapy).

### **5.2. Study Quality**

Methodological quality of studies was checked using Kmet, Lee and Cook's (2004) quality appraisal tool. This tool was chosen because it has been found to demonstrate good inter-rater reliability with by-item agreement ranging from 73% to 100% (Kmet, Lee & Cook, 2004) and it was developed for a range of interventions, including RCTs. The tool consists of 14 criteria for which articles can receive a score of 0 (criterion not met), 1 (criterion partially met), 2 (criterion fully met) or 'N/A' if the criterion was not relevant to the type of study. The tool provides an overall quality score, expressed as a value between 0 and 1, by dividing the obtained

**Table 2: Quality Rating Criteria and Scores (Kmet, Lee & Cook, 2004)**

Study Author	Question sufficiently described? (1)	Design evident & appropriate to answer question? (2)	Method of subject selection described & appropriate? (3)	Subject & comparison group characteristics sufficiently described? (4)	Random allocation described? (5)	Investigator blinding reported? (6)	Blinding of subjects reported? (7)	Outcome measures well defined? (8)	Appropriate sample size? (9)	Analysis described & appropriate? (10)	Estimate of variance reported? (11)	Controlled for confounding? (12)	Results reported sufficiently? (13)	Results support conclusions? (14)	TOTAL QUALITY SCORE
Borras et al 2009	2	2	2	2	1	0	N.A.	1	1	2	2	2	2	2	0.81
Brown et al 2004	2	2	1	1	2	0	N.A.	1	2	2	2	1	2	2	0.77
Brown et al 2008	2	1	1	1	0	0	N.A.	2	1	1	2	2	2	2	0.65
Freeman et al 2014b	2	2	1	2	2	2	N.A.	2	1	1	1	1	2	1	0.77
Gumley et al 2006	2	2	2	2	1	0	N.A.	2	2	1	2	2	2	2	0.85
Hall & Tarrier 2003	2	2	2	1	2	1	N.A.	2	2	2	2	2	1	2	0.88
Hall & Tarrier 2004	2	2	2	1	2	0	N.A.	1	1	2	1	1	1	2	0.69
Horrell et al 2014	2	2	1	2	2	1	N.A.	2	2	2	2	2	2	2	0.92
Korelboom et al 2009	2	2	2	2	2	0	N.A.	2	2	2	1	2	2	2	0.88
Korelboom et al 2011	1	2	1	1	2	0	N.A.	2	2	2	2	2	2	2	0.81
Korelboom et al 2012	2	2	1	2	2	0	N.A.	2	2	2	1	2	2	2	0.85
Lecomte et al 1999	2	2	1	1	1	0	N.A.	2	1	2	0	2	2	2	0.69
Neacsu 2013	2	2	1	1	1	0	N.A.	2	2	1	1	1	1	1	0.62
Peden et al 2000	2	2	1	2	1	0	N.A.	2	2	2	2	2	1	2	0.77
Peden et al 2001	2	2	1	2	1	0	N.A.	1	1	2	2	2	2	2	0.77
Ritter et al 2013	2	2	2	2	2	0	N.A.	2	2	2	1	2	2	1	0.85
Waite et al 2012	2	2	1	2	2	0	N.A.	2	2	2	1	2	2	2	0.85

scores by the total possible score. Quality scores ranged from 0.62 to 0.92 (Table 2) (Kmet, Lee & Cook, 2004). Areas of strength across the studies included clear study aims, appropriate design detailed report of analytical results and conclusions that linked to findings (criteria 1, 2, 13 & 14). Areas where studies received lower scores included the blinding of investigators, the process of experimental and control group selection, limited estimations of variation and descriptions of the random allocation procedure (criteria 3, 5, 6 & 11).

### **5.3. Study Outcomes**

The following section documents the main findings of the studies. The section is divided into four subsections according to intervention type: individual CBT, group CBT, psychoeducational workshops and Competitive Memory Training (COMET). A summary of the studies can be found in **Error! Reference source not found.**

An alternative way of structuring the review could have been according to patient population or diagnosis. However, as diagnostic comorbidity is common and self-esteem has been described as an aetiological and/or maintaining factor across multiple diagnoses (Waite et al, 2012), it felt more beneficial to cluster according to intervention type.

#### **5.3.1. Individual CBT**

Six publications evaluated CBT delivered as a one-to-one intervention.

##### ***5.3.1.1. Individual CBT Studies Overview***

Two studies recruited participants from community samples. Waite and colleagues (2012) compared Fennell's (1997) model of self-esteem with a waitlist control. Treatment consisted of ten sessions of psychoeducation, cognitive restructuring and behavioural experiments. Ritter, Leichsenring, Strauss and Stangier (2013) compared three groups, CT (cognitive therapy), psychodynamic therapy (PDT) and waitlist control, on their efficacy for improving implicit and explicit

**Table 3: Summary of Studies**

Study & Country	Population	Sample	Treatment	CBT components	Measure	Delivery	Assessment points	Main Findings
Borras et al 2009	Clinical; outpatient MH	n = 54 38 male (70%) Age: M = 41	CBT SE module (24 1hr sessions) vs. waitlist control	Psychoeducation Self-monitoring Emphasise +ve	SERS VASES PANSS	Group	Baseline PT 3mth FU	<u>SE:</u> Sig improvement on positive & negative symptoms on SERS at PT, in CBT group but only those who also had a case manager. Maintained at FU.
Switzerland	Psychosis		Traditional psychiatric care v. Care co-ordination		CGI CCS			<u>Other:</u> Sig improvements in general & positive symptoms on PANSS, at PT. Maintained at FU.
Brown et al 2004	Community Risk of Depression	n = 120 20 male (37%) Age not reported	CBT 1 day self-confidence workshop (7 hrs) vs. waitlist control	Psychoeducation Cog restructuring Beh techniques	RSES BDI STAI GHQ-12	Group	Baseline 3mth FU	<u>SE:</u> Sig improvement on RSES at 3mth FU, CBT group only. No effect size, mean increase 4 points on RSES. <u>Other:</u> Sig improvements on SDI and GHQ at 3 mth FU, CBT group only. Clin sig improvement in dep, at FU, 45% in intervention group vs. 8% in control group. No change on STAI.
Brown et al 2008	Community Risk of depression	n = 56 Initial sample; 21 male (37%) Age: M = 42	Original study: CBT 1 day self-confidence workshop (7 hrs) vs. waitlist control FU: Original groups combined & divided into dep and non-dep	Psychoeducation Cog restructuring Beh techniques	RSES BDI STAI GHQ	Group	2yr FU	<u>SE:</u> Improvements on RSES, following CBT, maintained at 2yr FU, for dep participants but not for non-dep participants. <u>Other:</u> Improvements on GHQ & BDI, following CBT, maintained at FU in dep participants only.

Freeman et al 2014b	Clinical; outpatients England	n = 30 10 male (33%) Psychotic disorder(s)	CBT alongside TAU (six weekly sessions, duration not reported) vs.TAU (medication, reviews with psychiatrists/ health worker)	Cog restructuring Normalising Increase activities Emphasise +ve	RSC BCSS GPTS WEMBS SCS PSYRATS BAI BDI	Ind PT 1mth FU	Baseline	<u>SE:</u> Improvement on RSC at PT in CBT group. Not maintained at FU.  <u>Other:</u> Improvement on positive beliefs about self (BCSS), SCS, WEMWBS and BDI at PT in CBT group. Large effect size. Not maintained at FU.  No change on negative beliefs about self (BCSS), GPTS, PSYRATS, or BAI.
Gumley et al 2006	Clinical; CMHT Scotland	n = 144 105 male Psychotic disorder(s)	CBT (6 weekly 1hr sessions) vs. TAU (medication, psychiatric reviews & MDT access)	Individualised formulation Psychoeducation Cognitive therapy	RSES PBIQ 12mth FU	Ind 3mth FU 6mth FU	Baseline	<u>SE:</u> Sig improvements on RSES at 12mth FU, in CBT group. <u>Other:</u> Sig improvements on one subtest of PBIQ (loss) at 12mth FU, in CBT group.
Hall & Tarrier 2003	Clinical; Inpatient England	n = 25 12 male (48%) Psychotic disorder(s)	CBT (7 weekly 1 hr sessions) vs. TAU (Medication, case management & therapy e.g. anxiety management)	Cognitive therapy Emphasise +ve Self-monitoring Practice +ve beh	RSC HAD PANSS SFS	Ind PT 3mth FU	Baseline	<u>SE:</u> Sig improvements on RSC at PT, CBT group only. Maintained at FU.  <u>Other:</u> Sig reductions on three subscales of PANSS at PT, CBT group only. Most subscale improvements maintained at 3 mth FU. Sig improvements in dep (HAD) at PT in CBT group, not maintained at FU. No change in anxiety (HAD)

Hall & Tarrier 2004 <i>*1 yr FU of disorder(s)</i> <i>Hall&amp; Tarrier,</i> <i>2003</i>	Clinical; Inpatient Psychotic	n = 12 5 male (43%) Age: M = 38	CBT (7 weekly 1hr sessions) vs.TAU (Medication, case management & therapy e.g. anxiety management)	Cognitive therapy Emphasise +ve Self-monitoring Practice +ve beh	RSC HADS PANSS SFS	Ind	12mth FU	<u>SE:</u> Sig improvements on RSC at 12 mth FU, CBT group only. <u>Other:</u> Sig improvements on all measures at 12mth FU, CBT group only, except depression scale of HADS.
Horrell et al 2014 England	Community Risk of depression	n =459 92 male (20%) Age: M = 44	CBT 1 day self-confidence workshop (7 hrs) vs. waitlist control	Psychoeducation Cog restructuring Beh techniques	RSES BDI GAD-7 EQ-5D	Group	Baseline 12wk FU	<u>SE:</u> Sig improvements on RSES at FU, CBT group only. <u>Other:</u> Sig improvements at PT BDI, GAD-7 & EQ-5D, CBT group only.
Korelboom et al 2009 Netherlands	Clinical; department of eating disorders	n = 52 0 male (0%) Age: M = 25	COMET alongside TAU (8 weekly 90 min sessions) vs. TAU (Therapy based on CBT/ MI)	Self-referent stories Positive verbalisation, imagery & music Counter conditioning	RSES BDI EDI	Group	Baseline PT	<u>SE:</u> Sig improvements on RSES at PT, COMET group only. Large effect size. At PT 6 ppl met CSC in COMET vs 0 in TAU. <u>Other:</u> Sig improvements on BDI & ineffectiveness (EDI), COMET group only. No change on eating pathology (EDI).
Korelboom et al 2011 Netherlands	Clinical; personality disorder clinic	n = 76 12 Male (16%) Age: M = 36	CBT/COMET alongside TAU (7 weekly 90 min sessions) vs. TAU (not specified)	Self-referent stories, positive verbalisation, music, counter conditioning	RSES BDI POS	Group	Baseline PT 7-10wk FU	<u>SE:</u> Sig improvements on RSES at PT in COMET group only, with large effect size. Maintained at FU. At PT 12 ppl met CSC in COMET vs 2 ppl in TAU. <u>Other:</u> Sig improvements on BDI & POS at PT, in COMET group only. Most maintained at FU, with exception of resilience (POS)

Korelboom et al 2012	Clinical; Depression Netherlands	n = 61 12 male (20%) Age: M = 41	CBT/COMET alongside TAU (8 sessions of 120mins) vs. TAU (medication &/or CBT or IPT)	Self-referent stories, positive verbalisation, music, counter conditioning	RSES SERS BDI RSS	Group PT 3mth FU 6mth FU	Baseline	<u>SE:</u> Sig improvements on RSES at PT, COMET group only, with large effect size. Further sig improvement between PT & 3mth FU, maintained at 6 mth FU. <u>Other:</u> Sig improvements on BDI & RSS, COMET group only. Large effect sizes. Maintained at 3 & 6mth FU.
Lecomte et al 1999	Clinical; inpatient & outpatient Canada	n = 95 72 male (76%) Age: M = 41	CBT SE (12 week module) vs. TAU (not specified)	Psychoeducation Self-monitoring Emphasise +ve	RSES CCS PSI PANSS	Group PT 6mth FU	Baseline	<u>SE:</u> No change on RSES. <u>Other:</u> Improvements at PT in CBT group on PANSS positive symptom measure. Not maintained at 6mth FU. No change on CCS or PSI.
Neacsu 2013	Community; university students Romania	n = 80 Gender not recorded Age: M=35	CBT (30 sessions of 1hr) vs. no treatment control	ABC model Cognitive restructuring Guided imagery Problem solving	RSES PSS GSES	Group PT	Baseline	<u>SE:</u> RSES improved at PT in CBT group only, medium effect size. <u>Other:</u> Reduced stress (large effect size) and increased self-efficacy (medium effect size) at PT, in CBT group only.
Peden et al 2000	Community; college women USA	n= 92 0 male (0%) Age: M=19 Risk of dep	CBT (6 1hr sessions) vs. no treatment control	Cog restructuring +ve self-talk	RSES BDI CCI CES-D	Group 1mth FU 6mth FU	Baseline	<u>SE:</u> Sig improvements in RSES at 1mth FU, in CBT group. Maintained at 6mth FU. At 1mth 34% in CBT group met criteria for depression vs. 65% in control group. <u>Other:</u> Sig improvements on BDI, CES-D & CCI at 1mth FU, in CBT group. Maintained at 6mth FU.

Peden et al 2001 USA	Community; college women	n= 92 0 male (0%) Age: M=19	CBT (6 1hr sessions) vs. no treatment control	Cog restructuring +ve self-talk	RSES BDI CCI	Group	18mth FU	<u>SE:</u> The sig improvements in RSES (see Peden et al 2000) were maintained at 18 month FU. <u>Other:</u> The sig improvements on BDI, CCI & CES-D (see Peden et al 2000) were maintained at 18 mth FU. .
*18mth FU of Peden et al 2000	Risk of dep				CES-D			
Ritter et al 2013 Germany	Clinical; Social Anxiety Disorder	n = 66 36 male (55%) Age: M = 33	Cognitive therapy (CT) vs. psychodynamic therapy (PDT) vs. waitlist control (WC)	Self-monitoring Cog restructuring Beh experiments Attention training Imagery	RSES IAT LSAS SPAI BDI VAS	Ind	Baseline PT	<u>SE:</u> Improvements on RSES and IAT at PT in CT & PDT groups, but not WC. No sig differences between CT & PDT. <u>Other:</u> Improvements on LSAS&SPAI in CT & PDT groups, but not WC, at PT. Improvements on BDI at PT, in CT group only. No change on VAS.
Waite et al 2012 England	Primary Care Range of diagnoses	n = 22 4 male (18%) Age: M = 34	CBT (10 sessions; duration not specified) vs. waitlist control	Individualised formulation Psychoeducation Cog restructuring Beh experiments	RSC BDI BAI CORE	Ind	Baseline PT 11wk FU	<u>SE:</u> Improvements on SE at PT following CBT only. Large effect size. Maintained at FU. <u>Other:</u> Improvements on BDI, CORE at PT following CBT only. Large effect sizes. Maintained at FU. No change on BAI.

Note: Abbreviations: Beh = behavioural; Cog = cognitive; COMET = Competitive memory training; CSC = Clinically significant change; Dep = depression; FU = Follow up; Ind = individual therapy; IPT = Interpersonal Psychotherapy; M = mean age; MH = mental health; MI = Motivational interviewing; mth = month; non-dep = not depressed; PT = Post-treatment; SE= self-esteem; wk = Week

Self-Esteem Measure Abbreviations: IAT = Implicit association test; RSC= Robson self-concept questionnaire; RSES = Rosenberg Self-esteem Scale; SERS= Self-esteem rating scale; VASES = Visual Analogue Self-Esteem Scale

Other Measures Abbreviations: BAI =Beck anxiety inventory; BDI = Beck depression inventory; BSS = Brief core schema scale; CCI = Crandall cognitions inventory; CCS= Cybernetic coping scale; CES-D= Center for epidemiological studies- depression scale; CGI= Clinical global impression; CORE = Clinical outcomes in routine evaluation; EQ-5D= Euroqol (measure of quality of life); GAD-7 = Generalised anxiety disorder questionnaire; GPTS = Green et al paranoid thoughts scale; EDI = Eating disorders inventory; GHQ= General Health Questionnaire; GSES = General self-efficacy scale; HADS = Hospital anxiety and depression scale; LSAS= Liebowitz social anxiety scale; PANSS = Positive & negative syndrome scale; POS= Positive outcome scale (resilience); PSI = Psychiatric symptom index; PSS = Perceived stress scale; PSYRATS = Psychotic symptoms rating scale; RSS = Rumination on sadness scale; SCS = Social comparison scale; SFS = Social functioning scale; SPAI = Social phobia anxiety inventory; STAI = Spielberger's state-trait anxiety inventory; VAS = Visual analogue scale (to measure anxiety); WEMWBS = Warwick and Edinburgh mental wellbeing scale.

self-esteem in people with social anxiety. Participants self-referred and treatment consisted of 25 hourly sessions, based on manuals which were not described in the study.

Four publications recruited participants from clinical populations, specifically psychosis and all of them compared individual CBT alongside TAU, with TAU only. TAU referred to standard care according to national guidelines and local protocols, predominantly involving antipsychotic medication and psychiatric reviews. TAU in Hall and Tarrier (2003) also included (unspecified) therapy.

Freeman and colleagues (2014b) recruited thirty participants with persecutory delusions, from outpatient mental health facilities. CBT was based on *You Can Be Happy* (Freeman & Freeman, 2012) and consisted of encouraging positive self-thoughts, challenging negative self-thoughts and increasing activity levels. Hall and Tarrier (2003) recruited from an acute inpatient ward. CBT consisted of 7 sessions focused on increasing positive self-beliefs. Hall and Tarrier (2004) reported the 12-month follow-up evaluation of their original study. Gumley and colleagues (2006) recruited participants deemed as “at risk of relapse”, through screening clinical databases in outpatient mental health services. They hoped to evaluate the efficacy of 6 sessions of CBT on improving self-esteem and reducing negative beliefs about illness.

#### 5.3.1.2. *Individual CBT Study Findings*

Both studies that recruited from community samples found significant improvements in self-esteem at post-treatment, in participants who received CBT. Waite and colleagues (2012) reported a large effect size ( $d=2.02$ ) and observed clinically significant change in 70% of participants and reliable change in 90% of participants, compared to 0% for both clinical and reliable change in the control group. Ritter and colleagues (2013) found significantly higher explicit and implicit self-esteem following CT & PDT, but not the control group. It has been argued that

implicit self-esteem, which reflects unconscious beliefs about the self, might be more important to psychopathology than explicit self-esteem as schemas may not always be consciously accessible or reportable (Raedt et al, 2006). However, as effect sizes were not reported it is not possible to determine if these results were clinically meaningful. No significant differences were found between the treatment groups (Ritter et al, 2013). One possible explanation for this result is that both treatments included helpful (yet different) strategies. Alternatively, changes in self-esteem may be attributed to common treatment factors, such as therapeutic alliance.

Waite and colleagues (2012) also reported significant improvements in depression and overall psychological functioning, again with large effect sizes ( $d=2.13$  &  $2.24$ ) and the results were maintained at 11-week follow up. However, no change was observed for anxiety. The study was rated as having high quality methodology (0.85) and the intervention was acceptable with only 2% attrition rate. However, the study was underpowered ( $N=22$ ), which was not acknowledged by the quality rating measure (Kmet, Lee & Cook, 2004) and predominantly consisted of well-educated women. Ritter and colleagues (2013) also reported significant reductions in social anxiety following CT & PDT, but not the control group. One difference was observed between treatment groups on measures of depression, where only the CT group improved at post-treatment.

The studies recruiting clinical samples all found greater improvements in self-esteem following CBT compared to TAU, at post-treatment. Freeman (2014b) and Gumley (2006) reported medium ( $d = 0.62$ ) and large ( $d = 0.8$ ) effect sizes respectively. Hall and Tarrier (2003) showed that the mean value of self-esteem following CBT increased to within ‘normal’ limits, unlike TAU, and 82% of the sample reported that they found CBT very helpful. Participants in Freeman et al (2014b) attended every therapy session, suggesting their treatment was feasible and acceptable.

Three publications documented follow-up data. Hall and Tarrier (2004) showed that although self-esteem scores significantly improved between baseline and 12-month follow up, at 12-months they dropped back below the range of 'normal'. Gumley et al (2006) showed that self-esteem had improved from baseline to 12-month follow up, with large effect sizes (0.8). In contrast, Freeman and colleagues (2014b) found the benefits on self-esteem were not maintained at 12-week follow up.

Each study also documented benefits of CBT for self-esteem on a variety of other outcomes. Hall and Tarrier (2003) found improvements in positive and negative symptoms of psychosis, general psychopathology, social functioning and depression, but not anxiety. With the exception of depression these results were maintained at 3 month and 12 month follow-up (Hall & Tarrier, 2004). However, effect sizes were not reported. Freeman et al (2014b) found improvements on measures of positive beliefs about the self, social comparison and wellbeing, all with large effect sizes ( $d=1.00$ , 0.88 & 1.16 respectively). Additionally, assessments were conducted blind which was not considered by the majority of studies. However, no benefits were maintained at follow-up. Improvements on paranoia and persecutory delusions were also observed however these did not reach statistical significance and no differences were found on negative beliefs about the self, anxiety or depression, at any time point. Finally, Gumley et al (2006) found improvements on personal beliefs about illness, which were maintained at 12-month follow up.

The results of these studies appear promising, particularly as they were conducted using intention-to-treat analyses which take into account attrition and are more conservative than per-protocol analyses, suggesting treatment effects may be even larger in participants who complete treatment. However, Gumley et al (2006) had some statistical limitations, such as, not adjusting for multiple testing and not reporting effect sizes. They also only recruited participants if psychiatrists agreed to

the referral, which introduces bias. In contrast, Hall and Tarrier (2003) discussed the study with all new patients admitted to the inpatient unit. Although Hall and Tarrier (2004) included a long-term follow up, their study was underpowered and had high attrition rates.

#### *5.3.1.3. Individual CBT Summary*

In summary, the results suggest that individual CBT for self-esteem may be more effective than TAU and equally effective to PDT at improving self-esteem in both community and clinical samples. Additionally, it appears to have a beneficial impact on some other psychological symptoms, including depression, with less impact on others, such as, anxiety. Evidence that the results are maintained over time is mixed.

#### *5.3.2. Group CBT*

Five articles evaluated the efficacy of CBT delivered as a group intervention.

##### *5.3.2.1. Group CBT Studies Overview*

Three articles targeted community samples, specifically college students, and compared group CBT with no-treatment control groups. Neacsu's (2013) intervention was the longest group treatment, comprised of thirty 60 minute sessions. They recruited 80 Romanian university students identified as having low self-esteem and high levels of stress. The group included thought challenging and problem solving techniques to address stressors. Peden, Rayens, Hall and Beebe (2000) recruited 92 American college women, with mild to moderate depression, through self-referral. The group was based on an unpublished model and used cognitive strategies to reduce negative thoughts and increase positive self-affirmations and relaxation exercises. The group were followed up at 1-month and 6-month post-intervention. Peden, Rayens, Hall and Beebe (2001) tested the long-term effectiveness of the group in an 18-month follow up.

Two articles (Borras et al, 2009; Lecomte et al 1999) investigated a 24 module CBT group programme designed by Lecomte et al (1999) for low self-esteem in individuals with psychosis. The authors theorised that increasing self-esteem and empowerment in people with psychosis will, in turn, increase active coping skills and act as protective factors against relapse. The programme targets five areas; security, identity, belonging, purpose and competence. Both studies compared the programme with TAU, which referred to medication and psychosocial treatments.

Lecomte et al (1999) recruited 54 participants from inpatient wards in Canada, followed up at post-treatment and 6-months later. Borras et al (2009) evaluated the efficacy of the programme in two outpatient facilities in Switzerland. Participants in one outpatient facility benefited from TAU, whilst the second facility benefited from TAU with the addition of an active case manager. Assessments at three time points: baseline, post-treatment and three month follow up, were completed by 54 participants.

#### *5.3.2.2. Group CBT Study Findings*

Neacsu (2013) found that the CBT group had significantly higher levels of self-esteem and lower levels of stress in pretest-posttest comparisons, with medium and large effect sizes ( $d= 0.65$  and  $0.80$  respectively), whereas the control group showed no improvements. However, limitations to their analytic methods may have overinflated their significance values. Firstly, multiple t-tests were used to evaluate the efficacy of the intervention, which was not the most appropriate analysis. Furthermore, statistical corrections were not used to counteract the problem of multiple comparisons, increasing the chance of a Type 1 error. Secondly, the authors used per-protocol analyses and did not comment on their attrition rates, which given the length of their group dropout seems likely. Furthermore, there were no comparisons of baseline characteristics between the groups and the

randomisation procedure was not reported, meaning confounding variables cannot be ruled out. As participants were self-selected from one university the results lack generalisability, although this was acknowledged by the authors.

Peden et al (2000) found the CBT group had significantly higher self-esteem at 1-month follow up than the control group and this was maintained at 6-month follow up. The difference in scores was approximately four points on the Rosenberg Self-Esteem Scale (RSES), which although the authors acknowledged may not be dramatic they argued it was significant given the stability of self-esteem and the difficulty in influencing it. Self-esteem remained significantly higher at 18-month follow up (Peden et al, 2001). The authors also found that the prevalence of depression was significantly lower in the CBT group (34%) than the control group (65%) at 1 month follow-up, 6 month follow-up (17% vs. 65%) (Peden et al, 2000) and 18 month follow-up (15% vs. 29%) (Peden et al, 2001). This was despite using a conservative mixed model analysis which enabled the authors to use data from participants who had dropped out. This was particularly important given the large attrition rate, with only 46% of participants completing the 18-month follow up. The authors concluded that their results provided support for the efficacy of the CBT group in bolstering self-esteem and improving depression.

With regard to the clinical samples Lecomte et al (1999) found no significant differences in self-esteem. The authors concluded that the non-significant findings were due to the outcome measure used (RSES) which measures global self-worth rather than the innumerable dimensions of self-esteem and therefore may not be appropriate for individuals with schizophrenia. Significant group by time interactions were found on three subscales of a measure of psychosis, the PANSS Positive symptoms scale (delusions, perceptual disorganisation and paranoia), demonstrating the efficacy of the group CBT intervention on psychotic symptoms. However, no significant differences were found on measures of active coping. This

is contradictory to the authors' theory that increased self-esteem and active coping skills will, in turn, lead to reductions in psychopathology.

Following the recommendations of Lecomte et al (1999) Borras and colleagues (2009) employed a more detailed self-esteem measure, which yielded positive and negative self-esteem subscales. Additionally, a visual analogue scale of subjective self-esteem was used, which is designed for people who struggle with written language. The study found significant improvements in both measures of self-esteem at post-treatment. However, the increase from 36.6 to 38.4 for the positive self-esteem subscale and 5 to 5.3 in the subjective self-esteem measure, are unlikely to be clinically significant. Furthermore, the differences in negative self-esteem following the intervention were only observed in groups who also had active case managers, suggesting it may be the addition of the case manager which was effective, rather than CBT. Likewise, significant improvements were observed in general and positive psychotic symptoms, following the intervention, only in individuals with an active case manager. The positive effects on self-esteem and psychopathology were maintained at the three month follow up.

Borras et al (2009) had a high quality score (0.81) and many methodological advantages, including a sampling procedure that controlled for selection bias by asking psychiatrists to present the study to their next five consecutive patients. Furthermore, 71% of participants expressed satisfaction with the programme. However, a major limitation was that the control group was not used as a comparison group in the analyses. The analyses evaluated the post-treatment outcomes of the whole sample, followed by comparisons between groups which received TAU and those which received TAU with the addition of an active case manager. Thus, the evaluation of the CBT intervention resembled a pretest-posttest study and therefore cannot be used to make inferences about causality.

### *5.3.2.3. Group CBT Summary*

In summary, the studies investigating the efficacy of group CBT showed the impact on self-esteem is mixed and those which showed promising results should be interpreted with caution due to methodological limitations. Group CBT appeared to have benefits on other symptomatology, such as depression and psychotic symptoms, however the same methodological limitations apply.

### *5.3.3. Psychoeducation Workshops*

#### *5.3.3.1. Psychoeducation Workshop Studies Overview*

Three publications reported on the efficacy of CBT delivered as a psychoeducational self-confidence workshop, by comparing it with waitlist controls. The workshop, based on Fennell's (1997) model of self-esteem, was designed by Brown, Elliott, Boardman, Ferns and Morrison (2004) to provide an accessible and brief intervention on a large-scale. It consists of four sections; information about the development of low self-confidence, thought challenging, problem-solving and assertiveness, and action planning. All the studies recruited participants through self-referral, by advertising the workshop in community areas. Participants attended an introductory talk prior to the workshop and were followed up after 12 weeks in a two-hour booster group. Brown et al (2004) recruited 120 participants from one London borough, and Brown et al (2008) followed them up after two-years. Horrell et al (2014) recruited 459 participants from eight London boroughs.

#### *5.3.3.2. Psychoeducation Workshop Study Findings*

At 12-week follow-up both studies found significant improvements in self-esteem, depression and general psychiatric symptoms (measured by General Health Questionnaire) in the CBT group only. Horrell et al (2014) also found significant improvements in anxiety. Brown et al (2004) did not comment on the magnitude of change for self-esteem but used changes in depression scores of at least 10 points to indicate clinically significant change and found 45% of the experimental group improved at three month follow-up, compared with only 8% of

the control group. Brown et al (2008) conducted a two year follow up of Brown et al (2004) to conclude if the results were maintained. However, as the waiting-list group had received treatment at this point it was not possible to compare the groups or determine if any observed changes were due to the intervention. Horrell et al (2014) reported a medium effect size for depression ( $d=0.55$ ) but showed scores of self-esteem were higher by only 1.8 points in the experimental arm, suggesting the magnitude of change was minimal.

The studies all received high methodological quality ratings and included large sample sizes and true randomisation procedures. Despite high attrition rates between the introductory talk and the workshop, intention-to-treat analyses supported the findings. Horrell et al (2014) also conducted a detailed comparison of baseline demographics between the two groups enabling the authors to control for confounding variables and found 96% of participants were satisfied with the group. However, recruitment through self-selection and the majority of the samples being female (80%) may not be representative of the population.

#### *5.3.3.3. Psychoeducation Workshop Summary*

In summary, the results suggest that psychoeducation workshops are more effective at improving self-esteem and depression than no treatment. However, the absence of reported effect sizes or clinical significance values for self-esteem meant it was not possible to determine the magnitude of the differences.

#### **5.3.4. Competitive Memory Training (COMET)**

##### *5.3.4.1. COMET Studies Overview*

Three studies reported on the efficacy of COMET, a manualised intervention aimed at enhancing retrieval of beneficial information from long-term memory, based on Brewin's (2006) notion of "memory retrieval competition". Participants are encouraged to visualise and write self-referent stories and repeatedly verbalise positive statements connected to these scenes. Counter-conditioning is used to

associate this emotionally enhanced positive self-knowledge with cues that would usually trigger negative self-thoughts (Korelboom, De Jong, Huijbrechts & Daansen, 2009).

The studies investigated COMET within a variety of outpatient mental health settings in the Netherlands, as a group intervention, with five to nine participants. COMET consisted of eight to ten ninety-minute sessions. Participants were randomised to either COMET or TAU. TAU varied in each study but included individual therapy, such as CBT or interpersonal psychotherapy. The treatment integrity in the group was high, with levels of performance according to the manual between 88% and 90%.

Korelboom et al (2009) investigated the efficacy of COMET with 52 individuals with eating disorders. Measurements were completed at pre-and-post intervention. Korelboom, Marissen and Van Assendelft (2011) investigated the efficacy of COMET with 76 individuals with personality disorders. Measurements were completed at pre-and-post intervention and seven to ten week follow up. Korelboom, Maarsingh and Huijbrechts (2012) investigated the efficacy of COMET with 61 individuals with depression. Measurements were completed at pre-and-post intervention, and three and six month follow-ups. Participants in all the studies were referred by clinicians.

#### *5.3.4.2. COMET Study Findings*

All three studies used intention-to-treat analyses and found significantly favourable self-esteem results post-intervention following COMET, with large effect sizes ( $d= 0.8, 0.9$  and  $1.3$ ) (reported respectively by Korelboom et al, 2009, 2011 and 2012). A clinically significant change for self-esteem was reported in 27%, 35% and 39% of patients in COMET, in comparison to 0%, 9% and 7% in TAU (reported respectively by Korelboom et al, 2009, 2011 and 2012). Korelboom et al (2011) used an additional measure of self-esteem that tapped into two dimensions of self-

esteem, positive and negative, and again found statistically significant results, with large effect sizes ( $d=1.3$  for positive self-esteem and  $d=1.2$  for negative self-esteem).

All three studies reported participants who received COMET performed significantly better on measures of depression, with a medium effect size in Korelboom et al (2009) ( $d=0.6$ ) and large effect sizes in Korelboom et al (2011 & 2012) ( $d= 0.8$  &  $1.2$ , consecutively). Additionally, Korelboom et al, (2009) found participants improved on one subscale of the Eating Disorder Inventory (EDI) namely ineffectiveness, which is considered to be a measure of self-esteem, with a medium effect size ( $d = 0.6$ ). However, there were no significant differences between groups on a second subtest of the EDI, dissatisfaction with the body, which was used to measure eating pathology. Korelboom et al (2011) found COMET led to improvements on resiliency and self-efficacy, with small ( $d=0.4$ ) and medium ( $d=0.5$ ) effect sizes consecutively.

All results were maintained at three and six month follow-up in Korelboom et al (2012). In Korelboom et al (2011) the effects remained on measures of self-esteem, depression and autonomy at seven-to-ten week follow up. However, scores of social optimism appeared to deteriorate between post-treatment and follow-up. However, in both studies the TAU group had also received treatment at follow-up, thus the results were not compared to a control group.

In general, the studies were of high methodological quality and the use of intention-to-treat analyses and true randomisation procedures provided a more reliable estimate of treatment effectiveness. Furthermore, the use of therapy in all three TAU groups is indicative that CBT for self-esteem may be more effective than therapies not aimed specifically at self-esteem, although further research would be needed to investigate this. In the Korelboom et al (2012) study, those receiving COMET had significantly more therapy (10.5 hours) than those receiving TAU (4.6

hours). Thus, the beneficial effects may be explained by amount of therapeutic time. However, the authors suggest this is unlikely as the majority of participants had a long history of receiving TAU prior to the trial.

Two limitations were that participants were referred by clinicians, which may introduce selection bias, and the author of COMET was a primary researcher in all the studies, which may introduce allegiance effects.

#### 5.3.4.3. *COMET Summary*

In summary, despite minor methodological limitations COMET seems to be an effective treatment for low self-esteem and depression.

## 6. **DISCUSSION**

### 6.1. Summary of Findings

This review aimed to examine whether CBT interventions are effective at improving self-esteem in adults. It also hoped to determine whether CBT aimed specifically at self-esteem would have a positive impact on any other psychological outcomes. Seventeen articles met criteria for inclusion. The articles were divided into four groups according to intervention type; individual CBT, group CBT, psychoeducation and COMET. Unless specified otherwise CBT was compared with TAU or waitlist control.

Six studies examined the effectiveness of CBT delivered as an individual intervention. The studies were all of high quality methodology and revealed that individual CBT was effective at improving self-esteem. When effect sizes were reported these ranged from medium to large (Freeman et al, 2016b, Gumley et al, 2006; Waite et al, 2012) and two studies revealed the benefits were maintained at 12-month follow-up (Gumley et al, 2006; Hall & Tarrier, 2004). Only one study compared individual CBT with an active treatment (PDT). Ritter et al (2013) found

both CBT and PDT were more effective than waitlist control at improving self-esteem but there were no differences between the treatment groups.

Individual CBT also appeared beneficial for a variety of psychological outcomes including social anxiety (Ritter et al, 2013), depression (Hall & Tarrier, 2003; Ritter et al, 2006; Waite et al 2012), beliefs about illness (Gumley et al, 2006) and general psychopathology (Gumley et al, 2006; Hall & Tarrier, 2003; Waite et al, 2012). No improvements in anxiety were observed following individual CBT (Hall & Tarrier, 2003; Waite et al, 2012) and results were mixed regarding symptoms of psychosis (Hall & Tarrier, 2003; Freeman et al, 2014b).

The review also provided promising evidence for the effectiveness of COMET, a manualised CBT intervention based on Brewin's (2006) notion of "memory retrieval competition" (Korelboom 2009, 2011 & 2012). COMET led to large improvements and clinically significant changes in self-esteem, across a variety of diagnoses. It also led to large improvements in depression (Korelboom et al, 2009, 2011 & 2012), resilience and autonomy (Korelboom et al, 2011). Korelboom et al (2012) administered outcomes at six month follow up and found that these improvements were maintained. However, COMET had no impact on eating pathology (Korelboom, 2009).

Two studies found a CBT psychoeducation workshop led to significant improvements in self-esteem (Brown et al, 2004; Horrell et al, 2014), although the magnitude of the difference was not reported. The workshop also led to significant improvements in depression, for example, Brown et al (2004) reported that 45% of participants achieved clinically significant change in the psychoeducation group, in comparison to 8% in the waitlist control group. The results were mixed regarding anxiety, with Horrell et al (2014) finding significant improvements but Brown et al (2004) reporting no change. The results were maintained at a two-year follow up however as the waitlist group had received treatment at this time, it was not possible to compare groups (Brown et al, 2008).

Finally, five studies investigated the effectiveness of CBT delivered as a group intervention, revealing mixed results, which should be interpreted with caution due to methodological limitations. Neacsu (2013) and Peden et al (2000; 2001) reported that group CBT was effective for self-esteem. However, Neacsu's (2013) study was of low quality methodology. In contrast, Lecomte et al (1999) found group CBT had no impact on self-esteem. However, Borras et al (2009) found significant improvements in negative and positive self-esteem following the same group programme as Lecomte et al (1999), although improvements in negative self-esteem were only observed in individuals who also had active case managers, suggesting it may be the addition of the case manager which was effective, rather than CBT.

Group CBT led to significant improvements in stress (Neacsu, 2013), psychosis (Borras et al, 2009; Lecomte et al, 1999) and depression (Peden et al, 2000). However, the same methodological problems apply.

In summary, the studies provided evidence for the effectiveness of individual CBT and COMET on self-esteem, and show that they performed better than TAU and waitlist controls. Only one study compared individual CBT with an active treatment (PDT) and found no difference between the groups. The evidence for the effectiveness of psychoeducation workshops is promising but their effectiveness requires further evaluation. Group CBT had mixed results and due to methodological limitations further research is required.

In terms of other psychological outcomes the studies suggest that individual and group CBT, as well as psychoeducational workshops and COMET, were also effective at improving depression. However, the results were mixed regarding anxiety and psychotic symptoms. It was not possible to conclude if CBT for self-esteem is effective for symptoms of social anxiety or eating pathology as there were too few studies.

## **6.2. Study Strengths and Limitations**

The studies used in this review were predominately of high quality methodology and the sole use of RCTS meant causal conclusions were possible. The studies recruited participants of various ethnicities, ages and diagnoses, with the shared goal of investigating the impact of CBT on self-esteem. Many of the studies also included outcomes on anxiety and depression. Thus, these results may be generalised to a wide range of people. However, several of the studies were underpowered with a small sample size (Hall & Tarrier, 2003; Hall & Tarrier, 2004; Waite et al, 2012). Furthermore, the impact CBT had on other psychological symptoms, such as, social anxiety and eating pathology, was more complicated as each study had differing aims and outcomes. Although this is not a limitation of the individual studies it does make it challenging to generalise the findings.

Secondly, several of the studies reported statistical significance in the absence of effect size. This merely suggests there was a difference between the groups but does not report its magnitude. Therefore, it was not always possible to conclude whether the difference was meaningful. Furthermore, seven of the studies included long-term follow-ups from six months to two years. However, as some of the comparison groups were waitlist controls and had received treatment by follow-up it was not always possible to compare groups or conclude whether any observed change was due to the intervention or other confounding variables, such as, spontaneous remission.

Finally, the existence of multiple definitions and conceptualisations of self-esteem has led to multiple ways of measuring the concept, which can lead to contradictory findings (Harter, 2012). Fortunately, the majority of studies used either Rosenberg self-esteem scale (RSES) (1965) or Robson self-concept questionnaire (1989), making comparisons easier. However, reliance on self-report measures can have limitations. Social desirability may impact on how participants respond to questions and feelings of worthlessness and inadequacy may be at a low level of

awareness and therefore not accessible through self-report (Raedt et al, 2006).

Therefore, the use of implicit measures of self-esteem would have been beneficial, yet were used in only one study (Ritter et al, 2013).

### **6.3. Review Limitations**

There are also limitations to the review which should be acknowledged. Firstly, there was an absence of studies comparing CBT with another active treatment. Therefore, it could not be distinguished whether improvements occurred due to specific CBT strategies or common therapeutic factors, such as, therapeutic alliance. Indeed, when CBT was compared to another active treatment (PDT) (Ritter et al, 2013), there were no differences between the treatments on measures of self-esteem. However, this is typical of the majority of comparative studies (Luborsky et al, 2002).

Furthermore, limiting the review to only published studies suggests that the beneficial effects of CBT may be over-estimated, as studies with significant results are more likely to be published (Moher et al, 2009). Additionally, studies were only included if they were written in English and non-English studies are more likely to be translated into English if results are beneficial, therefore inflating the results further (Centre for Reviews and Dissemination, University of York, 2008).

The quality of the studies was checked using Kmet, Lee and Cook's (2004) quality appraisal tool. This tool was chosen because it has been found to demonstrate good inter-rater reliability with by-item agreement ranging from 73% to 100% (Kmet, Lee & Cook, 2004). However, a limitation of the tool was that it did not identify studies with low power as being lower quality. For example, Hall and Tarrier (2003) received a high quality rating (0.88), despite having only 12 participants.

Finally, the studies were chosen for inclusion and assessed for quality by one reviewer (ED), consulting a second person (CG) only if difficulties reaching a

decision arose. However, this is likely to have reduced reliability and validity. Petticrew and Gilbody (2004) suggest that reviewers working alone can miss one in ten relevant studies. Additionally, the synonyms used to search for self-esteem were based on the terms most frequently employed in the literature. However Leary and Tangney (2003) found over 66 different terms referencing self therefore it is likely that further relevant articles may have been omitted, although reference lists were searched to try and address this limitation.

#### **6.4. Clinical Implications**

Co-morbidity between emotional disorders, such as depression and anxiety, is high and there is strong evidence indicating that they share similar aetiology and maintenance factors (Newby, McKinnon, Kuyken, Gilbody & Dalgleish, 2015). Despite this, disorder-specific interventions do not easily address co-morbidity (Newby et al, 2015). The results of this review suggest that a short-term CBT intervention may potentially be used transdiagnostically to improve self-esteem, as well as reduce symptoms, such as, low mood and general psychopathology, diminishing the need for multiple treatment protocols and improving efficiency.

However, the impact of CBT for self-esteem on anxiety was mixed. Several studies found it had no impact (Brown et al, 2004; Freeman et al 2014b; Hall & Tarrier, 2003; Waite et al 2012), whilst others found significant improvements (Horrell et al, 2014; Ritter et al, 2013). The term ‘anxiety’ encompasses a wide range of disorders, which may suggest that CBT for self-esteem is more effective for some anxiety disorders than others. Alternatively, the majority of studies used the Beck Anxiety Inventory (BAI) (Beck, Epstein, Brown & Steer, 1988) to measure anxiety which has been shown to be more sensitive to change in panic disorder than other anxieties, due to its predominant focus on physical symptoms (Cox, Cohen, Direnfeld & Swinson, 1996). Therefore, future studies should employ an alternative

measure of general anxiety to determine if CBT for self-esteem is effective at improving the metacognitive aspects of anxiety.

Secondly, the studies including long-term follow-ups predominantly showed that the benefits of CBT for self-esteem were maintained or improved further over time. This fits with CBTs goal of empowering individuals by giving them the tools and strategies to become their own therapists and is suggestive that individuals continue developing these skills over time. This is important for all individuals but particularly profound considering many of the studies included populations with psychosis, where relapse is common (Lecomte et al, 1999). This is suggestive that a short-term treatment can be used with long-term benefits for a variety of people, from community samples to those with severe and enduring psychosis.

#### 6.5. Future Research

This review has highlighted some gaps in the literature which would benefit from further research. First, if CBT for self-esteem is to be considered a transdiagnostic intervention it would benefit from further research testing its impact on individuals with multiple diagnoses, or without a diagnosis, within the same study. This should be evaluated using a variety of diagnosis-specific symptom measures and generic measures, such as psychopathology or wellbeing, as McEvoy, Nathan and Norton (2009) suggest that this is the optimal way of evaluating transdiagnostic programmes. Waite et al (2012) was the only study to recruit participants with a range of different and co-morbid disorders. This was also one of the few studies to employ a measure of wellbeing. Measuring wellbeing alongside psychopathology is important as the absence of symptoms does not necessarily imply positive wellbeing. However, they had a small sample size and mainly included women, therefore further research would be beneficial.

Secondly, future research comparing CBT for self-esteem with an active treatment is necessary to determine if the improvements in symptoms are due to CBT or common therapeutic factors.

Finally, group CBT for self-esteem received limited support. This may be because a group context is not helpful. However, this seems unlikely as the psychoeducation workshops and COMET were both delivered as group interventions and appeared effective. An alternative explanation may be that the content of the group CBT interventions, which all focused exclusively on cognitive strategies, were less effective for improving self-esteem due to the absence of any behavioural strategies. However, further research, including dismantling studies, would be needed to investigate this hypothesis.

#### **6.6. Conclusions**

This review supports the effectiveness of CBT for self-esteem delivered individually and through a specific group programme; COMET. The evidence for the effectiveness of psychoeducation workshops is promising but requires further evaluation. There was less support for the effectiveness of group CBT for self-esteem and the possible reasons for this are discussed. The review also provides support for the effectiveness of CBT for self-esteem, delivered in a variety of ways, on symptoms of depression. The impact on anxiety and psychotic symptoms was inconclusive and it was not possible to conclude the impact on any other psychological symptoms due to a lack of research.

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## **Part Two: Empirical Paper**

A feasibility study of a Cognitive-Behavioural Therapy group for domain-specific self-esteem and its impact on global self-esteem, depression, anxiety and psychological wellbeing.

## **1. ABSTRACT**

*Aims:* The study aimed to investigate the feasibility and acceptability of a cognitive-behavioural therapy group for domain-specific self-esteem. It also sought to explore the relationship between domain-specific and global self-esteem and to evaluate the effectiveness of the intervention on global self-esteem, depression, anxiety and psychological wellbeing.

*Method:* The study used a pretest-posttest single group design, with a one-month follow-up. Participants were 51 UCL students who completed self-report questionnaires at pre-treatment, post-treatment and one-month follow-up. Recruitment and retention rates were examined, alongside qualitative participant feedback, to determine feasibility and acceptability of the intervention.

Quantitative data were analysed using simple linear regressions and mixed-model analyses. Qualitative data were subjected to content analysis.

*Results:* The intervention was predominantly deemed to be feasible and acceptable. Recruitment rates and post-treatment retention rates exceeded the study targets. Participant feedback was positive and 85% of the sample reported that they found the group helpful. However, retention rate at follow-up was below the study target.

Significant improvements were observed in global self-esteem, depression and psychological wellbeing following the intervention. No changes were observed in anxiety.

*Conclusion:* The intervention was found to be acceptable to participants and feasible to implement. It had promising results on global self-esteem, depression and psychological wellbeing. It should now be evaluated further in a randomised controlled trial.

## **2. INTRODUCTION**

### **2.1. What is Self-Esteem?**

Defining self-esteem has long been a contentious issue, awarding it the title of a ‘definitional maze’ (Smelser, 1989, p9). Arguably the two most prominent theorists described it as a competence, achieved through “the ratio of our actualities to our supposed potential” (James, 1890, p. 310) or a feeling of worthiness (Rosenberg, 1979). The existence of multiple definitions and conceptualisations of self-esteem has led to multiple ways of measuring the concept, which can lead to contradictory findings (Harter, 2012).

Sociometer theory posits that self-esteem is necessary, as a gauge of social inclusion (Leary, Tambor, Terdal, & Downs, 1995a). The theory suggests that humans evolved with a fundamental need to belong to a group, as those who were protected by a group were more likely to survive and reproduce than those who were excluded. Thus, low self-esteem signals that one is at risk of exclusion and must take action to maintain social acceptance (Leary et al, 1995a).

#### **2.1.1. Global and domain-specific self-esteem**

The majority of literature construes self-esteem as a global construct, that is, an individual’s global evaluation of oneself (Brown, Dutton & Cook, 2001). Like an aspect of personality this form of self-esteem is relatively enduring across time and situations (Brown, Dutton & Cook, 2001). However, self-esteem can also be conceptualised as domain-specific, which refers to an individual’s self-appraisals within more circumscribed domains, for example, intellect or appearance (Neeman & Harter, 2012). Thus, individuals may hold different levels of self-esteem dependent on the domain (Mruk, 2006), which may vary over time and situations (Harter & Whitesell, 2003).

Whilst some researchers argue that domain-specific self-esteem is so heavily affiliated with global self-esteem that it continues to be best understood as a unidimensional construct (Coopersmith, 1967), there is now compelling support for a multidimensional perspective. Marsh (1986) investigated 12 specific-domains of self-esteem and their relationships with global self-esteem and found associations ranged from .06 to .60, suggesting domain-specific and global self-esteem are connected but distinct, raising questions about their relationship.

Researchers generally agree that global self-esteem is more than just the summed values of specific domains. One theory is that domains perceived as important by an individual make a larger contribution towards global self-esteem (James, 1890), than those perceived with less importance. Indeed, Rosenberg, Schoenbach, Schooler and Rosenberg (1995) found that the degree to which academic self-esteem predicted global self-esteem was dependent on how highly academia was personally valued. Based on James' (1890) idea, Harter (1999) proposed a discrepancy model which determines the difference between how competent one feels in a specific-domain and how important one believes that domain is. The model suggests that the higher the discrepancy the lower global self-esteem. Indeed, Harter (1999) found discrepancy scores were strongly predictive of American students' global self-esteem. However, Marsh (1986) found that importance discrepancies explained little or no more variance in global self-esteem than what could be explained by competence alone.

## **2.2. The Importance of Self-Esteem**

### **2.2.1. Low Self-Esteem**

Low self-esteem has been associated with a number of negative outcomes including poor interpersonal relationships, criminal behaviour, substance abuse and mental health (Leary, Schreindorfer & Haupt, 1995b). In regards to mental health,

self-esteem has most extensively been linked with depression. Indeed, 'feelings of worthlessness' is listed in the diagnostic criteria for major depression (APA, 2013) and studies consistently show a strong relationship between the two ( $r=-.79$ ) (e.g., Orth, Robins & Roberts, 2008). Some researchers have even argued that depression and self-esteem are opposite ends of the same construct (Watson, Suls & Haig, 2002), although correlations between the two are not as strong as would be expected if this were true. Self-esteem appears to have a more peripheral role in the onset of anxiety and fewer studies have investigated this relationship, however cross-sectional studies report moderate correlations ( $r = -.31$ ) (Joiner, 1995).

As the majority of research on self-esteem is cross-sectional it cannot imply causality. The vulnerability model suggests that self-esteem serves as a risk factor for psychopathology, whilst the scar model suggests psychopathology leads to low self-esteem (Jordan, Zeigler-Hill & Cameron, 2015). One way of addressing causality is through laboratory studies, which have shown that experimentally lowering self-esteem can lead to an increase in depression and anxiety (Wilson & Krane, 1980). However, by using laboratory studies it is difficult to evaluate the impact on real world outcomes. Therefore the best way of indicating a possible causal role of self-esteem is through prospective studies. A recent meta-analysis of longitudinal studies found that the effect of self-esteem on depression ( $\beta=-.16$ ) was significantly stronger than the effect of depression on self-esteem ( $\beta=-.08$ ), whilst the effects between low self-esteem and anxiety were relatively balanced; self-esteem predicted anxiety with  $\beta = -.10$ , and anxiety predicted self-esteem with  $\beta = -.08$  (Friederike-Sowislo & Orth, 2013). Furthermore, the vulnerability and scar models are not mutually exclusive and may occur simultaneously, in that, low self-esteem contributes to psychopathology and psychopathology contributes to low self-esteem (Harter, 1999).

### **2.2.2. Wellbeing**

In contrast, high self-esteem has been associated with various positive outcomes, including improvements in happiness (Baumeister, Campbell, Krueger, & Vohs, 2003) and psychological wellbeing (DeNeve & Cooper, 1998). Wellbeing has been described as a combination of affect (e.g., calm and satisfaction) and psychological functioning (e.g., confidence and optimism) (Taggart & Brown, 2015). A cross-cultural survey concluded that self-esteem was the strongest predictor of life satisfaction, above age, income and psychological and physical health (Diener & Diener, 1995). Furthermore, Brown (2010) found that individuals with high self-esteem were better able to handle negative events and felt less bad about themselves following a failure. Self-affirmation theory suggests this may be because people with high self-esteem are more able to maintain their positive qualities in the face of negative outcomes, because they have more psychological resources to draw on. For example, if a person with high self-esteem is rejected romantically they may console themselves with their occupational success (Jordan et al, 2015).

### **2.2.3. Self-esteem and psychological outcomes; a critical perspective**

Critics however have questioned the utility of self-esteem. A large review of studies found that effect sizes linking self-esteem and psychological outcomes were negligible (Baumeister et al, 2003). They concluded that their findings “did not support continued widespread efforts to boost self-esteem in the hope that it will by itself foster improved outcomes” (Baumeister et al, 2003, p1).

However, the review failed to acknowledge the difference between global and domain-specific self-esteem, despite studies indicating that they may predict different things. Swann and colleagues (2007) argued that attitudes are more predictive of behaviours when they are relevant to the outcome variable. For example, academic self-esteem is more likely to be predictive of school performance than global self-esteem, whilst global self-esteem is likely to be more predictive of

non-specific concepts, such as psychological wellbeing and depression (Swann, Chang-Schneider & McClarty, 2007). Indeed, Rosenberg and colleagues (1995) found global self-esteem was a better predictor of psychological wellbeing and domain-specific self-esteem (academic self-esteem) was a better predictor of specific behaviour (academic performance).

Contrastingly, others have documented that a multidimensional perspective explained 97% of the covariance between seven mental health problems and self-esteem, rather than a unidimensional perspective which explained only 3% (Marsh, Parada & Ayotte, 2004), suggesting that a multidimensional perspective may also be predictive of non-specific outcomes.

### **2.3. Interventions for Self-Esteem**

If high self-esteem is protective against negative outcomes, interventions aimed at improving self-esteem may be useful. The majority of interventions are based on cognitive-behavioural therapy (CBT).

A recent systematic review of randomised controlled trials (RCTs) investigated the efficacy of CBT for self-esteem (Dixon, 2018). The review provided support for the efficacy of CBT delivered both individually and through a specific group programme; Competitive Memory Training (COMET) (Dixon, 2018). The efficacy of CBT delivered as a psychoeducation workshop also appeared promising but required further evaluation. There was less support for CBT delivered as a group intervention, which may suggest that a group context is not helpful. However, the author argued that this seemed unlikely as both COMET and the psychoeducation workshops were effective when delivered as group interventions. Thus, further research on group CBT for self-esteem is required.

The systematic review also concluded that CBT for self-esteem can have a beneficial impact on a variety of other psychological outcomes including depression

and general psychopathology (Dixon, 2018). However, the impact on anxiety was mixed with some studies reporting improvements in anxiety (for example, Horrell et al 2014) whilst others reporting there was no change (for example, Waite et al 2012).

Cognitive-behavioural interventions for self-esteem are predominately based on Fennell's (1997) cognitive model, which states that people develop global negative beliefs about themselves as a result of early experiences. In appropriate circumstances these beliefs are activated, triggering negative thoughts, affect, physiological symptoms and behaviour, creating a negative cycle. A pretest-posttest study found significant improvements in self-esteem, anxiety and depression following a group intervention based on this model (Morton, Roach, Reid & Stewart, 2012). With the exception of anxiety, where no change was observed, these results were replicated in a randomised controlled trial (RCT), comparing CBT with waitlist controls. Waite, McManus and Shafran (2012) found significant improvements in self-esteem, depression and psychological wellbeing at post-treatment following CBT and these results were maintained at 11-week follow up.

The majority of CBT interventions focus exclusively on global self-esteem, which Fennell described as "enduring over time and across situations" (Fennell, 1997, p2). Thus, it seems likely that domain-specific self-esteem, which is more fluid and situation specific, would be more easily modifiable through psychological intervention than global self-esteem. Yet, despite the view that changes in domain-specific self-esteem are likely to have a causal effect on global self-esteem (Brown & Marshall, 2006), we are not aware of any prior research that has investigated whether domain-specific interventions would impact on global self-esteem.

## **2.4. Domain-Specific Model of Self-Esteem**

Taking into account the limitations of Fennell's model and the view that self-esteem cannot be adequately understood if its multidimensionality is ignored, a new cognitive-behavioural model of domain-specific self-esteem is proposed (Hollingdale, 2015).

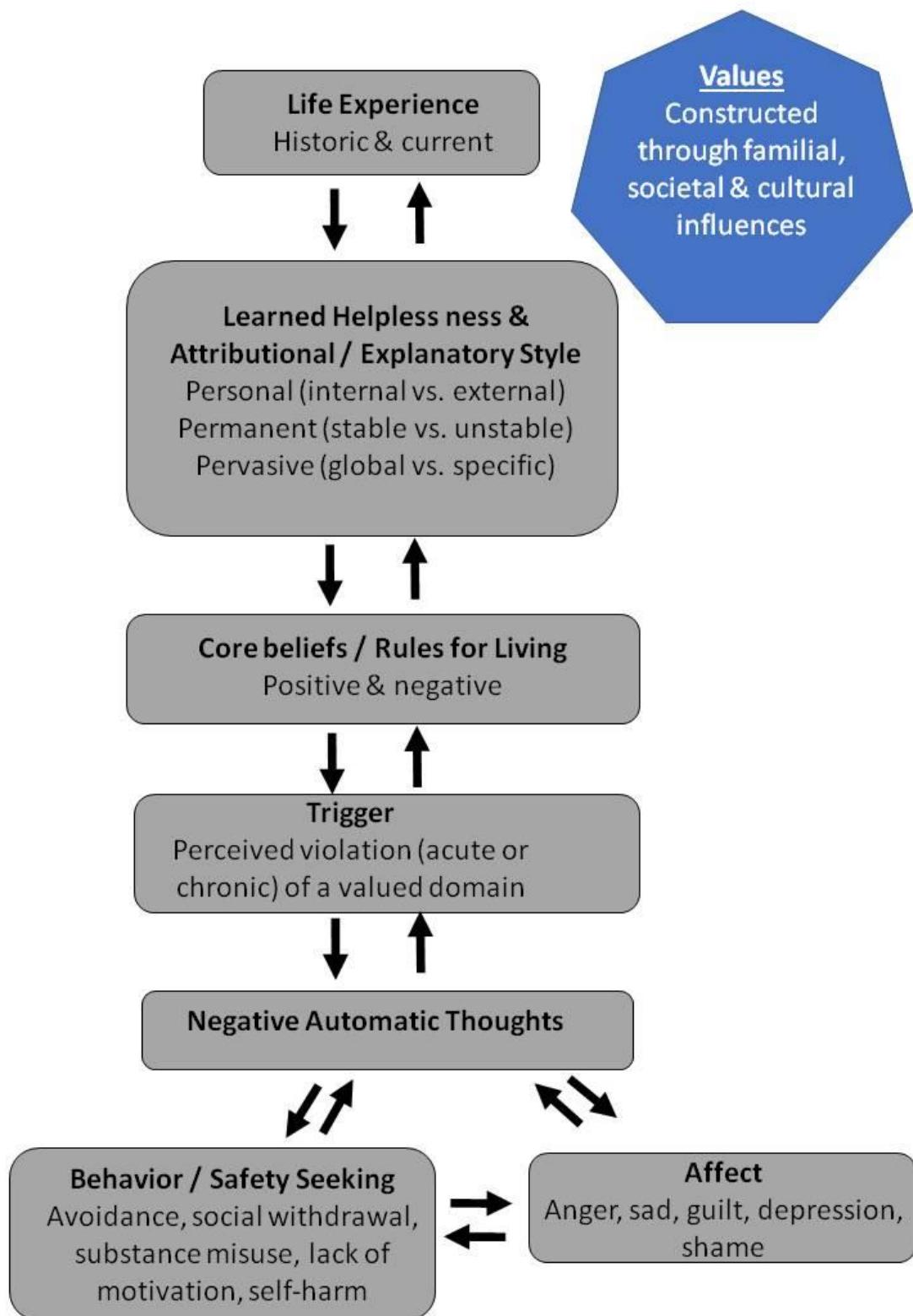
The model (Figure 1) assumes that our life experience constructs our valued-domains and the importance we place on them. An individual's attributional style explains how they will perceive and interpret events and influences the development of their core beliefs. Indeed, research shows that individuals with high self-esteem make more global and stable internal attributions for positive events, whereas individuals low in self-esteem make more global and stable internal attributions to negative events (Campbell, Chew & Scrathley, 1991). In turn, negative core beliefs about the self, within and across domains, can lead to increased vulnerability to triggers. A trigger is any incident or prolonged stressor that is perceived to violate a valued domain. This in turn generates negative automatic thoughts, affect and physiological symptoms and creates a vicious maintaining cycle.

Furthermore, the model suggests that rather than viewing self-esteem with levels (e.g., low and high) it is more helpful to consider self-esteem as a continuum from 'satisfactory' to 'unsatisfactory'. Thus, it assumes that at times our self-esteem can become unsatisfactory for our needs, within a specific domain, situation or period of life. Thus, self-esteem is seen as dynamic across domains and lifespan, rather than global and fixed. Based on this model we propose a four session group intervention. The intervention is thus far untested.

## **2.5. Summary**

High self-esteem has been associated with various positive outcomes, whilst low self-esteem has been associated with a number of negative outcomes, including

mental health problems (Schreindorfer & Haupt, 1995b). The majority of literature on self-esteem views it as a global concept that is “enduring over time and across situations” (Fennell, 1997, p2). However, this does not accommodate the fluidity of self-esteem across specific-domains (Harter & Whitesell, 2003). Despite assumptions that domain-specific evaluations influence global self-esteem (Brown & Marshall, 2006) there has been limited research to investigate whether interventions aimed at improving domain-specific self-esteem would impact on global self-esteem. Thus, a four session CBT group for domain-specific self-esteem is proposed, based on a model of domain-specific self-esteem (Hollingdale, 2015).



**Figure 1:** Model of Domain-Specific Self-Esteem (Hollingdale, 2015)

## **2.6. Study Aims and Hypotheses**

According to the Medical Research Council (2008) when developing a complex intervention the first step is to conduct a feasibility study. Thus, this study will investigate the feasibility and acceptability of the group through:

- A. Recruitment and retention rates.

The study will be deemed feasible and acceptable if it is possible to recruit 34 participants in the dedicated timeframe (January 2017-January 2018) and retain 50% of participants at post-treatment and follow-up.

- B. Perceived acceptability of the intervention

Acceptability of the intervention will be assessed through participant retention rates and participant feedback.

Next, the study will explore the relationship between domain-specific and global self-esteem, specifically it is hypothesised that:

- C. Domain-specific discrepancy scores will be more highly predictive of global self-esteem than competency scores alone.

Finally, it is hypothesised that the domain-specific group intervention will lead to:

- D. Improvements in global self-esteem
- E. Decreased levels of anxiety and depression
- F. Increased psychological wellbeing

### **3. METHOD**

#### **3.1. Design**

A pretest-posttest single group design, with a one-month follow-up, was used.

#### **3.2. Participants**

Participants were students from University College London (UCL) who wanted to improve their self-esteem, and who self-referred to the study between January 2017 and January 2018. Participants were eligible if they had a proficient level of English and scored <3 on question 9 of the PHQ-9, which identifies suicidal ideation.

There were no inclusion criteria based on self-esteem scores, as this may have eliminated participants who scored above cut-off on a global self-esteem measure but who had unsatisfactory self-esteem within a particular domain(s).

##### **3.2.1. Power Analysis**

A power analysis was informed by Rigby and Waite (2006) who found an effect size of  $d= 0.98$  when running a CBT group for low self-esteem using Fennell's (1997) model. As this was a very large effect size we remained conservative, with a medium effect size of 0.5. A power calculation was carried out using the "G\*Power 3" computer program (Faul, Erdfelder, Lang and Buchner, 2007), specifying alpha = 5% and desired power = 80%. The required sample size was estimated to be 34.

#### **3.3. Procedure**

The study was advertised in UCL communication emails and posters in university toilets, common rooms and student accommodation. Advertisements for the study directed people to an online platform (Qualtrics). Once online, individuals were presented with a Participant Information Sheet (PIS) (Appendix A) and asked to consent to participation. If individuals consented they completed a screening procedure which included the Patient Health Questionnaire (PHQ-9) (Kroenke, Spitzer & Williams, 2001), Generalised Anxiety Disorder Assessment (GAD-7)

(Spitzer, Kroenke, Williams & Lowe, 2006) and Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965). If individuals did not meet the inclusion criteria (score of 3 on question 9 of PHQ-9) they were informed that they were not suitable for the study and signposted to alternative psychological support services. If participants did meet the inclusion criteria they were asked to complete a demographic questionnaire, presented with the dates of the upcoming groups and asked to confirm their attendance.

### **3.4. Domain-Specific Group Intervention**

Groups consisted of four two-hour weekly sessions, with a follow-up session one month later. They were delivered by two trainee clinical psychologists. There were five groups in total with approximately eight participants in each group. The group combined didactic psychoeducation, small group discussions and a weekly homework task. Participants were provided with a group handbook to supplement the content of the sessions.

The group structure and content was designed from an informal review of the self-esteem literature. The review highlighted beneficial strategies for improving self-esteem which were incorporated into the intervention, for example, encouraging attributional feedback, replacing critical thoughts with beneficial alternatives and using praise (O'Mara, Marsh, Craven & Debus, 2006; Wood, Anthony & Foddis, 2006). Strategies that were shown to be less effective, such as, repeating positive self-statements (Wood, Anthony & Foddis, 2006) were excluded, and the recommended adaptations to these strategies were employed, for example, encouraging a person to self-focus on their positive attributes. The strategies were adapted into domain-specific interventions by asking participants to focus specifically on one (or several) valued domains. The content of the group sessions and homework tasks are summarised in Table 1.

The current study was a pilot and adaptations to the group will be made based on feedback from participants. However, prior to implementation the content was discussed with two clinical psychologists with extensive experience of CBT and group interventions and adaptations were made accordingly. For example, several tasks were removed due to time restraints.

**Table 1: Summary of Group Content**

Session	Session Content	Homework Task
<b>One</b>	Intro to SE & CBT	Notice positive qualities
<b>Two</b>	Personalised SE domain profile; Intro to domain-specific SE model; Identify NATS	Record NATS
<b>Three</b>	Create personalised model; design BE for valued domain	Complete BE
<b>Four</b>	Design BE for valued domain; therapy blueprint	Complete BE
<b>Follow-up</b>	Review & problem-solve	Continue above strategies

*Note:* CBT= cognitive behavioural therapy; BE = behavioural experiment; Intro = Introduction; NATS = negative automatic thoughts; SE = self-esteem

### 3.5. Outcomes

#### 3.5.1. Acceptability & Feasibility

The following outcomes were used to assess feasibility and acceptability;

##### (a) *Recruitment rate*

Recruitment was deemed feasible if it was possible to recruit 34 participants within the dedicated time frame (January 2017 – January 2018).

##### (b) *Retention rate*

Retention rates were defined as the number of sessions completed and number of participants assessed at post-treatment and follow-up. It has been proposed within cohort research that follow up rates of 50% are adequate, 60% are good and 70% are very good (Babbie, 1973). Additionally, research suggests that the average

dropout rate from CBT is approximately 26% (Fernandez, Salem, Swift & Ramtahal, 2015), but that this is likely to be higher in a university sample, as they have one of the highest dropout rates from psychological interventions (Swift & Greenberg, 2012).

Considering these findings it was deemed an acceptable completion rate if 50% of participants attended three of the five sessions and completed post and follow-up data.

(c) *Participant Feedback*

Alongside retention rates, the acceptability of the intervention was assessed through a Group Experience Questionnaire (GEQ) (See Appendix B), which asks participants for feedback on their experience of the group. It consisted of ten questions, for example, “*What were the most helpful aspects of the group?*” and included quantitative and qualitative items. Quantitative items were on a five point Likert scale.

### 3.5.2. Effectiveness of the intervention

The effectiveness of the group was assessed using the following outcome measures:

(d) *Self-Perception Profile for College Students (SPP)* (Neeman & Harter, 2012)

The SPP identifies 12 domains of self-esteem and consists of 54 items. For each item individuals are asked to identify which of two statements they most identify with. For example, “*Some students feel they are as smart as others*” vs. “*other students wonder if they are as smart*”. They are then asked to choose whether the statement they have chosen is “*sort of true*” or “*really true*”. Each item is scored from 1 to 4, with higher scores indicating higher competence.

A separate form entitled Importance Ratings determines how important the twelve domains are to people. Items are scored from 1 to 4, from the lowest to the

highest importance. The competency and importance scores are then used to calculate an individual's discrepancy score.

(e) *Rosenberg Self-Esteem Scale (RSES)* (Rosenberg, 1965)

The RSES is a measure of global self-esteem. It consists of ten items, for example, "*I take a positive attitude toward myself*", which are measured on a four point Likert scale ranging from strongly disagree (0) to strongly agree (3). Total scores range from 0-30, with scores below 15 suggestive of low self-esteem.

The measure has sufficient validity and reliability, with a Cronbach alpha of 0.88.

(f) *Generalised Anxiety Disorder Assessment (GAD-7)* (Spitzer, Kroenke, Williams & Lowe, 2006)

The GAD-7 is a measure of generalised anxiety disorder. Participants are asked to respond to seven statements, using a four point Likert scale. Scores range from 0 to 21. The questionnaire has high reliability and validity, with Cronbach's alpha of 0.92.

(g) *Patient Health Questionnaire (PHQ-9)* (Kroenke, Spitzer & Williams, 2001)

The PHQ-9 is a measure of depression. Participants are asked to respond to nine statements, using a four point Likert scale. Scores range from 0 to 27 with higher scores representing an increase in depression. The questionnaire is reliable and well validated with Cronbach's alpha of 0.86.

(h) *Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS)* (Tennant et al, 2007)

The WEMWBS is a measure of mental wellbeing that consists of 14 items rated on a five point scale. Scores range from 14 to 70, with higher scores indicating higher positive wellbeing. The measure has high validity and reliability, with a Cronbach alpha of 0.89.

### **3.6. Data Analysis**

#### **3.6.1. Qualitative Analysis**

Qualitative participant feedback was analysed using content analysis, which enables large amounts of information to be summarised into categories and tallied (Weber, 1990). Categories were generated inductively through four phases which included familiarising self with the data, identifying meaning units, condensing meaning units into categories and quantifying categories (Bengtsson, 2016). Categories were formed based on latent content, which implies meaning from the text rather than using the informant's exact words (Weber, 1990).

#### **3.6.2. Quantitative Analysis**

Quantitative data were analysed using The Statistical Package for the Social Sciences (SPSS) version 22.0.

##### **3.6.2.1. *Data Preparation***

Normality of distribution was conducted for each dependent variable using skewness and kurtosis scores (**Error! Reference source not found.**), a Shapiro-Wilk's test and a visual inspection of their histogram. All dependent variables were approximately normally distributed, across all time points.

##### **3.6.2.2. *Statistical Analyses***

To address the studies' hypotheses regarding the effectiveness of the intervention the following procedures were followed:

- (1) To test the assumption that domain-specific discrepancy scores were more highly predictive of global self-esteem than competency scores alone (Hypothesis C), two simple linear regressions were conducted.
- (2) To test hypotheses D to F that the intervention would lead to improvements in global self-esteem, depression, anxiety and wellbeing, four mixed-model analyses were computed.

(3) For each mixed-model two covariance structures (compound symmetry and first-order autoregressive) were compared to determine the model of best fit, using the Akaike's Information Criterion (AIC) (Howell, 2008). (See Appendix D). Based on the AIC score, compound symmetry was deemed to be the most accurate model and was used in each mixed-model analysis.

(4) Bonferroni corrections were used to account for multiple testing and to reduce the risk of a Type 1 error. The results section reports the corrected results.

(5) Where the mixed-model analyses reached statistical significance further post-hoc analyses were sought to determine the pattern of the mean difference.

(6) Effect sizes were calculated, using Cohen's (1992)  $d_z$  for correlated measurements, to determine the magnitude of the change based on the difference scores. According to Cohen (1992) .2 is a small effect, .5 a medium effect and .8 a large effect.

### ***3.6.2.3. Missing Data***

Mixed-model analysis was chosen for this study as it is an approach to repeated measures data that can be used when there are incomplete data sets, as it includes all available data and does not exclude cases where data are missing. Additionally, it requires only that data are missing at random (MAR) and does not require data to be missing completely at random (MCAR) (Howell, 2008). A Little's (1988) MCAR test was conducted which showed data were missing completely at random  $\chi^2 (51, N = 51) = 34.95, p=.958$ .

### ***3.6.2.4. Reliable Change and Clinical Significant Change***

For participants that completed pre and post outcome measures their reliable Change Indices (RCI) were calculated. Change is considered reliable when it is greater than one would expect by chance, taking into account the reliability of the measure used (Cronbach's alpha). An RCI greater than  $\pm 1.96$  is considered larger

than would be expected from measurement error alone and therefore deemed to be a reliable difference (Jacobson & Truax, 1991).<sup>1</sup>

Clinically significant change (CSC) was also calculated on the RSES, PHQ-9 and GAD-7 for participants who had scored above clinical cut-off prior to the intervention. CSC is represented as a participant moving from the ‘dysfunctional’ population into the ‘functional’ population range, alongside a statistically reliable change (Jacobson & Truax, 1991). CSC was not calculated for the WEMWBS as this is a measure of psychological wellbeing; hence there is no predetermined cut-off for ‘caseness’.

### **3.7. Joint Project**

The study was a joint project, conducted alongside Ciping Goh. Goh (2018) investigated whether the intervention was effective at improving domain-specific self-esteem and its impact on attributional style. See Appendix E for joint thesis statement.

### **3.8. Ethical Considerations**

Ethical approval for the study was granted from University College London (UCL) Research Ethics Committee (9659/001) (Appendix F). Although we hoped the group would be beneficial for participants there was a possibility that individuals would not benefit from the group or experience detrimental consequences. Thus, participants were asked for informed consent and reminded that they had the right to withdraw at any time. They were also signposted to further psychological support, if necessary.

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<sup>1</sup> RCI was calculated as the difference between pre and post test means ( $X_2 - X_1$ ) divided by standard error of difference (SEDiff).

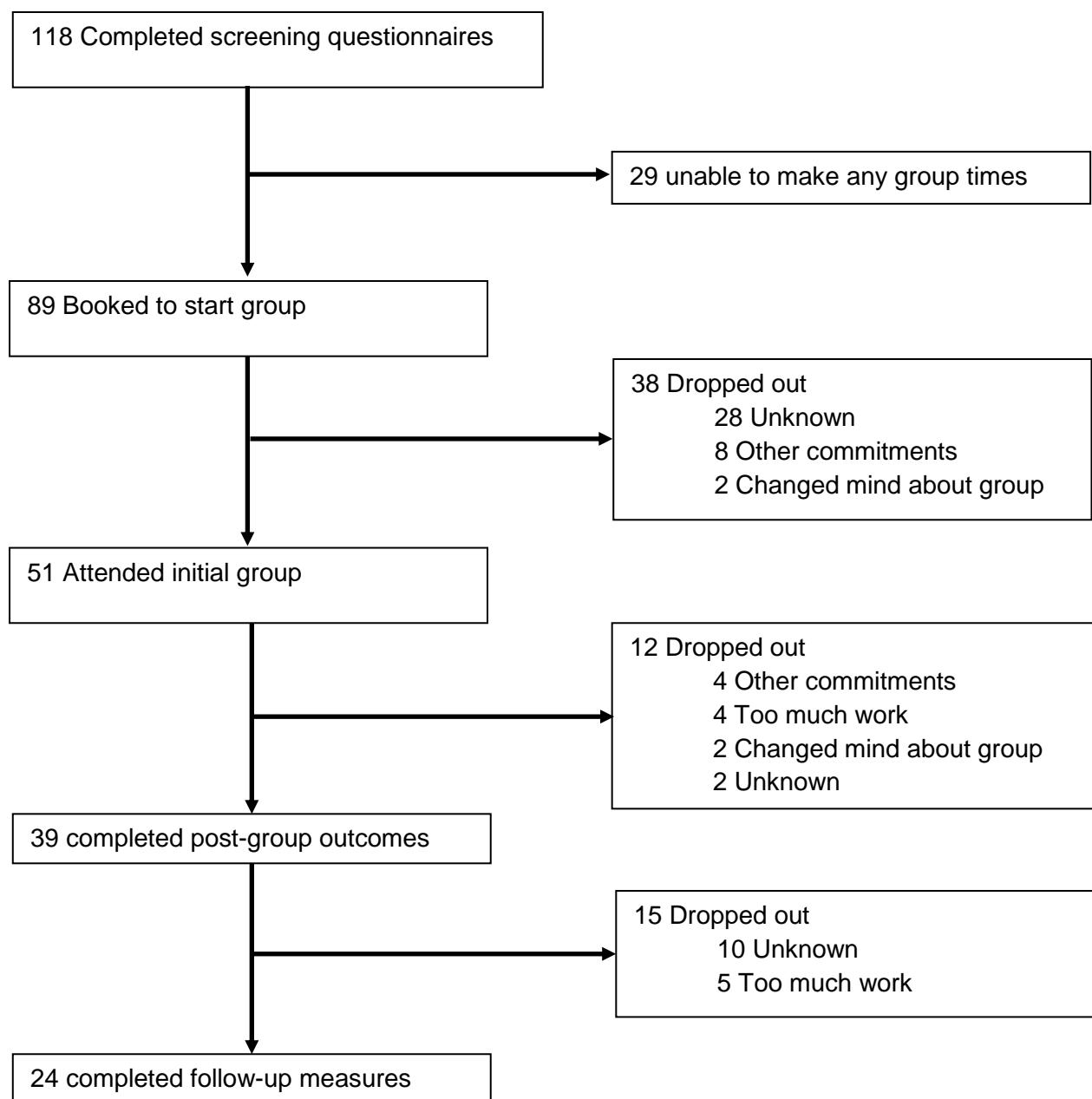
## **4. RESULTS**

### **4.1. Recruitment and Retention Rates**

To investigate aims A and B, recruitment and retention rates were evaluated using a CONSORT diagram (Schulz et al, 2010), to record patient flow from initial screening to the end of participant involvement (Figure 2). The screening questionnaire was completed by 118 individuals, who consented to take part in the group. However 29 were unable to make any of the group dates. For first sessions, 89 individuals booked to attend but 51 actually attended. Of those 51 participants, 39 were retained to post-test (76%) and 24 to follow-up (47%). Dropout reasons are recorded in Figure 2. On average participants attended 3 sessions; 67% attended three or more sessions and 24% attended all five sessions. Thus, recruitment rates were deemed acceptable and above the preliminary target of 34 participants. Retention rate at post-treatment and numbers of participants that attended three or more sessions also met study targets and were deemed ‘good’ according to Babbie’s (1973) criteria. However, the 47% retention rate at follow-up was slightly below the 50% target.

### **4.2. Demographics**

Demographic information for the participants is presented in Table 2. The average age of participants was 24 and the majority were female. Slightly more were undergraduate, than postgraduate. Participants from Asian or British backgrounds comprised 75% of the total (see Table 2).



**Figure 2:** CONSORT Diagram of Participant Flow

**Table 2: Participant Demographics**

<b>Demographic</b>	<b>n (N=51)</b>	<b>%</b>	<b>Mean (SD)</b>	<b>Range</b>
<b>Gender</b>	F 43	84		
	M 8	16		
<b>Age</b>			24 (7.3)	17-52
<b>Ethnicity</b>				
Asian	20	39		
British	18	35		
European	8	16		
Arab	3	6		
American	1	2		
African	1	2		
<b>Study Level</b>				
Undergraduate	32	63		
Postgraduate	19	37		
<b>Total number of sessions</b>			3 (1.4)	1-5

Note: F=female

#### **4.3. Comparisons of Completers and Dropouts**

Completers and dropouts were compared on demographics and symptom measures to determine if there were any significant differences between them (see Table 3).

No differences were found in terms of gender, ethnicity or study level. No differences were found on pre-treatments scores on the PHQ-9, GAD-7, WEMWBS, RSES or SPP.

**Table 3: Comparisons of Completers (n=24) and Dropouts (n=27)**

Variable	Completers	Drop-Outs	df	t	p
	M (SD)	M (SD)			
Age	23.63 (5.98)	24.26 (8.44)	49	.306	.761
PHQ-9	10.67 (4.88)	12.26 (3.97)	49	1.28	.205
GAD-7	8.63 (4.84)	9.89 (4.50)	49	.965	.339
WEMWBS	39.21 (7.72)	39.69 (8.10)	49	.216	.830
RSES	14.00 (4.35)	13.26 (5.13)	49	-.522	.583
SPP Competency	2.34 (.28)	2.34 (.43)	49	.005	.996
SPP Discrepancy	1.54 (.477)	1.65 (.54)	49	.783	.438
		df	X <sup>2</sup>	p	
Gender		1		.33	.856
Ethnicity		7		6.81	.449
Study Level		1		.001	.973

\*df = degrees of freedom

#### 4.4. Descriptive Statistics

Descriptive statistics were calculated for each of the dependent variables at pre-treatment (

Table 4). The scores on the PHQ-9, GAD-7 and WEMWBS ranged widely, suggesting the sample was heterogeneous in terms of depression, anxiety and wellbeing. The range of scores on the RSES and SPP was less variable.

##### 4.4.1. Clinical Caseness

The mean score on the PHQ-9 was 11.51 and 32 participants (63%) scored above the clinical cut-off ( $\geq 10$ ) (Manea, Gilbody & McMillan, 2012). The mean score on the GAD-7 was 9.29 and 30 participants (59%) scored above the clinical cut-off ( $\geq 8$ ) (Kroenke et al, 2007). The mean score on the RSES was 13.61 and 29 participants (57%) scored within the range for low self-esteem ( $\leq 15$ ) (Rosenberg, 1965).

**Table 4: Descriptive Statistics of Dependent Variables at Pre-treatment**

Variable	Mean (SD)	Range	Possible Range
PHQ-9	11.51 (4.45)	0-21	0-27
GAD-7	9.29 (4.67)	0-19	0-21
RSES	13.61 (4.74)	3-25	10-40
WEMWBS	39.36 (7.85)	25-61	14 -70
SPP (Competency)	2.34 (.36)	1.56-3.00	1-4
SPP (Discrepancy)	1.60 (.51)	.56-2.56	0-4

#### 4.5. Simple Linear Regressions

To test hypothesis C, that domain-specific discrepancy scores are more predictive of global self-esteem than competency scores alone, two simple linear regression analyses were performed. In the first regression model, competency scores (SPP) were found to significantly predict global self-esteem ( $b=.71$ ,  $t(49)=-2.55$ ,  $p=.014$ ), explaining a significant proportion of the variance in global self-esteem scores ( $R^2=0.499$ ,  $F(1, 49)=48.75$ ,  $p<.000$ ). A second regression model including discrepancy scores (SPP) found this variable to be a significant predictor of global self-esteem ( $b=-.59$ ,  $t(46)=11.86$ ,  $p<.000$ ), with this predictor also explaining a significant proportion of the variation in global self-esteem scores ( $R^2 =0.345$ ,  $F(1, 46)=24.21$ ,  $p<.000$ ). These results indicate that competency scores explain more of the variance in global self-esteem than discrepancy scores, contrary to the initial hypothesis

#### 4.6. Pre-Post Comparisons

To investigate hypotheses D to F four mixed-model analyses were conducted. Descriptive statistics and mean changes for each dependent variable at pre-intervention, post-intervention and follow up are displayed in **Error! Reference**

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**Table 5:** Descriptive Statistics and Mean Change for Dependent Variables at Pre-Intervention, Post-Intervention and Follow Up

Measure	Pre M	Post M	FU M	Pre-post Mean	Pre-FU	Post-FU Mean
	(SD)	(SD)	(SD)	Change	Mean Change	Change (95%
				(95% CI)	(95% CI)	CI)
RSES	13.60 (5.15)	15.50 (5.48)	16.62 (6.05)	-1.90 (-3.34 to -.559)	-3.01 (-4.61 to -1.40)	-1.11 (-2.73 to .51)
PHQ-9	11.51 (4.83)	10.12 (5.28)	9.33 (6.16)	1.39 (-.23 to 3.02)	2.18 (.23 to 4.14)	.790 (-1.20 to 2.78)
GAD-7	9.29 (4.88)	8.57 (5.88)	7.82 (6.24)	.725 (-.93 to 2.38)	1.47 (-.52 to 3.45)	.749 (-1.28 to 2.78)
WEMWBS	39.46 (8.77)	42.88 (9.64)	40.91 (11.43)	-3.42 (-6.61 to -.23)	-1.46 (-5.29 to 2.37)	1.96 (-1.94 to 5.87)

Note: CI = Confidence Interval; SD = standard deviation

**Table 6:** Reliable Change (N=39) and Clinically Significant Change (CSC)<sup>2</sup>

Measure	Reliable Improvement	No Change	Reliable Deterioration	CSC	
				N	n (%)
RSES	13 (33.3)	22 (56.4)	4 (10.3)	23	8 (35)
PHQ-9	13 (33.3)	21 (53.9)	5 (12.8)	23	7 (30)
GAD-7	9 (23.0)	23 (59.0)	7 (17.9)	22	7 (32)
WEMWBS	14 (35.9)	22 (56.4)	3 (7.7)		

Note: CSC based on participants scoring above clinical cut-off at pre-treatment

#### 4.6.1. Rosenberg Self-Esteem Scale (RSES)

A mixed-model analysis revealed that there was a significant difference between time periods on the RSES suggesting the intervention had an effect on global self-

<sup>2</sup> Clinical cut-off was based on ≥10 on PHQ-9; ≥8 on GAD-7 and ≤15 on RSES

esteem  $F(2, 64.9)=12.19$ ,  $p<.000$ . Bonferroni corrected post-hoc comparisons indicated that the mean RSES score at pre-intervention was significantly lower than post-intervention  $p=.003$ , 95% CI (-3.24, -.529), Cohen's  $d_z=0.60$  and follow up ( $p<.000$ ) 95% CI (-4.61, -1.41), Cohen's  $d_z=0.95$ . There were no differences observed between post-intervention and follow-up  $p=.291$ ; 95% CI (-2.73, .51), indicating that initial improvements in self-esteem post-intervention were maintained at follow-up.

At post-treatment 33% of the sample showed a reliable improvement on the RSES. Twenty three participants scored below clinical cut-off on the RSES at pre-treatment, of which, 35% met criteria for clinically significant change at post-treatment.

#### **4.6.2. Patient Health Questionnaire (PHQ-9)**

A mixed-model analysis revealed that there was a significant difference between time periods on the PHQ-9 suggesting the intervention had an effect on depression  $F(2, 69.9)=4.36$ ,  $p=.016$ . Bonferroni corrected post-hoc comparisons indicated that the mean PHQ-9 score at pre-intervention was significantly higher than follow up  $p=.024$ , 95% CI (.227 to 4.14), Cohen's  $d_z=0.57$ . However, there were no significant differences between pre and post-intervention indicating that improvements were not observed until follow-up. Furthermore, there were no significant differences between post-treatment and follow-up.

At post-treatment 33% of the sample showed a reliable improvement on the PHQ-9. Twenty three participants scored above clinical cut-off on the PHQ-9 at pre-treatment, of which, 30% met criteria for clinically significant change at post-treatment.

#### **4.6.3. Generalised Anxiety Disorder Assessment (GAD-7)**

A mixed-model analysis revealed that there was no significant differences between time periods on the GAD-7;  $F(2, 69.7)=1.72, p=.187$ , suggesting the intervention had no effect on anxiety.

At post-treatment 23% of the sample showed a reliable improvement on the GAD-7. Twenty-two participants scored above clinical cut-off on the GAD-7 at pre-treatment, of which, 32% met criteria for clinically significant change at post-treatment.

#### **4.6.4. Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS)**

A mixed-model analysis revealed that there was a significant difference between time periods on the WEMWBS suggesting the intervention had an effect on wellbeing  $F(2, 69.5)=3.46, p=.037$ . Bonferroni corrected post-hoc comparisons indicated that the mean WEMWBS score at pre-intervention was significantly lower than post-treatment,  $p=.031$ , 95% CI (-6.61 to -.231), Cohen's  $d_z=0.50$ . There were no significant differences between post-treatment and follow-up suggesting that the improvements were maintained. However, there was also no significant difference between pre-treatment and follow-up.

At post-treatment 36% of participants showed a reliable improvement on the WEMWBS.

### **4.7. Acceptability**

The acceptability of the group was partly assessed using the feedback questionnaire, completed in the final session. Of the 39 participants that attended, 92% ( $n=36$ ) completed the questionnaire. Table 7 reports the percentage of participants that gave each answer to the Likert scale questions, whilst Table 8 and Table 9 document the categories identified through the qualitative questions.

Overall, the majority of participants found the group helpful (86%) and believed it had helped them to address their difficulties 'at all times' or 'most of the time' (83%). Over half of participants (63%) reported that their self-esteem had improved, whilst

approximately one third (29%) were undecided. The majority of participants had confidence in the facilitators' skills (91%), felt listened to (91%) and would be 'very likely' (49%) or 'likely' (43%) to recommend the group to others.

Qualitatively, seven categories were identified to summarise what participants found the most helpful aspects of the group (Table 8). Participants particularly valued the introduction of theoretical concepts around CBT and self-esteem, as well as learning practical strategies to manage their difficulties, specifically noticing and challenging their negative thoughts. Participants described how the group had been helpful for altering their self-esteem and they had noticed improvements at domain-specific and global levels, as well as changes in the importance they assigned to domains. Participants also found the group beneficial for improving self-compassion, illustrated through reductions in self-blame and increased kindness. Finally, participants reported that the group setting (which offered peer support and normalisation), receiving handouts and supportive facilitators were all helpful aspects of the intervention.

Six categories were identified to summarise what participants found unhelpful about the group or how it could be improved (Table 9). The largest proportion of participants reported that there was nothing unhelpful about the group. Others suggested that they found the questionnaires hard to complete and some did not find the recaps at the beginning of the sessions beneficial. There were also suggestions about additional things people would like, such as, more sessions and strategies. Finally, some participants reported that they had difficulties implementing the strategies.

**Table 7:** Participants' Quantitative Feedback

Question No.	Percentage of participants (n= 36)				
	At all times	Most of the time	Sometimes	Rarely	Never
Attending the group was helpful	34%	52%	11%	3%	0%
The group helped me understand and address my difficulties	31%	51%	14%	3%	0%
I have noticed changes in my self-esteem	Strongly Agree 9%	Moderately Agree 54%	Undecided 28%	Moderately Disagree 0%	Strongly Disagree 9%
I had confidence in the facilitators skills	At all times 51%	Most of time 40%	Sometimes 9%	Rarely 0%	Never 0%
The facilitators listened & treated contributions seriously	At all times 91%	Most of time 9%	Sometimes 0%	Rarely 0%	Never 0%
I would recommend the group	Very Likely 49%	Likely 43%	Undecided 5%	Unlikely 3%	Very Unlikely 0%

**Table 8: Participants' Qualitative Feedback (n=36): Helpful Aspects of the Group**

Category	N	Quotations (Participant number)
Practical strategies	15	<i>It was helpful to learn how to spot negative thoughts and change them</i> (27) <i>Learning how to design experiments to challenge our negative thoughts</i> (32)
Theoretical concepts	14	<i>I learned how my mind is working through an introduction to some psychological theories</i> (8) <i>It was helpful to learn about the models and think about how they apply to me personally</i> (19) <i>Really found thinking about self-esteem in terms of domains rather than global helpful</i> (35)
Changes in self-esteem	12	<i>I have noticed changes in my social self-esteem and I am more able to talk to others</i> (5) <i>I don't think I have changed on the domain level but I feel better about myself</i> (1) <i>There are domains where previously I would think "I suck" but now I think "who cares"</i> (20)
Self-awareness & compassion	10	<i>I now know more about myself; how I feel and handle my emotions. I can give forgive myself</i> (2) <i>I have learnt to be kinder to myself and stop being so hard</i> (34)
Group support	8	<i>It was helpful to be part of a small group and to discuss personal things</i> (20) <i>The support and hearing experiences from other members of the group was helpful</i> (30)
Handouts & resources	5	<i>Receiving power points and.....worksheets is good so we can look over the material again</i> (19) <i>Having a copy of the results in the forms of graphs.....was useful to put things into context</i> (26)
Supportive facilitators	5	<i>The facilitators were really supportive and lovely</i> (10) <i>The facilitators were really nice so it was easier for me to feel relaxed from the beginning</i> (15)

Note: An ellipsis indicates text has been omitted

**Table 9:** Participants' Qualitative Feedback ( $n=36$ ): Unhelpful Aspects of the Group

Category	N	Quotations (Feedback form number)
Nothing was unhelpful	10	<i>I didn't find anything unhelpful. I just enjoyed my time here (15)</i>
Number of sessions	9	<i>Could be divided into more but shorter sessions. (23)</i> <i>An extended version of the group would be even better...four weeks is a little too short (8)</i>
Questionnaires	8	<i>....questionnaires were quite hard ..... (13)</i> <i>We could do the questionnaires for homework (4)</i>
Not enough strategies	7	<i>Theories are good but you could throw in more day-to-day coping techniques or practices" (21)</i> <i>I would have liked to learn a new task in the last week (19)</i>
Eliminate recaps	3	<i>The recaps at the beginning of the session were not necessary (1)</i>
Difficulties implementing strategies	3	<i>I know how to address my scholastic self-esteem issues but I'll probably be too scared to do it (29)</i> <i>When I'm well the methods appear useful ....but when I'm down there's no way of getting to me (21)</i>

Note: An ellipsis indicates text has been omitted

## **5. DISCUSSION**

### **5.1. Summary of Findings**

#### **5.1.1. Acceptability and Feasibility**

The primary aims of the study were to assess the feasibility and acceptability of the intervention, through exploring recruitment and retention rates and participant feedback. In summary, the intervention was predominantly found to be feasible and acceptable.

Recruitment rates and post-treatment retention rates exceeded study targets and were similar to those recorded in a comparable study (Morton, Roach, Reid & Stewart, 2012). However, retention at follow-up was below the study target and below what is deemed 'acceptable' (Babbie, 1973). Research suggests that attrition rates above 20% can threaten validity and introduce bias (Schulz & Grimes, 2002). Although comparisons between completers and dropouts did not reveal any significant differences, there may be characteristics that increased the likelihood of dropout and thus biased the estimate of the overall effect. On the other hand, follow-up retention (47%) was only marginally below acceptable rates (50%) (Babbie, 1973) and the missing data was accounted for by the mixed-model analysis.

Additionally, the majority of feedback was positive, suggesting participants found the intervention acceptable. Of the sample, 85% found the group helpful and 91% said they would recommend the group to others. Qualitatively, seven categories were identified to summarise aspects of the group that participants found helpful, including, theoretical concepts, practical strategies, improvements in self-esteem, peer support, handouts and supportive facilitators. Interestingly, participants also reported improvements in self-compassion. Self-compassion is defined by Neff (2003) as having a healthy stance towards oneself, which unlike self-esteem, does not involve evaluations of self-worth. Although this makes logical

sense and studies have reported a high correlation between the self-esteem and self-compassion (e.g., Neff & Vonk, 2009), as self-compassion was not measured in this study it is not possible to determine the nature of this relationship. One may tentatively hypothesise that as participant's feelings of worthiness increased (global self-esteem) it became easier for participants to extend compassion towards the self. Indeed, a recent longitudinal study found that self-esteem consistently predicted changes in self-compassion but not vice versa (Donald et al, 2017). However, this would need to be investigated further in future research.

Contrastingly, six categories were identified which summarised what participants thought was unhelpful or could be improved. However the two most frequently reported categories included not finding anything unhelpful and wanting the group to be longer, suggesting that participants generally found the group helpful. Further unhelpful aspects of the group were reported to be the session recaps, questionnaires and difficulties implementing the strategies.

However, feedback was completed in the final session and people who attended the final session were more likely to have found the group helpful than participants who dropped out. Although the majority of participants that dropped out gave practical reasons, such as having too much work, it is possible that participants may not have felt able to say if it was due to the treatment. Thus, feedback is likely to be positively biased.

#### 5.1.2. Domain-Specific and Global Self-Esteem

Next, the study sought to determine if domain-specific discrepancy scores were more highly predictive of global self-esteem than competency scores alone, as theorised by James (1890). However, there was no support for this hypothesis. This replicates findings by Marsh (1986) who found discrepancy scores were no more predictive of global self-esteem than competency scores alone. Marsh (1986)

hypothesised that a potential explanation for his findings was due to using psychometrically weak importance ratings, with single-item responses. However, this study addressed this limitation, yet similar results remained.

An alternative explanation could be that discrepancy scores have less influence on global self-esteem than hypothesised because they do not account for social influences. Sociometer theory (Leary et al, 1995a) posits that humans strive to be accepted into a group and self-esteem acts as a gauge of social inclusion. Thus, in an attempt to remain accepted by others, our view of what others perceive as important may take precedence over our own. Thus, personal discrepancy scores explain less variance in global self-esteem than expected. Further research investigating the impact of social influences on discrepancy scores and importance ratings would be helpful.

#### 5.1.3. Effectiveness of the Intervention

Finally, the study sought to determine the effectiveness of the intervention on global self-esteem, depression, anxiety and psychological wellbeing.

As predicted, the intervention led to improvements in global self-esteem, which were maintained at follow up. At post-treatment effect sizes were moderate ( $d_z = .60$ ). Furthermore, 35% of the 23 participants that scored below clinical cut-off on the RSES at pre-treatment met criteria for clinically significant change (CSC) at post-treatment. Although the CSC scores are based on a small sample and should be interpreted with caution, the results suggest that the intervention appears effective at improving global self-esteem. These results replicate findings from studies that have investigated global self-esteem interventions (Waite et al, 2012).

The intervention also led to improvements in depression, with moderate effect sizes ( $d_z = .57$ ), although these effects were not observed until the one month follow-up. This resembles findings by Brown and colleagues (2004) who found that

depression improved at the three month follow-up. It is likely that the strategies required practice and individuals developed these skills over time, gradually leading to improvements in mood. At post-treatment 30% of eligible participants met criteria for CSC on the PHQ-9. This is less than the 45% in Brown et al (2004). However, it is possible that fewer participants met criteria for CSC in the current study as only 24% of participants attended all of the sessions. Thus, it is possible that the effectiveness of the intervention is underestimated, as participants did not gain the full benefit due to missed content.

In terms of anxiety no significant differences were observed. Although this was contrary to predictions it replicates previous findings that CBT interventions for self-esteem led to improvements in self-esteem and depression but not anxiety (Brown et al, 2004; Waite et al, 2012). One explanation for the non-significant findings is that self-esteem actually plays a peripheral role in anxiety and unlike depression they are not highly correlated (Joiner, 1995). Alternatively, it may be due to the outcome measure used. GAD-7 predominantly measures generalised anxiety disorder. It may be that the group is more effective for other types of anxiety. Indeed, Morton and colleagues (2012) found improvements in anxiety following group CBT for self-esteem when using the Beck Anxiety Inventory (BAI). The BAI has been shown to be more sensitive to change in panic disorder than other types of anxiety, due to its predominant focus on physical symptoms (Cox et al, 1996). However, further research would be needed.

Finally, as predicted, psychological wellbeing significantly improved at post-treatment, with medium effect sizes ( $d_z = 0.50$ ) and was maintained at follow-up. Although research suggests that self-esteem is the strongest predictor of wellbeing (Diener & Diener, 1995), few studies have included a measure of wellbeing when investigating interventions for self-esteem. Research tends to measure psychopathology: however, the addition of a wellbeing scale is important as the

absence of psychopathology does not necessarily imply positive wellbeing (Ryff, 1995). Waite et al (2012) was one of the few studies to measure wellbeing and showed similarly promising results to the current study. Although both of these studies included small samples, with predominantly women, they offer promising findings as psychological wellbeing has major beneficial impacts on health and social outcomes (Jordan et al, 2015). However, although the effects were maintained between post-treatment and follow-up in the current study, there were no significant differences between pre-treatment and follow-up which may suggest the effects were starting to reduce. It is possible that a longer intervention would be necessary to maintain effectiveness in wellbeing over a longer period of time.

## **5.2. Methodological Limitations**

It is important to interpret the findings of this study within the context of a number of methodological limitations. Firstly, as it was a feasibility study it did not include a control group or randomisation process, which makes it difficult to determine how much of the effect can be attributed to the intervention and how much was due to confounding variables. For example, we did not account for whether participants were receiving psychological therapy or medication, which is likely to have influenced outcomes. Furthermore, simply being part of a trial may have had a consequential impact on participants' behaviour, known as the Hawthorne effect (McCambridge, Witton & Elbourne, 2014).

Secondly, there are a variety of elements that make it difficult to generalise the results of the study to a wider population. Participants were self-selected and therefore likely to have been more highly motivated to seek help and ready to change. The sample were young ( $M = 24$ ) and predominately female (83%) and research shows that self-esteem varies depending on age (Robins et al, 2002) and gender (Gentile et al, 2009). The study was conducted on a student sample, who are likely to have above average intelligence. Thus, it is not possible to determine if

the benefits of the intervention would be observed in another population. However, a considerable strength of the study was the diverse range of ethnicities recruited. This is particularly pertinent as self-esteem appears to vary across culture (Heine et al, 1999). Interestingly, it has been documented that Asians report the lowest levels of self-esteem (Twenge & Crocker, 2002), which may offer an explanation for the large proportion of Asian students recruited in the current sample.

Thirdly, the data was gathered using self-report which can be subject to social desirability effects and/or participants can misinterpret questions. Furthermore, self-report measures focus exclusively on explicit self-esteem. However, there is general consensus that people also possess implicit self-esteem which is an unconscious and automatic evaluation of the self, that people are therefore unable to disclose (Jordan, Zeigler-Hill & Cameron, 2015). Thus, it may be beneficial for future research to use both explicit and implicit measures of self-esteem to gain a holistic picture. However, implicit self-esteem measures have been shown to have low reliability and convergent validity (Bosson et al, 2000), so should be used with caution.

Finally, there was a relatively high dropout rate and very few participants attended all of the sessions, which can reduce power. Although attendance was strongly encouraged it may be beneficial in future studies to include explicit rules about attendance, for example, agreeing that participants would be asked to join a new group if they missed more than one session.

### **5.3. Clinical Implications**

Despite the limitations, the current study demonstrated that the intervention had beneficial effects on global self-esteem, depression and wellbeing. Given that low self-esteem has been associated with a number of negative outcomes including criminal behaviour, substance abuse and mental health problems (Leary,

Schreindorfer & Haupt, 1995b), this intervention could have promising implications for public health.

The short-term nature of the intervention is suitable for implementation in the National Health Service (NHS), which is under increasing pressure to deliver more care with fewer resources (Wilkinson, 2015). Although alternative group CBT interventions for self-esteem are available (See Part 1 of this thesis), these are usually longer in length ( $M= 12.5$  hours, range = 6-30 hours) and similarly effective, suggesting the current group may be a cost-effective alternative. However, participant feedback suggested that additional sessions would be beneficial so this would need to be considered prior to implementing the group. Additionally, to the best of our knowledge this is the only CBT group that targets domain-specific, rather than global self-esteem.

The groups were facilitated by trainee clinical psychologists who received minimal training on the group programme prior to implementation, suggesting professionals with prior knowledge of CBT could facilitate the group without extensive training. This may be an incentive for services who would hesitate to acquire new interventions if the training and cost demands are high.

The group could also be used transdiagnostically, as individuals are taught to apply the treatment strategies to general emotional problems, rather than specific disorders. Transdiagnostic treatments have been shown to save costs on training and be more efficient at treating co-morbid conditions than sequentially treating each disorder (McEvoy, Nathan & Norton, 1999). Indeed, the group led to beneficial impacts on untargeted co-morbid difficulties, such as, depression and wellbeing. Although, one must not overestimate the effectiveness of the intervention on co-morbid conditions as it did not appear beneficial for anxiety.

#### **5.4. Research Implications**

Further research would be beneficial to extend the current project and to overcome some of its limitations, such as recruiting a non-student population, a larger age range and increasing the number of male participants. It would also be beneficial to have a longer follow-up period to see if the results are maintained over a longer period of time. It is possible that the effects of the intervention may reduce over time, as participant feedback highlighted that some individuals struggled to implement the strategies without support. Alternatively, the effects may improve over time as people have longer to practise implementing the strategies. Although the sample size in this study was deemed suitable, it would still be beneficial to recruit a larger sample to increase representativeness of the population, particularly considering the high attrition rates.

It would be particularly pertinent to compare the intervention with a control group, using a randomised controlled trial (RCT), so it could be used to make inferences about causality. Initially, it would be beneficial to compare the intervention with an untreated control group (e.g., waitlist). This would estimate the absolute effects of the intervention in comparison to not receiving a treatment. If the intervention is deemed efficacious then the next step would be to compare the intervention with another active treatment, such as, a global self-esteem CBT group. This would also determine how much of the effect is due to specific therapeutic ingredients, rather than common factors. Furthermore, it would be beneficial to determine whether this short-term intervention is cost-effective. Cost effectiveness would involve calculating the costs of running the interventions alongside full health care costs (such as further therapeutic interventions, GP visits, inpatient facilitates, use of medication, etc.)

## **5.5. Conclusion**

In conclusion, the study provides evidence for the feasibility and effectiveness of a four-week CBT group for domain-specific self-esteem, in a student sample. The intervention was deemed acceptable as measured by recruitment and retention rates and participant feedback. The group appeared effective at improving global self-esteem, depression and wellbeing, although no change in anxiety was observed. The intervention would benefit from a more methodologically rigorous randomised design.

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### **Part Three: Critical Appraisal**

A critical reflection on the process of completing Part One and Part Two of the research project

## **1. INTRODUCTION**

Throughout the research process I kept a reflective journal to document my thoughts, dilemmas and decision making, which form the basis of this critical appraisal. The appraisal presents my reflections on conducting both the literature review and empirical paper and is divided into four sections. Firstly, I will present my personal reflections and reasons for choosing the topic. Secondly, I will provide a summary of some of the methodological dilemmas encountered, including whether to have an inclusion criterion based on low self-esteem, selecting appropriate measures, negotiating group content and reducing attrition. Thirdly, I will discuss some of the qualitative findings that I found particularly interesting, specifically subjectively reported increases in self-compassion. Finally, I will present my reflections on the clinical and research implications.

## **2. CRITICAL REFLECTIONS**

### **2.1. Personal Reflections**

Like many aspiring psychologists I had multiple jobs prior to commencing doctoral training, including with adults with learning disabilities, individuals with eating disorders and in a child and adolescent service. Despite the variety of services, I was repeatedly struck by how consistently difficulties with self-esteem presented as a challenge for the individuals I was working with and seemed to span the whole spectrum of mental health difficulties. During my first year placement in a psychosis team, I was surprised that improvements in self-esteem were frequently the primary reason clients sought therapy, despite often experiencing distressing hallucinations and delusions. This elicited my interest in the topic and was my reason for studying self-esteem for my thesis.

My clinical experience led to me understanding self-esteem as a transdiagnostic concept. Transdiagnosis refers to identifying constructs and processes that occur

across diagnoses, as well as treatments that can be applicable to a number of disorders (SauerZavala et al, 2017). This idea fits with my ambivalent feelings towards the diagnosis-led culture of mental health services in the United Kingdom. I believe that diagnoses can be beneficial by normalising symptoms and providing a shared language, which empowers clients by enabling them to research their condition and develop their knowledge. However, I also believe that it is too simplistic to believe that complex emotional experiences can reliably fit within independent diagnostic boxes. In reality there is much overlap between diagnostic categories. Indeed, individuals with different diagnoses can have similar symptoms, whilst individuals with the same diagnosis may experience different symptoms (Rapley, Moncrieff & Dillon, 2011). Thus, by focusing on self-esteem as the presenting difficulty, I hoped that I could investigate a treatment that would not eliminate the use of diagnosis but be symptom led rather than defined by diagnosis.

Due to my personal interest, the initial aim for my literature review was to examine literature which investigated CBT for self-esteem across diagnoses, or indeed in the absence of any mental health diagnosis. Considering CBT is one of the most extensively researched forms of psychotherapy (Butler, Chapman, Forman & Beck, 2006) I was surprised that a review of CBT for self-esteem had not already been conducted. This validated my opinion that this was an important topic. However, due to the lack of published research on CBT for self-esteem used transdiagnostically the focus of the review had to be altered. Instead, the review was expanded to include studies of CBT for self-esteem within the context of specific mental health diagnoses.

On starting the literature review, I immediately discovered the plethora of writing on the subject of self-esteem. An initial search for scholarly articles provided over one million results. This was before even considering other often overlapping terms, using the prefix ‘self’. Indeed, a review of the literature documented 66 different

terms, including self-perception, self-efficacy and self-image (Leary & Tangney, 2003). Due to time and word restraints it was not possible to do justice to a discussion on the difference between these terms in this paper, despite finding this a pertinent and interesting consideration. Instead, I decided to spend a vast amount of time engulfed in the literature to ensure that I found the most clear and accurate definition of global self-esteem, which was both comprehensive and multi-dimensional. As self-esteem is one of the oldest and most researched constructs in psychology (Smelser, 1989), this was no mean feat! On reflection, and through discussions with peers and participants, I have learnt that self-esteem is a unique and subjective experience. There is no single definition that will fit for everyone and my chosen definition may not be the most accurate for other people. Nevertheless, it was a clear definition that was necessary to guide my literature review and empirical research.

## **2.2. Methodological Dilemmas**

One of the first dilemmas in the design of the empirical research was whether to have an inclusion criterion based on low self-esteem. This would specify that individuals could participate only if they scored within a cut-off on a standardised measure and were objectively identified as having low self-esteem. This is commonly applied in research, for example, participants in Hall and Tarrier (2003) required a score of <132 on the Robson Self Concept Questionnaire (Robson, 1988) to be included in the study. It seemed logical to include this as a criterion considering the sole intention of the treatment was to improve unsatisfactory (low) self-esteem. However, I was aware that research investigating the relationship between global and domain specific self-esteem was ambiguous and a reliable relationship had not been documented. Therefore, I did not want to exclude people based on having average or satisfactory (high) global self-esteem, if they also had unsatisfactory (low) self-esteem in a number of domains. Furthermore, I

hypothesised that it was unlikely that individuals would apply to the study unless they felt that their self-esteem was unsatisfactory. Thus, after much deliberation it was decided not to include low self-esteem as an inclusion criterion.

In hindsight I do not think that this was the correct choice, as only 57% of participants scored below the cut-off for global low self-esteem (Rosenberg, 1965). In other words, 43% of the participants did not have global low self-esteem. Furthermore, undergraduates have an obligation to participate in research and several participants informally commented that they were interested in learning about self-esteem, rather than improving it. Thus, it is likely that these participants may have been less motivated to practise the strategies at home, which may have reduced the effectiveness of the intervention. Thus in future, I would include an inclusion criterion based on a pre-determined score on a measure of global self-esteem, to ensure I am targeting the most appropriate individuals. Alternatively, a cut off score on a domain-specific measure could be used.

The global self-esteem measure used in this study was the Rosenberg Self-Esteem Scale (Rosenberg, 1965), which, despite the vast amount of self-report questionnaires available, is the most commonly used measure. Thus, I quickly felt confident that this was the most appropriate measure for the study. Choosing the most suitable measure of domain-specific self-esteem however created a dilemma. The domains which individuals regard as important are diverse and I did not want to restrict people's options by allowing them to choose only from predetermined domains, as identified by standardised questionnaires. Therefore, I considered developing a measure specifically for the research that would enable participants to have the flexibility to choose personalised domains. I had anticipated creating this by using something similar to Goal Based Outcomes, which are a way to evaluate progress towards goals by using a simple scale from 0-10 (Law & Jacob, 2013). I wondered if participants could rate their competence and importance levels using a

similar scale, for each of their identified domains. However, I quickly realised that although this would have had benefits such as enabling flexibility and being idiosyncratic, it would have lacked reliability and validity. I also felt it was more appropriate for capturing change in competence and importance over time, rather than giving a snapshot of an individual's discrepancy score, which was needed for my research question. Thus, I decided that a standardised measure would be more appropriate.

Following an informal literature review of measures I was immediately drawn to Neeman and Harter's (2012) domain-specific self-esteem questionnaire as it offered separate scores for importance and competence, as well as giving a discrepancy score. Additionally, the questionnaire was constructed specifically for college students based on developmental research that suggested domains that were meaningful for college students were different to those of either adolescents or adults (Neeman & Harter, 2012). The questionnaire also enabled participant data to be mapped in graph form. Thus, we were able to provide participants with the scores from their questionnaires, at each time point, so they could map their progress. We hoped that this would help participants to feel engaged in the process of completing self-report data.

Nevertheless, I believe my enthusiasm for the questionnaire may have hindered my ability to consider the utility of it for participants, as it is a long and complicated measure. Indeed, a key theme identified through the qualitative feedback was that the questionnaires were too time consuming and difficult to complete. Although I maintain that this is the most applicable and useful measure in the future I would extend the length of the sessions to ensure participants had extra time to complete it or give participants the option to complete it at home.

Receiving participant feedback was not only informative but is crucial for improving future research. A pilot group or discussion with service users prior to beginning the study would have highlighted the difficulties with the questionnaires (or indeed any other problem) sooner, so solutions could have been implemented prior to starting the group. The reason for not conducting an initial pilot study was twofold. Firstly, it was planned that the current study would constitute a pilot by assessing the feasibility of the group and using participant feedback to inform subsequent changes. Secondly, the content of the group was discussed in depth with two clinical psychologists with experience of running CBT groups, and altered accordingly, rather than conducting a group with service users, due to time constraints. This was to ensure that the maximum amount of time was dedicated to recruiting participants and running the groups. On reflection, I believe it would have been beneficial to have a focus group with service users to discuss the group content prior to starting recruitment. Indeed, service user involvement is an indispensable part of mental health service delivery and can be critical to improving research and services (Newton, Beales, Collins & Bassett, 2013). For example, it was initially intended that each group session would begin with a mindfulness exercise and the final group session would include an introduction to thought challenging. However, through discussions with professionals it was decided that these exercises would have resulted in the sessions becoming too lengthy and they were removed. Yet feedback from the participants was that they would have benefited from the introduction of additional strategies and therefore these options might have been maintained and may have been beneficial. Thus, in the future I will endeavour to consult with service users at every stage of the research process.

Finally, a major challenge of the research was ensuring that participants attended sessions frequently, in order to determine the effectiveness of the intervention. Non-attendance is a common phenomenon in health care services,

particularly in psychiatric services where approximately 20% of all appointments are missed (Mitchell & Selmes, 2007). Therefore I predicted that similar non-attendance rates might be replicated in the group. Not only can non-attendance lead to poorer clinical outcomes (Binnie & Boden, 2016) but it can also increase the risk of drop out (Mitchell & Selmes, 2007). In contrast, there is a positive relationship between number of sessions attended and reduction in mental health symptoms (Lueger, 1998). Several strategies have been shown to improve attendance, such as providing practical information about how to get to the appointment and offering reminders (Mitchell & Selmes, 2007). Therefore these methods were employed during the project, for example, participants were sent weekly email reminders about the group informing them of the date, time and location. Furthermore, the group was scheduled in the evening to reduce overlap with lectures, which were assumed predominantly to take place during the working day. Despite this, only 24% of participants attended every group session, which is likely to have impacted on the outcomes.

In hindsight it would have been beneficial to employ additional strategies to encourage consistent participation prior to starting recruitment, for example, requesting participants to confirm that they are able to attend every group session prior to consenting to take part and asking for suggestions of convenient times for the group rather than having pre-arranged dates. Nevertheless, a prevalent reason for non-attendance was sessions being scheduled outside of term time, when participants frequently left university. However, due to the length of the intervention it was not practically feasible for all five sessions to take part during term-time and therefore this was unavoidable. It may be constructive to experiment with altering the time between group sessions to fit with the university term and observe if this improves attendance. It would also be important to investigate if increasing attendance has any impact on outcomes. Nevertheless, the attendance rates likely

represent what may occur in a non-research or clinical setting and therefore increases the external validity of the study.

### **2.3. Qualitative Findings**

My preference when conducting research is to use a quantitative approach. Quantitative research enables greater precision in measurement and has a well-developed theory of reliability and validity (Barker, Pistrang & Elliott, 2016). Despite an increasing acknowledgement in psychology of the benefits of qualitative research, it is well documented that there continues to be a bias towards publication of quantitative research in prestigious journals (Barker et al, 2016). Consequently, I believe I had subconsciously started to view quantitative research as being more valuable and contributing more knowledge to the field than qualitative research; despite being aware that qualitative methods are necessary, particularly for exploratory research. However, the qualitative findings in the current project encouraged me to scrutinise this assumption. I was fascinated to discover that participants subjectively reported an increase in self-compassion, something that I had not previously considered. In future studies it would be interesting to use a standardised measure to examine quantitatively any impact on self-compassion, for example the Self-Compassion Scale (Neff, 2003). This highlighted the importance of qualitative findings in discovery-orientated research and not being constrained by a priori hypothesis.

### **2.4. Clinical & Research Implications**

During the research I was struck by the percentage of Asian students that chose to participate. This was contrary to research over the past few decades that has repeatedly shown that Asians were less likely to access psychological therapy, compared with other ethnic groups (for example, Chen, Sullivan, Eva Lu & Shibusawa, 2003; Sue & McKinney, 1975). It was also in contrast to my experience working in an outer London borough where South Asian communities made up the

largest ethnic minority yet were underrepresented in the service. I was interested in understanding this finding and it was frequently a topic of discussion both during supervision and informal conversations with my thesis partner. I developed multiple hypotheses about why this may have occurred, of which two particularly resonated.

Firstly, I wondered whether the percentage of Asian participants merely reflected the number of Asian students at University College London (UCL). Indeed, UCL's total student population in the year 2017-2018 comprised 32% overseas students (UCL, 2018a), of which 49.9% identified as Asian (UCL, 2018b). However, I became unconvinced that this was the only contributing factor as similar findings were not reflected in the team in which I was working, despite having a large Asian population. The number of Asian communities at UCL also did not appear dissimilar to the 18.4% of Asians that make up the total population of London (Office for National Statistics, 2011).

My second hypothesis was about the use of language. I wondered whether the term 'self-esteem' was more acceptable or resonated more with an Asian population, than terms synonymous with mental health. Anthropologists have shown that understandings of mental distress are heavily influenced by wider cultural health beliefs. These culturally diverse 'explanatory models of distress' not only influence causal attributions of disorders but also determine patterns of help seeking (Sheikh & Furnham, 2000). Stigma has been defined as negative attitudes towards a social group who are devalued in society and therefore socially rejected (Goffman, 1963). Stigma about mental illness is widely endorsed in society (Corrigan & Watson, 2002) and researchers have found Asian groups see more stigma attached to mental health than any other ethnic group (Chen et al, 2003). As a result they are more likely to seek support from their family or community than from professionals. Thus, I wondered whether the term 'self-esteem' was less stigmatising and more acceptable, meaning it felt easier for Asian people to access the group than if other terminology had been used. Brown and colleagues (2004) found that changing the

title of a psychoeducational workshop from ‘depression’ to ‘self-confidence’ led to a significant increase in the number of people applying to attend, including attendees who, despite scoring above clinical cut-off on a measure of depression, had never sought treatment before. Brown et al (2004) concluded that the term self-confidence was a more acceptable term than depression, particularly for people who do not usually seek medical help.

I am aware that this is merely one hypothesis and one should not ‘fall in love’ with an idea (Cornwell, 1989). Furthermore, a large meta-analysis concluded that Asians reported the lowest levels of self-esteem in comparison to a number of different cultures (Twenge & Crocker, 2002). Thus, the large proportion of Asian participants may simply reflect need. Nevertheless, if my hypothesis was accurate the study could offer important findings to the growing body of literature investigating the underutilisation of mental health services, which is a current issue across the globe (Chen & Mak, 2008).

### **3. CONCLUDING REMARKS**

In summary, this critical appraisal has summarised my main reflections on carrying out the research project including the literature review and empirical paper. The appraisal was divided into four sections. Firstly, I discussed my personal reflection and reason for choosing the topic. Secondly, I summarised some of the methodological dilemmas that were encountered. Thirdly, I discussed the impact the qualitative findings had on previously held beliefs. Finally, I described how the intervention could potentially be used to encourage populations who are underrepresented in clinical and research settings to access support.

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## **Appendix A**

### **Participant Information Sheet and Consent Form**

**RESEARCH DEPARTMENT OF CLINICAL, EDUCATIONAL AND HEALTH PSYCHOLOGY****PARTICIPANT INFORMATION SHEET****Study of a Domain-Specific Self-Esteem group**

**This study has been approved by the UCL Research Ethics Committee (9659/001):**

You are being invited to take part in a research study. Before you decide whether you would like to take part, it is important for you to know what the research is about and what it will involve. Please read this information sheet carefully and discuss with others if you wish. If there is anything that is not clear, or if you would like more information, you can contact us. Your participation in this study is completely voluntary and you may choose to withdraw at any time.

**What is this study about?**

This study forms part of University College London Doctorate of Clinical Psychology research theses by Emily Dixon (Trainee Clinical Psychologist) and Ciping Goh (Trainee Clinical Psychologist), and is supervised by Dr Sue Watson, Dr Henry Clements and Dr Sunjeev Kamboj.

The study aims to investigate the effectiveness of a group programme for people experiencing self-esteem difficulties. Currently, the majority of literature on self-esteem views it as a global evaluation of oneself (e.g. confidence in and respect for one's own worth or abilities). However, we believe that self-esteem is domain-specific, that is, it can vary within circumscribed domains. Thus, a person might experience self-esteem deficits in a particular domain(s) (e.g. appearance, academic achievement etc.) but not in others.

Additionally, we believe that self-esteem is on a spectrum and at times can become "unsatisfactory" for a person's needs, within specific domains or within a specific time period. For example, a university student may value academic achievement highly, and perceived threats to this (e.g. failing an exam), will subsequently violate the individual's self-esteem in this area and so become unsatisfactory for that individual.

The study is a small scale study and we want to establish whether the group has any effect on self-esteem and also how it may be improved in the future to help people with self-esteem issues.

**What happens in the group?**

In the group, you will have the opportunity to explore your own valued domains, create your individualised domain-specific self-esteem chart and explore why you

may have developed unsatisfactory self-esteem in some of these domains. Subsequently, you will plan individualised activities to engage in.

Groups will consist of four, two hour sessions on a weekly basis, with a fifth follow-up session one-month later. The groups will be facilitated by ourselves, Emily Dixon and Ciping Goh. The sessions will involve a group of 10-12 people.

During the sessions we will ask you to undertake a variety of activities, some of which you will also do between sessions: these may include, tracking your levels of self-esteem in domains important to you; keeping a thought diary; and planning experiments to test the validity of some of your thoughts.

### **Why have I been invited to take part?**

This study is an open invitation to UCL students who would like to work on self-esteem issues.

### **Do I have to take part?**

It is up to you to decide whether or not to take part. If you do decide to take part, you will be asked to give consent after reading through this information sheet.

If you decide to take part, you are still free to withdraw at any time without giving a reason.

### **What will happen if I take part?**

If you are happy to take part in this study and have given consent, you will be asked to complete some online questionnaires regarding your self-esteem, and any possible depression and anxiety symptoms.

This will determine your eligibility for the study. If you are eligible, you will be required to do the following:

- Provide some demographic information and indicate the dates you are available to attend the group.
- Attend four weekly group sessions and one follow-up session (one month after the group ends) (each 2 hours long)
- Complete questionnaires that will be administered in the first and last session of the group and at follow-up. The questionnaires will include measures of global and domain-specific self-esteem, depression symptoms, anxiety symptoms and attributional style.

### **What will I be asked to do?**

You can carry on your everyday activities as normal while participating in the study.

We also ask that you attend all five group sessions as far as possible. You will then give yourself the opportunity to gain maximum benefit from the sessions.

### **Are there any risks in taking part?**

Overall the risks of taking part in this study are minimal. The researchers conducting the sessions have experience of working with adults with self-esteem issues in clinical settings. In addition, they will be working under supervision from qualified clinical psychologists. In the sessions, you will be encouraged but never forced to take part in any activity. However if being involved in this research really does not suit you, for example, should you find it distressing, you are free to withdraw at any point. We will also signpost you to other services if you need further support.

### **What are the potential benefits?**

If you decide to participate in the study, we hope that you will find the sessions interesting and enjoyable.

The information gathered during this study will also help to inform our understanding of treatment for domain-specific self-esteem. We anticipate that this will be a step towards improving interventions for self-esteem difficulties in the future.

### **Will my taking part in the study be kept confidential?**

All information collected about you over the course of the study will be kept confidential unless we became aware of something which makes us worry about you or someone around you, in which case we will discuss the issue with you. Once the study has finished, University College London (UCL) will keep the study data in a secure location. The data used for the study will be anonymised and it will not be possible to trace the results back to individual participants.

Your personal data given on this online platform is being handled by Qualtrics. Please refer to the following weblinks for the security and privacy statements.

<https://www.qualtrics.com/security-statement/>

<https://www.qualtrics.com/privacy-statement/>

### **What happens when the research study stops?**

The results of the research study will be written up as part of Emily Dixon's and Ciping Goh's theses for the Clinical Psychology Doctorate at UCL. The report of the study could also be published in relevant journals outside UCL. You will not be identifiable from these results.

### **What if something goes wrong?**

Every care will be taken in the course of this study to protect you. Any complaint about the way you have been dealt with during the study or any possible harm you might suffer will be addressed. You should contact Dr Henry Clements, who is the Chief Investigator for the research, and based at UCL.

**Who is organising and funding the research?**

The research has been organised by Emily Dixon and Ciping Goh, Trainee Clinical Psychologists. They are conducting this study as part of their Clinical Psychology Doctorates. The research will be funded by UCL.

**Who can I contact for further information?**

**For more information about this research, please contact:**

Emily Dixon and Ciping Goh

Research Department of Clinical, Educational and Health Psychology

UCL

Gower Street

WC1E 6BT

Email: [emily.dixon.14@ucl.ac.uk](mailto:emily.dixon.14@ucl.ac.uk); [ciping.goh.15@ucl.ac.uk](mailto:ciping.goh.15@ucl.ac.uk)

Phone: TBC (we are waiting for phones specifically for the project)

**Or if you have any concerns or complaints about this study please contact:**

Dr Henry Clements

Research Department of Clinical, Educational and Health Psychology

University College London

Gower Street

London WC1E 6BT

Email: [henry.clements@ucl.ac.uk](mailto:henry.clements@ucl.ac.uk)

**ALL DATA WILL BE COLLECTED AND STORED IN ACCORDANCE WITH THE  
DATA PROTECTION ACT 1998.**

**THANK YOU FOR READING THIS INFORMATION SHEET AND FOR  
CONSIDERING TAKING PART IN THIS RESEARCH.**

**RESEARCH DEPARTMENT OF CLINICAL, EDUCATIONAL AND HEALTH  
PSYCHOLOGY**

**PARTICIPANT CONSENT FORM**

**Study Title: Study of a Domain-Specific Self-Esteem group**

Name of Researchers: Emily Dixon and Ciping Goh

Please tick boxes

I confirm that I have read and understand the information sheet dated [insert date, insert version] for the above study, have had the opportunity to ask questions and have had these answered acceptably.	
I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.	
I understand that the information that I provide will be included in the researchers' doctoral thesis, may be published in a scientific journal, and may be presented at a national or international conference. I understand that all information included will be anonymised to protect my identity.	
I understand that all information given by me or about me will be treated as confidential by the research team. Such information will be treated as strictly confidential and handled in accordance with the provisions of the Data Protection Act 1998.	
I agree to take part in the above study.	

By clicking the

## **Appendix B**

### **Group Experience Questionnaire**

## **SELF-ESTEEM GROUP FEEDBACK FORM**

1. Was attending the group helpful?

At all times      Most of the time      Sometimes      Rarely      Never

2. What were the most helpful aspects of attending the group?

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3. What were the least helpful aspects of attending the group?

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4. Attending the Group has helped me to understand and address my difficulties.

Strongly Agree      Moderately Agree      Undecided      Moderately Disagree      Strongly Disagree

5. a. I have noticed changes in me as a result of attending the Group.

Strongly Agree      Moderately Agree      Undecided      Moderately Disagree      Strongly Disagree

b. If so, what changes have you noticed?

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6. Did you have confidence in the facilitators' skills and techniques?

At all times      Most of the time      Sometimes      Rarely      Never

7. Did the facilitators listen to you and treat your comments and contributions seriously?

At all times      Most of the time      Sometimes      Rarely      Never

8. How likely are you to recommend the Group to friends and family if they needed similar help?

Very Likely      Likely      Undecided      Unlikely      Very Unlikely

9. Is there anything about the Group that you would like to change?

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10. Is there anything else that you would like to say about the Group?

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## **Appendix C**

### **Skewness and Kurtosis Scores**

Variable	Skewness (SE=.512)	Kurtosis (SE=.992)	Variable	Skewness (SE=.512)	Kurtosis (SE=.992)
<b>Pre</b>			<b>Follow-up</b>		
GAD	-.046	-.841	GAD	.692	.380
PHQ	-.486	-.630	PHQ	.428	.362
Wemwbs	.945	1.743	Wemwbs	-.393	-.230
Rosenberg	-.272	1.030	Rosenberg	-.416	.376
Harter Comp	-.206	.192			
HarterDisc	.256	-.164			
<b>Post</b>					
GAD	.164	-1.187			
PHQ	-.205	-.531			
Wemwbs	-.057	.074			
Rosenberg	-.422	-.232			

## **Appendix D**

AIC Statistics for each Mixed Model

A summary of the Akaike's Information Criterion (AIC) for each mixed model analysis, comparing the use of compound symmetry (CS) and first-order autoregressive (AR1). AIC represents model error and therefore a lower AIC represents a better model (Howell, 2008).

	Compound	First-order
	Symmetry (CS)*	Autoregressive (AR1)
Global self-esteem (RSES)	637.639	643.975
Depression (PHQ-9)	658.946	661.106
Anxiety (GAD-7)	662.148	667.313
Wellbeing (WEMWBS)	784.194	801.854

*Note:* \* = model used in final analysis

## **Appendix E**

### **Joint Thesis Statement**

## **JOINT THESIS STATEMENT**

This project was carried out jointly with another Doctorate in Clinical Psychology Trainee, Ciping Goh, although we were interested in different outcomes. Goh (2018) investigated whether the intervention was effective at improving domain-specific self-esteem and its impact on attributional style.

We had equal responsibility for the project. The ethics application, information sheets and group content were compiled jointly and we shared responsibility for recruitment, practical tasks and facilitating the group. Data analysis and write up were conducted independently.

## **Appendix F**

### **Ethics Approval Letter**

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**UCL RESEARCH ETHICS COMMITTEE  
ACADEMIC SERVICES**



30<sup>th</sup> November 2016

Dr Henry Clements  
UCL Research Department of Clinical, Educational and Health Psychology

Dear Dr Clements

**Notification of Ethical Approval**

**Re: Ethics Application 9659/001: The effectiveness of a domain-specific self-esteem group**

I am pleased to confirm in my capacity as Chair of the UCL Research Ethics Committee (REC) that your study has been ethically approved by the REC until 30<sup>th</sup> September 2018.

Approval is subject to the following conditions:

**Notification of Amendments to the Research**

You must seek Chair's approval for proposed amendments (to include extensions to the duration of the project) to the research for which this approval has been given. Ethical approval is specific to this project and must not be treated as applicable to research of a similar nature. Each research project is reviewed separately and if there are significant changes to the research protocol you should seek confirmation of continued ethical approval by completing the 'Amendment Approval Request Form':  
<http://ethics.grad.ucl.ac.uk/responsibilities.php>

**Adverse Event Reporting – Serious and Non-Serious**

It is your responsibility to report to the Committee any unanticipated problems or adverse events involving risks to participants or others. The Ethics Committee should be notified of all serious adverse events via the Ethics Committee Administrator ([ethics@ucl.ac.uk](mailto:ethics@ucl.ac.uk)) immediately the incident occurs. Where the adverse incident is unexpected and serious, the Chair or Vice-Chair will decide whether the study should be terminated pending the opinion of an independent expert. For non-serious adverse events the Chair or Vice-Chair of the Ethics Committee should again be notified via the Ethics Committee Administrator within ten days of the incident occurring and provide a full written report that should include any amendments to the participant information sheet and study protocol. The Chair or Vice-Chair will confirm that the incident is non-serious and report to the Committee at the next meeting. The final view of the Committee will be communicated to you.

**Final Report**

At the end of the data collection element of your research we ask that you submit a very brief report (1-2 paragraphs will suffice) which includes in particular issues relating to the ethical implications of the research i.e. issues obtaining consent, participants withdrawing from the research, confidentiality, protection of participants from physical and mental harm etc.

Yours sincerely

A black rectangular redaction box covering a signature.

**Professor John Foreman  
Chair, UCL Research Ethics Committee**

Cc: Emily Dixon & Ciping Goh

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University College London  
Tel: +44 (0)20 3108 8216  
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