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AN INITIAL EVALUATION OF AN ONLINE COMPASSION FOCUSED THERAPY INTERVENTION FOR SELF-ESTEEM.

Section A: Can self-esteem be improved by self-help interventions?: A systematic review and meta-analysis of the effectiveness of self-help interventions' on self-esteem.

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Section B: Building self-compassion and combating low self-esteem an online-based CFT programme (YoungMindBeKind.com) for adolescents and young people: A pilot randomised control trial.

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Summary

Section A provides a systematic literature review aimed to summarize the effectiveness of self-help interventions at improving self-esteem in adults with clinical difficulties. This review also investigated the engagement and cost-effectiveness of such self-help programmes. Overall, twelve studies were identified and reviewed, in which eight were included in a meta-analysis, four were included in a narrative review. Most evidence was found for self-help interventions having a significant benefit on self-esteem when compared to a wait-list control group. Engagement with the self-help intervention varied but on average two-thirds of participants completed the intervention. There was insignificant information provided on cost-effectiveness to provide any conclusions. Limitations and gaps in the existing evidence are discussed, and the review concludes with future research recommendations to address these limitations in the current evidence base.

Section B consists of an empirical investigation of a created Compassion Focused Therapy web-based programme, YoungMindBeKind.com for adolescents and young people between the ages of 16 to 25 years old from a non-clinical population. Forty participants took part in the four-week programme, which offered psychoeducation and exercises involving mindfulness, soothing breathing, compassionate imagery and compassionate letter writing. Self-report measures of self-esteem, self-compassion, mental health and quality of life were completed at baseline, post-test and 4 week follow-up. In addition, qualitative feedback was taken from participants following completion of the programme. Overall, the study's findings offer encouragement to the development of an effective web-based CFT programme for young people in the future.

Table of Contents

Section A

List of Tables

List of Figures

List of Appendices

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Section A: Literature Review

Can self-esteem be improved by self-help interventions?: A systematic

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Abstract

Background: There is growing evidence that self-help interventions have positive consequences for psychological and physical health. A number of recent studies have begun to explore whether self-help interventions may have benefits in increasing self-esteem in participants with a variety of mental health difficulties.

Aims: The current review investigates the effectiveness of self-help interventions at improving self-esteem in adults with clinical difficulties. A secondary aim is to examine the engagement and cost-effectiveness of such self-help programmes.

Methods: Searches were conducted on several electronic databases (PsychINFO, PubMed, Web of Science, the Cochrane Database of Systematic Reviews, and Medline) to identify self-help intervention studies that investigated change in self-esteem either as a primary or secondary outcome.

Results: Twelve studies were identified and reviewed. Eight RCTs were included in a meta-analysis, and four studies were included in the narrative review. Self-help interventions produced significant benefits in comparison to wait-list control conditions (z (7)= 2.63, p=0.009) on measures of self-esteem, with a small to medium effect size (g=0.18, 95% confidence interval 0.05 to 0.32). Engagement with the self-help intervention varied but on average two-thirds of participants completed the intervention.

Conclusion: Preliminary evidence exists for the effectiveness of self-help interventions for increasing self-esteem in a variety of clinical difficulties. However, several limitations and gaps in research will be discussed. Further research is needed to investigate mechanisms of change, cost-effectiveness and engagement in this novel medium of self-help interventions.

Keywords: self-help, online-based, self-esteem, internet-based

1. Introduction

Empirical studies over the last eighteen years suggest that self-esteem is an important psychological factor contributing to health and quality of life (Evans, 1997). Previous studies have illustrated that positive self-esteem can lead to better health and social behaviour, where poor self-esteem is associated with a broad range of mental health disorders and social problems both in internalising problems (e.g. depression, suicidal ideation, eating disorders and anxiety) and externalizing problems (e.g. violence & substance abuse) (Baumeister, 2005; Mann, Hosman, Schaalma, & de Vries, 2004; Orth, Robins, & Roberts, 2008). Furthermore, previous research has shown that subjective well-being significantly correlates with high self-esteem (Zimmerman, 2000) and that self-esteem has been found to be the most dominant and powerful indicator of happiness (Furnham & Cheng, 2000).

1.1 What is self-esteem?

Self-esteem has been understood as the positive or negative evaluations that one holds toward oneself (Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995). William James (1890), one of the founding fathers of Western psychology, first coined the term 'self-esteem' and described it as a product of 'perceived competence in domains of importance'. More recently, Fennel (1999, pg 20) defines 'self-esteem' as "the overall opinion we have of ourselves, how we judge or evaluate ourselves, and the value we attach to ourselves as people." She states central beliefs lie at the heart of self-esteem that one has about the kind of person they are and if these beliefs are mostly negative then it constitutes low self-esteem.

1.2 Does low self-esteem affect our well-being?

It is helpful to consider the relationship between self-esteem and mental health distress as it appears to play a role in mental health problems (Fennell, 2004; Mann et al., 2004), and may make people vulnerable to mental health problems (Butler, Hokanson, & Flynn, 1994; Ingham, Kreitman, Miller, Sashidharan, & Surtees, 1986) and their relapse (Franck, De Raedt, & De Houwer, 2007; Gumley et al., 2006). Importantly, low self-esteem during adolescence predicts poorer mental health outcomes (Orth et al., 2008), future suicide attempts (Lewinsohn, Rohde, & Seeley, 1998) and failure to develop positive social support networks (Marshall, Parker, Ciarrochi, & Heaven, 2013).

Low self-esteem has been frequently associated with depression, as clinical literature suggests that low self-esteem is correlated to depressed moods (Patterson & Capaldi, 1992), depressive disorders (Dori & Overholser, 1999; Rice, Ashby, & Slaney, 1998), hopelessness, suicidal tendencies and attempted suicide (Overholser, Adams, Lehnert, & Brinkman, 1995). However, there have been relationships found with other internalizing disorders such as anxiety and eating disorders (Button, Sonuga-Barke, Davies, & Thompson, 1996; Crisp, Griffiths, Mackinnon, Bennett, & Christensen, 2014; Horan, 1996). Research suggests that self-esteem is negatively correlated with anxiety and other signs of psychological and physical distress (Beck, Brown, Steer, Kuyken, & Grisham, 2001). According to the Diagnostic and Statistical Manual of Mental Disorders (DSM V; American Psychiatric Association, 2013), poor self-esteem plays a significant role in a variety of mental health disorders. Negative or unstable self-perceptions are listed as a key component to the diagnostic criteria of major depressive disorders, manic and

hypomanic episodes, dysthymic disorders, dissociative disorders, anorexia nervosa, bulimia nervosa, and in several of the personality disorders.

Although low self-esteem has been associated with various psychiatric conditions, the nature of this relationship is still remains unclear. While some studies suggest that having a psychiatric illness lowers self-esteem (Ingham et al., 1986), in contrast other studies show that low self-esteem predisposes one to a range of psychiatric illnesses (Miller, Kreitman, Ingham, & Sashidharan, 1989). Previous research has shown that the relationship between depression or self-esteem changes in one can affect the other condition (Hamilton & Abramson, 1983; Wilson & Krane, 1980). Despite the uncertainty about the direction of causality and the possibility that there is a bidirectional causal relationship between self-esteem and psychiatric illness, it is clear that the negative effects of low self-esteem is far reaching. In summary, low self-esteem is common and can be distressing and disabling in its own right. Furthermore it appears to be involved in the etiology and persistence of various disorders, and attending to these processes of low self-esteem may improve treatment outcomes. Therefore, it is important to develop effective treatments for low self-esteem that can be applied across the range of diagnoses and age groups associated with low self-esteem.

1.3 What is the current treatment for low self-esteem?

A cognitive-behavioural conceptualization of low self-esteem proposed by cognitive-behavioural treatment (CBT) is one of the leading used technique in clinical practice when working with low self-esteem (Fennell, 1997, 2006; see Figure 1). Within CBT, low self-esteem is thought to be connected to schematic processing biases and/or cognitive distortions (Shirk, Burwell, & Harter, 2006). However, there is still limited data on the evaluation of CBT treatment for self-esteem in a routine clinical

population (Hall & Tarrier, 2003). To date, the evidence base for CBT for self-esteem outcomes in an adult population consists only of single-case examples with little or no empirical evaluation (Fennell, 2004; McManus, Waite, & Shafran, 2009). Within an adolescent population, there has been slightly more empirical evaluation published in regards to a systemic review (Taylor & Montgomery, 2007) and a meta-analysis (Haney & Durlak, 1998) which both reported that CBT appears to be an effective treatment in increasing self-esteem among adolescents. Further research is required to examine the causal connection between changes occurring in self-esteem and understanding which specific techniques within either CBT or other interventions have an impact on outcomes as well investigate the possibility of self-help intervention that are becoming increasing popular for a variety of mental health disorders.

Figure 1: *Fennel's* CBT formulation for low self-esteem (Fennel 1999, pg 78)
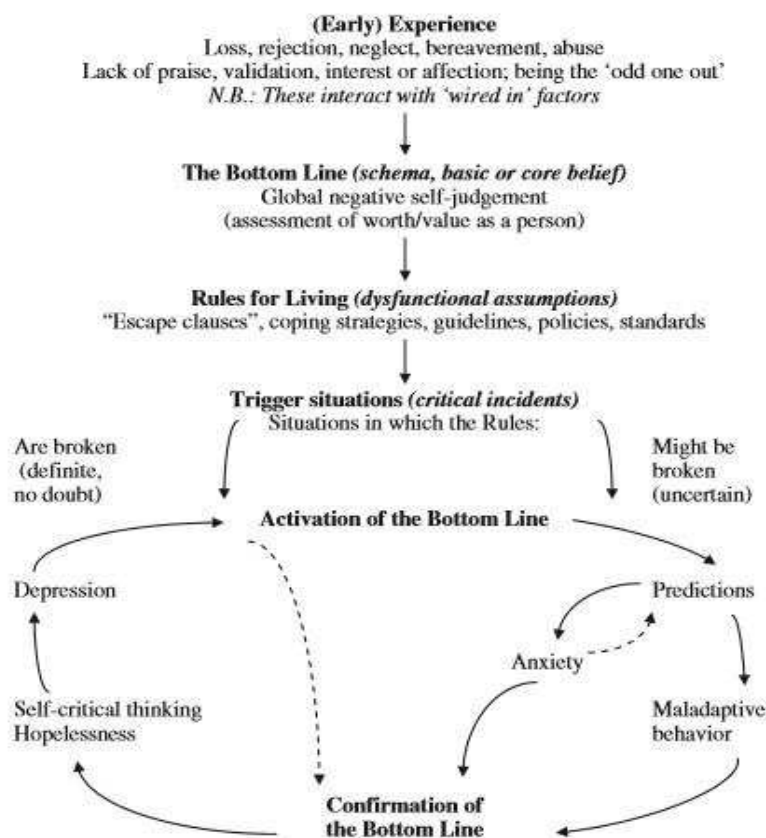
1.4 What is self-help?

The term 'self-help' tends to be used loosely and interchangeably with other terms such as 'self-management', 'self-instruction', 'self-care' or 'psychoeducational' interventions (Lewis, Anderson, & Araya, 2003). In the context of depression, the National Institute for Health and Clinical Excellence (NICE, 2004) describes self-help as "A self-administered intervention designed to treat depression, which makes use of a range of books or a self-help manual that is based on an evidence-based intervention and is designed specifically for the purpose (pg. 4) ". Currently self-help interventions have extended further than books, workbooks and manuals, and have been delivered by computer programme or in other audio, visual or multimedia formats.

1.5 Can self-help interventions offer support for individuals with low self-esteem?

Self-help is one category of intervention that has potential to support self-esteem improvements as it has several advantages in that it allows for flexibility in time and location of the delivery of the intervention and can be highly beneficial to those who can not access face-to-face services (Calear & Christensen, 2010; Griffiths & Christensen, 2007; Moritz, Wittekind, Hauschildt, & Timpano, 2011). Societies around the world are becoming more digitalized as the availability and use of the internet has expanded greatly over the past decade. Therefore, there has been a shift in self-help treatments moving from mostly self-help books to using new, creative technologies such as, smart phone apps (Luxton, McCann, Bush, Mishkind, & Reger, 2011), internet-based programs (Griffiths & Christensen, 2007), CD-ROM

programs (Coyle, Doherty, Matthews, & Sharry, 2007), chat-rooms (Limb, 2012) and even using virtual reality games (Falconer et al., 2014).

Self-help is potentially attractive for adolescents in particular as it allows them to receive support independently from their parents (Merry et al., 2012). Furthermore, as many young people may fear the stigma associated with receiving mental health interventions in which the anonymity of self-help interventions is greatly valued (Gould & Clum, 1993).

There are various types of self-help interventions, which range from non-interactive information and psychoeducation to interactive intervention programs based on empirically supported treatments (Barak, Klein, & Proudfoot, 2009; Tate & Zabinski, 2004). Although, self-help interventions are by definition considered to be without the support of a professional, in practice they are often implemented with various degrees of professional support from entirely self-administered to being integrated with face-to-face professional therapy as a part of the client's homework, or as a method of recommended self-management resources (Kaltenthaler et al., 2002; Lewis, Anderson, & Araya., 2014).

In summary, the field of self-help approaches has increased tremendously over recent years with more households having access to the internet and the high level of uptake of new technologies by young people with access to computers, and smart-phones (Edwards-Hart & Chester, 2010). Self-help interventions could widen the scope of support for individuals with self-esteem difficulties by providing programmes that are more accessible, convenient and affordable. This review therefore seeks to address the following question: Do self-help interventions lead to significant improvements in self-esteem? To date, there has been no other review on

this topic to the best of the author's knowledge. Therefore, a review exploring the effectiveness of self-help interventions on self-esteem appears warranted.

1.6 Aims

This review aimed to determine the efficacy of self-help interventions for improving the self-esteem in participants. A secondary aim was to investigate engagement with and the cost-effectiveness of such self-help interventions. To this end, a systematic literature search, followed by both a meta-analysis of RCTs and narrative review, was conducted.

2. Methodology

2.1 Literature Search

To ensure that all relevant studies were reviewed, several methods were used to identify studies for inclusion. First, online databases were searched including: PsychINFO, PubMed, Web of Science, the Cochrane Database of Systematic Reviews, and Medline. Searches of the database ranged from inception until June 2015. The following search terms were used 'self*esteem' or *'*esteem*' in combination with the terms 'self*help', '*book', 'computer' or 'app*'. Reference lists were also searched manually to identify potentially eligible studies. Finally, primary authors were contacted to request if there were any studies to their knowledge, published and unpublished, that might meet inclusion criteria. Ten authors were approached by email contact, of whom three responded and stated they did not know of any other studies.

Papers included in the review: i) were published reports of empirical studies, ii) that employed self-help interventions, iii) and measured self-esteem as either a primary or secondary outcome variable, iv) where no or reduced therapist support was

offered, v) and that were published in the English language. In addition, due to the limited amount of studies found interventions that recruited adolescent and adult participants were included.

2.2 Eligible studies

The initial search produced 143 results, full papers were retrieved and examined for eligibility. Of which 12 met the inclusion criteria. Eight studies out of the 12 met the criteria for the meta-analysis in which a randomised controlled design was used. Out of the four studies excluded, two studies did not make the criteria for the meta-analysis due to lack of randomised control design. One study, of the three, did not meet the criteria for the meta-analysis due to lack of data provided. The author of this paper was contacted by email to request a copy of the data, however there was no reply received. Therefore the literature search resulted in eight studies that were selected for meta-analysis and three studies that will be subsequently considered in a narrative review, see Figure 2. The meta-analysis will address the first aim on determining the efficacy of self-help interventions for improving the self-esteem in participants. The narrative review will address the secondary aims to investigate engagement with and the cost-effectiveness of such self-help interventions.
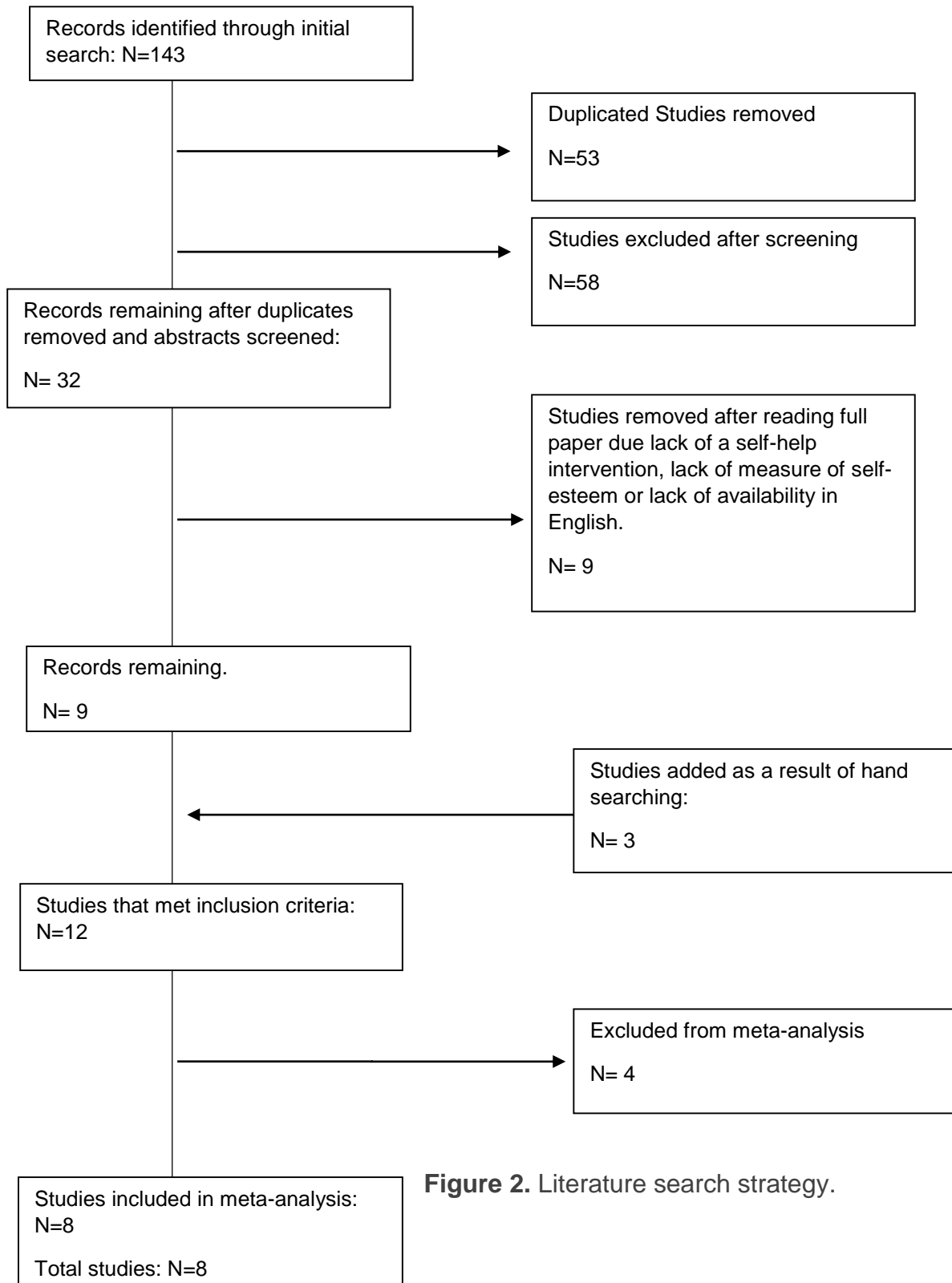
Figure 2. Literature search strategy.

2.3 Data analysis

The between-group post-intervention means and standard deviations from the Rosenberg self-esteem scale (Rosenberg, 1965) were extracted from the eight studies included in the meta-analysis and entered into Review Manager version 5.3 (Cochrane Collaborations, 2014). For the eight studies included in the meta-analysis the between-group post-intervention means and standard deviations on the Rosenberg self-esteem scale (Rosenberg, 1965) were extracted and entered into Review Manager version 5.3 (Cochrane Collaborations, 2014). A forest plot of post-intervention between-group effect sizes was produced for the self-esteem outcome using Review Manager (RevMan). Due to the heterogeneity of the interventions it seemed appropriate to use a random effects model. The following formula was used to calculate post-intervention between group effect sizes:

$$SMD_i = \frac{m_{1i} - m_{2i}}{S_i}\left(1 - \frac{3}{4N_i - 9}\right)$$

where,

$$S_i = \sqrt{\frac{(n_{1i} - 1)sd_{1_i}^2 + (n_{2i} - 1)sd_{2_i}^2}{N_i - 2}}$$

If a study included more than one control condition the inactive control condition was selected as the comparator as this was the most common comparison condition used across the studies, and offers a basic test of intervention efficacy.

Forest plots of post-intervention between-group effect sizes were produced for the outcome variable using RevMan.

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3. Meta-analysis Results

Aim 1: The efficacy of self-help interventions for improving the self-esteem in participants

3.1 Description of Included Studies

Eight studies were included in the meta-analysis. Each of these studies evaluated self-esteem as an outcome while evaluating the efficacy of self-help interventions compared to a wait-list control (Carrard et al., 2011; Crisp et al., 2014; Egan et al., 2014; Horan, 1996; Hötzel et al., 2014; Moritz et al., 2011; Schneider, Wittekind, Talhof, Korrelboom, & Moritz, 2015; ter Huurne et al., 2015) and a further four studies reviewed narratively following the meta-analysis. All eight studies used the Rosenberg self-esteem scale (RSES; Rosenberg, 1965) to assess self-esteem. The meta-analysis has focused on providing information concerning the primary aim of this report was to determine the efficacy of self-help interventions for improving the self-esteem for individuals. Key information about the studies included in the meta-analysis are summarised in Table 1.

Table 1

Description of Studies Included in the Meta-analysis

Reference	Sample	Design	Control Group	Self-help Intervention	Guided or unguided	Intervention duration	Other measures Used	Quality score
Carrard et al. (2011)	N=74 adults with BED (aged 21-60)	RCT	Wait-list control condition	Internet-based self-help treatment for Binge Eating Disorder following CBT techniques	Guided self-help: support from coaches throughout the programme.	6 months	Eating Disorder Examination-Questionnaire (Fairburn & Beglin, 1994; Mobbs & Van der Linden, 2006) Eating Disorder Inventory-2 (Archinard, Rouget, Painot, & Liengme, 1994; Garner, Olmsted, & Polivy, 1983) Three-Factor Eating Questionnaire (Lluch, 1995; Stunkard & Messick, 1985)	16/24
Crisp, Griffiths, Mackinnon, Bennett, & Christensen(2014)	N= 298 adults with Depression (aged 18-65)	RCT	An attention control website (HealthWatch) on well-being	A depression Internet training program (e-couch) comprising a depression literary and online versions of CBT	Pure self-help	12 weeks	Medical outcomes study social support survey (MOS; Sherbourne & Stewart, 1991) UCLA Loneliness Scale (Russel, 1996) Empowerment Scale (Rogers et al., 1997) EUROHIS Quality of Life (Schmidt et al., 2006)	15.5/24
Egan et al. (2014)	N= 52 adults with Perfectionism (aged 18-65)	RCT	Wait-list control condition	Pure online self-help CBT-perfectionism. Weekly emails of book chapters and worksheets	Pure self-help	8 weeks	Frost Multidimensional Perfectionism Scale (FMPS) Clinical Perfectionism Questionnaire (CPQ) Dysfunctional Attitude Scale (DAS) Depression Anxiety and Stress Scale (DASS-21)	15/24
Horan, (1996)	N = 56 adolescents and young people (aged 16-19)	RCT	Relaxation-training control condition	Computer-based cognitive restructuring program focused on specific irrational beliefs.	Pure self-help	2 days	Janis-Field Feelings of Inadequacy Scale (Eagly, 1967) Peirs-Harris Children's Self-Concept Scale (Peirs, 1984)	7/24

Hötzel et al. (2014)	N= 212 adult females with ED (aged 18-50)	RCT	Wait-list control condition	Web based program focused on enhancing motivation to change eating disorder behaviour online sessions, 45 mins each.	Guided self-help - Standardised feedback via text messages	6 weeks	Stages of change questionnaire for eating disorders (SOCQ-ED; Rieger et al 2002) Pros and Cons of Eating Disorders Scale (P-CED; Gale et al. 2006) Self-Efficacy Scale (SES; Schwarzer & Jerusalem, 1999) EDE-Q (Fairburn &Beglin, 1994)	17/24
Moritz et al. (2011)	N=210 adults with Depression (aged 18-65)	RCT	Wait-list control condition	Internet-based self-help program for depression (Deprexis). 10 modules with a focus on CBT techniques	Pure self-help	8 weeks	Beck Depression Inventory(BDI; Beck, Steer & Garbin,1988) Suicide Behaviours Questionnaire-Revised (SBQ-R; Osman et al., 2001) WHO Quality of Life (Skevington, Lotfy, & O'Connell, 2004)	15.5/24
ter Huurne et al. (2015)	N= 214 adult females with ED (aged 18-65)	RCT	Wait-list control condition	Web-based CBT programme for Eating Disorders. 20 mins each session.	Guided self-help in the form of regular contact with therapists that acted as coaches	15 weeks	Eating Disorder Examination-Questionnaire (EDE-Q; Fairburn & Beglin,1994) Body Attitude Test (BAT; Probst M, Van Coppenolle & Vandereycken, 1997) Maudsley Addiction Profile-Health Symptom Scale (MAP-HSS' Marsden et al, 1998) Depression Anxiety and Stress Scale (DASS-21; Lovibond, Lovibond, 1995)	15.5/24
Schneider et al. (2015)	N=65 adults with obsessive-compulsive disorder (OCD) (aged 18-70)	RCT	Wait-list control condition	Self-help manual based on Competitive Memory Training	Pure self-help	4 weeks	Yale-Brown Obsessive Compulsive Scale (Y-BOCS; Schaible, Armbrust, & Nutzinger, 2001) Obsessive Compulsive Inventory-Revised (OCI-R; Abramowitz & Deacon, 2006) Beck Depression Inventory –Short Form (Furlanetto, Mendlowicz & Romildo Bueno, 2005)	13/24

3.2 Study design and included interventions

The eight studies followed a randomised control trial (RCT) design using parallel-groups in which participants were randomly allocated to either a self-help intervention or a control group. Five studies reported on primarily Internet-based interventions (Carrard et al., 2011; Crisp et al., 2014; Hötzel et al., 2014; Moritz, Schilling, Hauschildt, Schröder, & Treszl, 2012; ter Huurne et al., 2015), two sent book manual chapters by email to participants (Egan et al., 2014; Schneider et al., 2015) and one which was a computer-based programme installed on a computer hard drive (Horan, 1996). The studies varied in number of modules within the intervention provided, with a range of 8 to 15 modules. The duration of intervention ranged from 2 days to 6 months.

Six studies compared the self-help intervention group to a wait-list control group (Carrard et al., 2011; Horan, 1996; Hötzel et al., 2014; Moritz et al., 2012; ter Huurne et al., 2015). One study compared the self-help intervention to a face-to-face group and a wait-list control (Egan et al., 2014). Another study had a four arm intervention approach, comparing a self-help interventions to a psychoeducation training programme, a combination of the two and a control website (Crisp et al., 2014). If a study had more than one control condition, the inactive (wait-list) control condition was selected as the comparator as this was the most common comparison condition used across the studies in review. Seven of the eight studies under review specifically investigated self-esteem as a 'secondary' outcome for evaluating the effectiveness of the self-help intervention, the Horan (1996) study was the only study in which it was the primary focus.

i. Cognitive behavioural therapy programmes: self-help interventions

The majority of the self- help interventions used a form of online CBT program providing exercises involving psychoeducation, cognitive modification, behavioural activations, problem solving and interpersonal skills. Egan et al. (2014) studied a pure online self-help programme based on a CBT book "Overcoming Perfectionism" (Shaftran, Egan, & Wade, 2010) which provided weekly emails containing allocated book chapters and instructions to worksheets. They compared the online CBT-P programme with a face-to- face arm and a wait-list control. Similarly, the Carrard et al. (2011) study also created an online guided self-help website that provided weekly modules based on the manual for binge eating 'Overcoming Binge Eating' (Fairburn, 1995). Participants had up to six months to work through the 11 modules and exercises, which provided support of daily self-monitoring, meal plans, physical activity, problem solving, assertiveness and cognitive restructuring.

ter Huurne et al. (2015) conducted a two-arm open RCT comparing a CBT online intervention to a wait-list control for female patients with bulimia nervosa, binge eating and eating disorders not otherwise specified. The website-based CBT programme "Look at your eating" aimed to analyse participants' eating attitudes and behaviours. The programme consisted of 10 assignments, which took approximately 20 minutes per day, using CBT, motivational intervention, psycho-education, self-monitoring, thought restructuring, problem-solving, and relapse prevention. Participants were also required to complete homework assignments and an online eating diary.

Moritz et al. (2012) study was conducted over the internet and aimed to assess the efficacy of an online CBT programme, Deprexis, for Depression. The programme included 10 modules, which last 10 to 60 minutes. They provided teaching on cognitive modification, mindfulness, interpersonal skills, lifestyle changes, and problem-solving. Within the programme participants were contacted as well by text messages to their mobiles. The programme was adaptive; exercises were selected based on the individuals' responds to the text messages.

ii.   Non-cognitive behavioural therapy programmes: self-help interventions.

The Hötzel et al. (2014) study focused on self-help interventions for eating disorders by creating a web-based program in which the modules were based on the principle of motivational interviewing. Participants were required to weigh the positive and negative aspects of their eating disorder and to reflect on how symptoms effected them and related to their self-esteem. Whereas the Horan (1996) study specifically focused on the technique of cognitive restructuring on specific irrational beliefs related to social rejection and difficult emotions. The program used video clips in each session depicting a student of a similar age experiencing a difficult emotion and social rejection by peers. Participants were then asked if they had ever felt similar to this actor in the clip, if they chose 'yes' then they received cognitive restructuring dialogs to challenge the irrational basis of their thinking and offer more rational perspectives. As described, there was much variability in the self-help interventions that were included in this review. This variability leads to question whether is it helpful to consider these interventions together and pool effects across them. This will be examined empirically later, when the heterogeneity statistics are examined.

3.3 Sample size and characteristics

The sample size, within the studies that were included, ranged from 52 to 298. In total the studies recruited 1,172 participants, in which 592 were allocated to self-help interventions, 580 formed the control group. All eight studies used a random allocation to treatment group and control group. The majority of the studies included several recruitment strategies (e.g. magazine, radio, newspaper) to increase the likelihood of a representative sample of their respective population. However one study only advertised directly to general practitioners who informed service-users of the study. Another study informed teachers who then selected students for participation. The recruitment strategy, used in these two studies, may have led to sampling error as the results obtained may not be representative of data involving the entire population for which the sample was derived.

3.4 Outcome measures

The eight studies assessed self-esteem by using the 10-item Rosenberg self-esteem scale (RSES; Roth et al., 2008) which one of the most widely used self-esteem scale in research studies. Respondents rate the items on a 4-point scale from 1 (strongly agree) to 4 (strongly disagree). Higher numbers represent higher levels of self-esteem. The RSES consists of 10 statements, of which five are negative and five positive. The RSES has very good validity (Robins, Hendin, & Trzesniewski, 2001). It has also been demonstrated to be highly reliable with Cronhach's alphas in the range of 0.77 to 0.88 (Blascovich & Tomaka, 1993).

3.5 Guided verse unguided self-help

Support from a therapist ranged from none at all to weekly contact within a coaching relationship. Six studies reported having only self-administered therapies (with no support from a therapist), in which weekly email contact was made by the researcher. However, emails did not contain therapeutic information. Two studies reported to have a more guided self-help based intervention. The Carrard et al. (2011) study guidance consisted of regular contact with a coach, a trained psychologist, during the whole intervention by receiving weekly emails supporting the participant in motivation and content understanding. The coaches were able to monitor participants' progress and review completed exercises, diary entries, and automatic feedback charts, to ensure that participants completed the techniques correctly. If participants did not engage with the programme for two weeks, their coach would call them on the phone to reinforce their motivation. Similarly, the ter Huurne et al. (ter Huurne et al., 2015) study consisted of asynchronous contact with a personal therapist twice a week, via the internet alone. The responses of the therapists were supportive and included CBT and motivational interviewing techniques. Moreover, their communication focused on providing accurate and objective information, reinforcement and relabelling of statements. The majority of the studies used email prompts when participants failed to complete the intervention modules. Two of the eight studies had the therapist contact the participants by telephone if they had not responded to the email prompts (Crisp et al., 2014; Egan et al., 2014).

3.6 Study quality

The studies were assessed on quality based on the CONSORT criteria (see Appendix A; Schulz, Altman, & Moher, 2010). The quality scores reflect an evaluation of the study design, sampling, randomisation, outcome measures, analytic method and control of confounds. Please see Table 2 for the details of the key criticisms of each study. The quality scores awarded, see Table 1. The quantitative measure of quality that was calculated in Table 1, where Hötzel et al. (Hötzel et al., 2014) and Carrard et al. (Carrard et al., 2011) studies were the highest in quality of the studies in terms of their quality of randomisation, sample size, and analysis. The Horan (1996) and Egan et al. (2014) studies were particularly limited by their small sample sizes. Several important items on the CONSORT checklist related to the study quality will be discussed in more detail below.

The fourth item on the CONSORT checklist is eligibility criteria for participants. Overall the eight studies provided a comprehensive description of eligibility criteria used to select participants. However, several studies provided a description of the method of recruitment, such as by referral or self-selection (for example, through advertisements) which may influence the external validity of the findings due to a lack of the generalisability to the wider population. However, the majority of the studies provided adequate information on participant baseline characteristics which helps judge the relevance of the results to specific groups and further assess the similarity between intervention and control groups.

The eighth item on the CONSORT checklist is randmonisation. In which studies are evaluated on the description of allocation to comparison groups on the basis of chance (random) process characterised by unpredictability. The eight studies were

mixed on compliance with this item. Four of the eight studies used a computer-generated system for randomisation. One study used a 'third party' an independent researcher not involved in data collection to prepare the study's allocation schedule. Centralised or 'third party' assignment is especially desirable as biases presumably arise from the inability to conceal the group assignment. Unfortunately, the other half of the studies provided insufficient information regarding randomisation. This raises concerns as unclear or inadequately reported concealed randomisation and allocation of subjects may later contribute to bias in estimating treatment effects.

The eleventh item on the CONSORT checklist is blinding which was not applicable to the majority of studies selected as it is not feasible to blind patients to an active intervention such as self-help and all the studies used self-reports only.   Lack of blinding of the participants and researcher to the intervention may lead to ascertainment bias which may affect the results of the trial since the participants would be aware of the type of intervention received. However, the outcome assessments were at least single blind in that they involved a researcher at the baseline stage who did not know the allocation of the participants.

Overall, the methodological quality of the included studies was medium to low in concordance with the rating system used by CONSORT. Predominantly, these relatively poor ratings were due to small sample size, potential sampling bias, and insufficient information on how randomisation was conducted, relatively homogenous samples and lack of information on study design. Therefore, the results should be interpreted with caution.

Table 2.

Tables of reviewed papers main key critiques

Reference	Sample	Design	Intervention	Key Findings	Key Critique
Carrard et al. (2011)	N=74 adults with BED (aged 21-60)	RCT	Internet-based self-help treatment for Binge Eating Disorder. 11 modules for 6 months following CBT techniques	Experimental group improved significantly more than the control group in self-esteem	(+)Computer-generated randomisation (-) No power analysis conducted. Assessors not blinded. Small sample size
Crisp, Griffiths, Mackinnon, Bennett, & Christensen(2014)	N= 298 adults with Depression (aged 18-65)	RCT	A depression Internet training program (e-couch) comprising a depression literary and online versions of CBT for 12 weekly modules	The study found no significant increase in self-esteem.	(-) low adherence rate, limited information of interventions (+) attempts to establish similarity of groups at outset, detailed description of measures administered
Egan et al. (2014)	N= 52 adults with Perfectionism (aged 18-65)	RCT	Pure online self-help CBT-perfectionism. 8 weekly emails of book chapters and worksheets	No significant effects were found for the self-help intervention and self-esteem.	(-) small sample, selective sample cannot be generalised to clinical sample, lack of treatment adherence measures (+) researcher blinded, prior power analyses, detailed information provided of intervention, good statistical analysis
Horan, (1996)	N = 56 children (aged 16-19)	RCT	Computer-based cognitive restructuring program focused on specific irrational	Experimental group improved significantly more than the control group in self-esteem	(-) Convenience sample, small sample size, setting and intervention not generalisable to a clinical population, participants selected by teacher, from classroom setting. Limited demographic information collected.

			beliefs. 13 modules over 2 school days		No analysis of similarity of experimental and control group. Lack of information on randomisation. (+)Good statistical analysis MANOVA
Hötzel et al. (2014)	N= 212 adult females with ED (aged 18-50)	RCT	Web based program focused on enhancing motivation to change eating disorder behaviour. 6 weekly online sessions, 45 mins each.	Significant improvements in self-esteem for the self-help group when compared to wait-list control	(-) high drop-out rate, inadequate randomisation information, no demographic information (+) good statistical analysis, sampling strategy well discussed
O'Kearney et al. (2005)	N=78 boys (age 15 and 16)	Quasi- experiment	Web based CBT program (Moodgym) with 5 modules, 30-60 mins, for depression	Relative to the control group (personal development activities) no significant between group differences in change score. However for boys complete 3 or more modules there was small relative benfits of Moodgym for self-esteem.	(-) purposeful sampling (-) lack of randomisation (-) results data not provided
Pritchard et al. (2003)	N= 20 individuals with bulimia nervosa	Quasi- experiment	Weekly emails and online guided support of CBT self-help manual for bulimia nervosa. 6 sessions (30 mins).	Self-esteem significantly improved	(-) purposeful sampling (-) lack of randomisation

Moritz et al. (2011)	N=210 adults with Depression (aged 18-65)	RCT	Self-help program for depression (Deprexis). 10 modules with a focus on CBT techniques	Relative to the wait-list group, the self-help group had significant improvements on self-esteem	(-) randomly allocated to treatment or wait-list in consecutive order, recruitment bias, no demographic details (+) good information given about intervention/ measures/results
Schneider et al. (2015)	N=65 adults with obsessive-compulsive disorder (OCD) (aged 18-70)	RCT	Self-help manual based on Competitive Memory Training	Promising effectiveness for OCD self-help manual interventions in increasing self-esteem	(-) sample of convenience, limited information of measurement, lack of verification of diagnosis, questionable adherence to manual (+) detailed baseline differences discussed, good statistical analysis, computer based randomisation
ter Huurne et al. (2015)	N= 214 adult females with ED (aged 18-65)	RCT	Web-based CBT programme for Eating Disorders. 15 week period, twice a week for 20 mins each session.		(-) convenience sampling, lack of information on randomisation process, effect size needed (+) detailed information about intervention, good information provided on baseline characteristics
Wentz et al. (2012)	N= 10 young adults with ASD or/and ADHD (aged 15-16)	Quasi- experiment	Internet-based support via chatroom group (SalutChat). 8 week intervention with daily contact with coaches (30 -1 hr sessions)	Significant improvements in self-esteem	(-) small sample size (-) insufficient information on sample recruitment process (-) lack of control
Zabinski et al. (2000)	N=4 female college students with eating disorders	Quasi- experiment	Online chatroom providing a 7 week program for CBT techniques to address unhealthy eating practices	No change in self-esteem	(-) small sample size (-) insufficient information on sample recruitment process (-) lack of control

3.7 Meta-analysis findings

Post-intervention means and standard deviations were extracted from the final set of eight papers for the self-help intervention and for their control conditions. All analyses used a random effects model given the heterogeneity of the study populations and interventions.

Figure 3 shows forest plots for the post-intervention between-group effect sizes for the self-esteem outcome. As can be seen, when the studies were aggregated, post intervention self-esteem scores were significantly higher for participants who were allocated into the self-help interventions than for the control groups (z (7)= 2.63, p=0.009) with an effect size in the small to medium range (g=0.18, 95% confidence interval 0.05 to 0.32). The individual study effect sizes did not show significant heterogeneity (x^2(7)=6.84, n.s.), suggesting that it was reasonable to aggregate across this group of somewhat varied interventions and participant populations. Given that the number of included studies was relatively small, no moderator analysis could meaningfully be conducted.

	self-help			Control				Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Carrard et al 2011	21.3	4.2	37	19.1	4.9	37	8.5%	0.48 [0.01, 0.94]	
Crisp et al 2014	24.1	5.27	53	24.43	3.98	71	14.4%	-0.07 [-0.43, 0.28]	
Egan et al 2014	29.38	5.21	16	27.87	4.6	18	4.0%	0.30 [-0.38, 0.98]	
Horan 1996	31.03	5.83	29	30.89	4.39	26	6.5%	0.03 [-0.50, 0.56]	
Hotzel et al 2014	16.43	3.91	49	15.34	4.5	76	14.0%	0.25 [-0.11, 0.61]	
Moritz et al 2012	29.09	9.37	80	25.58	8.85	90	19.7%	0.38 [0.08, 0.69]	
Schneider et al 2014	33.74	9.68	34	31.81	10.13	31	7.6%	0.19 [-0.30, 0.68]	
Ter Huurne 2015	18.6	6.8	108	18.3	6.9	106	25.3%	0.04 [-0.22, 0.31]	
Total (95% CI)			406			455	100.0%	0.18 [0.05, 0.32]	

Heterogeneity: Tau² = 0.00; Chi² = 6.84, df = 7 (P = 0.45); I² = 0%
Test for overall effect: Z = 2.63 (P = 0.009)
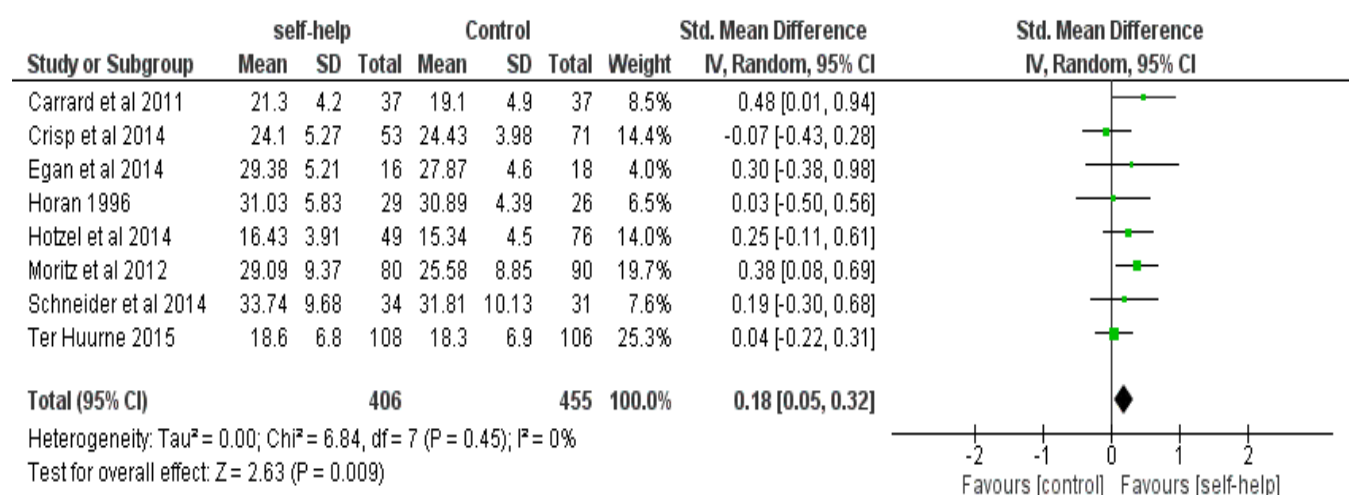
Favours [control]   Favours [self-help]

Figure 3: Meta-analysis data and forest plot for the outcome of self-esteem.

Publication bias was assessed by visual inspection of the funnel plot. Figure. 4
shows a funnel plot, which depicts a scatterplot of treatment effect against a
measure of study size. A symmetric inverted funnel shape arises from a 'well-
behaved' data set in which studies that have larger sample sizes (therefore lower
standard error) are represented by an effect size that is closer to the mean.. The
pooled effect size found in the meta-analysis is represented by the dotted line.
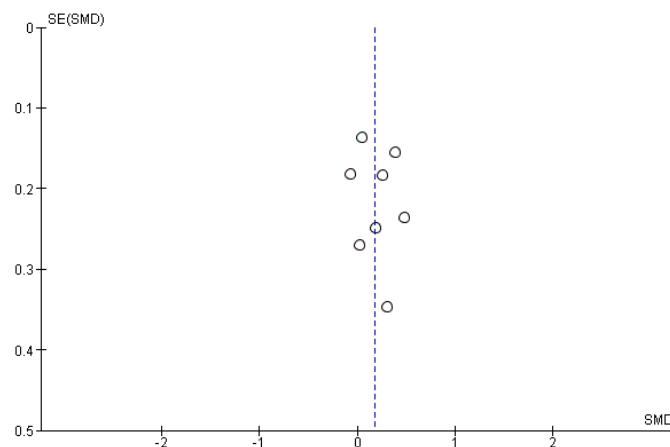
Figure 4. Funnel plot showing post intervention effect size by standard error.

While, there is not a notable funnel shape, the dots are nearly symmetrically
distributed, providing little obvious evidence of publication bias. However due to the
small number of studies included, this result should be treated with caution. This will
be discussed further in the limitations section.

Overall, the meta-analysis shows a significant positive effect of self-help
interventions for increasing self-esteem relative to controls, with an effect size in the
small to medium range. However, the studies in the review have a number of
methodological drawbacks, including small sample sizes and high levels of
attribution; they also show inadequate reporting of randomisation and several
confounding variables. Therefore the internal validity of some of the findings is

limited, and the apparent positivity of the results can only be considered suggestive at this point. In addition six of the eight studies compared the self-help intervention to only a wait-list control groups, therefore further research is required to investigate which components of the self-help interventions are associated with increasing self-esteem. Finally, as the effect size is relatively small, future studies are warranted to attempt to improve the size of the effect.

4. Narrative Review

Aim 2: To investigate engagement with and the cost-effectiveness of such self-help interventions.

There were four studies that were not suitable for the meta-analysis. Key information for these studies is described in Table 2. These four studies will be included in this narrative review, with the eight studies included in the meta-analysis, in order to discuss the secondary aims of the review, exploring engagement in the self-help interventions and cost-effectiveness.

4.1 Study dropout, intervention engagement and completion

The majority of the studies reported participant flow from which the figures indicated that there was an average of 71.5% participants (range 52% to 87.5%) who completed post-intervention measurements. This figure is comparable to attrition in other self-help studies which have reported an average completion at 69% (range 17 to 98%) (Melville, Casey, & Kavanagh, 2010). Previous research has also reported that rates of attrition are higher in pure self-help therapies when compared to more supported interventions (Eysenbach, 2005). This was comparable to the findings within our review which the less supported self-help interventions reported higher levels of attrition when compared to more guided self-help studies.

One example, the Carrard et al. (2011) study investigating support for eating disorders, which are known for high drop-out rates (Bandini et al., 2006). However this study surprisingly had a high completion rate of 75.7%, which the researchers believed was due to the guided support in the form of individual coaches (psychologists) for each participant that provided weekly email support to increase motivation. Compared to the Hotzel et al. (2012) study which also included participants with eating disorders that offered only limited support in the form of standardised, predefined text feedback to participants, reported a lower completion rate of 52% for the self-help intervention. Interestingly, the ter Hurrne (2015) study found that participants who withdrew from the study were often lower in self-esteem at baseline then participants who completed post-tests, which may be a reason why a more guided approach may be beneficial to those with low self-confidence and motivation. Therefore, self-help intervention may improve study completion by focusing on providing an appropriate level of guidance for participant, however, there is still limited understanding of what is the optimal level of guidance and the specific characteristics that predict self-help intervention adherence.

Intervention engagement (e.g the number of modules/sessions completed by participants) varied across studies. The majority of the included studies failed to evaluate intervention engagement with the self-help intervention material. This unfortunately does not allow for proper assessment of the effects of intervention engagement. Where studies identified intervention engagement it appears that under half of those allocated to the intervention condition met targets of module completion. The O'Kearney et al. (2006) study reported that only 40% completed three or more sessions out of five sessions. The participants that did complete three or more sessions showed relative benefits in self-esteem and depressive symptoms, in which

the effect for self-esteem was sustained at follow-up. The Carrard et al., (2011) study reported that only 33% completed all 11 modules, however 73% completed up to six modules. Interestingly, the study also reported that the most frequent hours of connection to the website were between 8:00 pm to 10:00 pm. The Prichard et al. (2003) study reported that the largest dropout was 15% which occurred after session three out of 14 sessions. Unfortunately there was no information from the other studies under review regarding intervention engagement. Where the studies did report data on levels of participants' engagement with the self-help intervention, the findings indicate that engagement with self-help interventions was associated with study outcomes. This is also supported by previous research that has associated better outcomes with greater use of self-help material, with studies reported a strong dose-response relationship (Lewis, Pearce, & Bisson, 2012). This highlights the importance of designing and delivering self-help interventions so that the optimal level of participant engagement can be kept in mind.

In conclusion, few studies in the review formally examined intervention engagement, therefore little is known about the specific component factors that improve adherence in self-help interventions measuring self-esteem. Self-help interventions may have a number of unique features that may impact on adherences rates such as, presence of rewards or motivator, the expectations of users, the level of contact with a health professional. Further evidence is required to explore where self-help delivery may be able to increase adherence relative to traditional face-to-face interventions by tailoring interactivity, level of guidance, and rewards for individual users.

4.2 Studies cost-effectiveness

As the self-help approach has received growing recognition within a climate of limited resources, and economic pressure on psychological services (Gould & Clum, 1993; Lewis et al., 2012). Currently, self-help interventions for psychiatric disorders are a popular alternative to therapist-administered psychological therapies, as they can offer an increase in access to cost-effective treatment (Lewis, Pearce, & Bisson, 2012).

The review secondary aim focuses on investigating the cost-effectiveness of the self-help interventions used to improve self-esteem. Although an important component within self-help interventions research, none of the included studies in the review conducted a concurrent economic evaluation of the self-help programme. We cannot therefore reach any conclusion regarding the cost-effectiveness of these interventions. Further research is required to including well-designed RCTs incorporating evaluation of cost-effectiveness. Providing a cost-effective approach is important as self-help interventions often enable self-improvement through the use of health technologies (such as books, CDs, apps and websites) with little or no therapist input thus this method of delivering treatment may show promise in widening access to psychological therapies in a way that may be cost-effective for the user and the service. According to Bower and Gilbody (2001) the use of self-help interventions can be an essential part of a stepped care model which relies on the assumption of efficacy, cost-effectiveness and acceptability of self-help interventions. However, it is still questionable if self-help interventions fulfil these criteria. In a proposed stepped care approach, individuals are provided with a low-cost intervention (such as self-help) in the first steps, with more intensive and costly interventions reserved for those insufficiently helped by the initial intervention

(Haaga, 2000). Based on meta-analytic findings, some researchers have suggested that current stepped-care approaches may be revised to include online self-help programs as the preferred recommendation for milder or sub-threshold cases, given their demonstrated superior effectiveness compared to "watchful waiting" (Cuijpers et al., 2011).Cost- effectiveness analysis is used to determine the direct and indirect costs incurred by the service and/or service-user.

5. Discussion

The narrative review and meta-analysis summarises the empirical evidence to date regarding the effectiveness of self-help interventions to which these interventions were associated with symptom changes in self-esteem either as a primary or secondary component. Studies were found reporting on the effects of a variety of self-help interventions such as internet-based interventions, books, online chat rooms and mobile phone apps. The meta-analysis revealed that self-help interventions resulted in a positive change in self-esteem when compared to a control wait-list condition. These findings suggest that self-esteem may be improved by self-help interventions, and may lead to reductions of negative effects of low self-esteem in participants, such as depression and anxiety. This extends a growing body of literature that is in support of the potential benefits of self-help approaches for a wide-range of mental health conditions (Egan et al., 2014; Merry et al., 2012; Orth et al., 2008). However, due to a number of methodological limitations which affected the quality of the included studies, including potential sampling bias, insufficient information on how randomisation was conducted, relatively homogenous samples and lack of information on study design. Further research to address methodological limitations of the existing evidence base is needed, such as larger randomised

controlled studies comparing self-esteem focused self-help interventions with active control groups.

The secondary aims of the review was to investigate intervention engagement and cost-effectiveness of the self-help programmes. In relation to this aim a narrative review of 11 studies was provided. Unfortunately, there was insufficient data to fully answer these questions. However, there is a tentative suggestion that self-help interventions may have improved engagement by providing increased levels of guidance, which links to documented superiority of guided self-help in comparison with pure self-help (Titov, Andrews, Choi, Schwencke, & Mahoney, 2008).

5.1 Clinical heterogeneity

There was no significant heterogeneity when it came to the self-help programmes that were being evaluated in the meta-analysis. However, interventions did vary in terms of the content, delivery, aims and structure. Although the majority were based on cognitive-behavioural techniques, the precise nature of what was included varied from programme to programme. Delivery methods also ranged greatly from emailed modules, to computer programmes, to more advanced multimedia websites. The level of guidance provided by a trained professional also varied. The majority of the programmes were completely self-explanatory, whereas others provided therapist or professional input when required.

5.2 Limitations

The findings of this review are limited by a significant number of methodological limitations in the studies reviewed. The majority of the studies included samples that were highly selective and focused on a very specific population, reducing the generalisability of the findings. Moreover, there was also considerable variability

across studies in the forms of the self-help interventions, making it difficult to draw specific conclusions about the active ingredients of change. Several studies provided details of the protocol used, however adherence to the protocol was often not reported. In addition, the most common controls used tended to be an inactive wait-list control, which may influence expectations of improvement between treatment and control group as the control group know that they are not yet receiving an active treatment and have no reason to expect positive change.

Furthermore, another implication is that the primary outcomes were not self-esteem measures therefore further research investigating self-esteem as a primary outcome may yield greater efficacy. The majority of these outcomes were self-report measures rather than objective assessment by a researcher, which may have biased the results. Overall, these methodological limitations restrict the generalisability of the findings and the extent to which the positive outcome in self-esteem can be attributed specifically to the use of self-help intervention. Moreover, although in the present review, self-help interventions were found to be more effective than wait-list controls in improving self-esteem, the lack of active control and small sample of studies reviewed makes it difficult to determine the comparative effectiveness of self-help interventions in relation to other face-to-face evidence-based interventions.

Another limitation that should be noted is the possibility of publication bias, which is often a problem for review of controlled trials. The review included a number of different search method, which also included correspondence with experts and authors of previous studies. The informants contacted to request information on any unpublished studies, however it cannot be absolutely certain that unpublished studies do not exist. The restriction to studies published in English is another

limitation. Therefore, despite a systematic search strategy it is possible that some studies meeting the inclusion criteria might have been missed.

5.3 Clinical Implications

This review has demonstrated the potential benefits of self-help interventions that included self-esteem components across a range of population. The results of the meta-analysis of self-help interventions compared with a waiting list for individuals suffering from mental help disorders affecting their self-esteem showed a significant difference in favour of the self-help intervention. The findings suggest that people may develop a more positive sense of self-esteem through interventions that require little or no therapist resource. Methods of providing home treatment may be essential in helping individuals experiencing low self-esteem whom do not want to leave the house, due to lack of confidence or fearing social engagement with mental health services. Whilst most studies demonstrated significant improvements on measures of self-esteem for participants, it is important to remember that self-esteem was only the primary target for one of the 12 interventions under review. Bearing this limitation in mind, the evidence to date is consistent with the efficacy of such tools in clinical and community samples, although the widespread of implementation of self-help interventions targeting self-esteem at this point may be premature.

5.4 Future research

Future research could helpfully include: (i) replication and extension of the above findings regarding efficacy and process of self-help interventions for self-esteem, using larger scale and more robust designs; (ii) further trials using active control groups and/ or dismantling designs to determine active ingredients; (iii) participants recruited from mental health services, to examine acceptability, efficacy and

feasibility for this population; (iv) exploration into the mediators for engagement with self-esteem self-help interventions; (v) develop a better understanding of the mediators of change and whether these are consistent with the underpinning therapy and evident from face-to-face literature and (vi) explore various evidence-based approaches which may be particularly useful for people who struggle with low self-esteem, such as Compassion Focused Therapy.

CFT is an evidence-based, integrative third-wave cognitive behavioural therapy thought to be particularly useful for people who experience high levels of shame, are highly self-critical and have previously lacked sufficient positive nurturing experiences (Gilbert, 2009). CFT offers a potential benefit as self-compassion entails treating oneself with kindness, recognizing one's shared humanity, and being mindful when considering negative aspects of oneself (Neff, 2009). Interestingly, individuals who are high in self-compassion tend to be also high in self-esteem (Neff, 2003) and able to deal with negative life events in a more healthy manner promoting self-kindness and acceptance (Neff, Hsieh, & Dejitterat, 2005). Therefore, future research may benefit investigating the difference between self-esteem and self-compassion and its relation to promoting emotional regulation in self-help interventions.

Self-help material designed to increase positive self-esteem is still a growing field of research that may provide great benefits in symptom improvement in both clinical and non-clinical populations. Further research is required to establish the mechanisms of change, generalisability, cost-effectiveness and optimisation of self-help interventions for low self-esteem.

7. Conclusion

In summary, this review has shown that there is emerging but tentative evidence that self-help intervention may increase self-esteem for individuals suffering from a range of mental health conditions. However, there is a lack of information on adherence and cost-effectiveness of self-help interventions for self-esteem, which has made it difficult to report conclusive findings. Future research is needed to explore the effects and potentials of self-help interventions for self-esteem, in addition it feels important to gather further qualitative information on how individuals experience self-directed interventions.

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Section B: Empirical Paper

Building self-compassion and combating low self-esteem an

online-based CFT programme (YoungMindBeKind.com) for adolescents

and young people: A pilot randomised control trial.

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SALOMONS CANTERBURY CHRIST CHURCH UNIVERSITY

Abstract

Objective: To date, no research has evaluated the efficacy of a web-based Compassion Focused Therapy (CFT) intervention for young people. The current pilot study aimed to begin the process of evaluating the effectiveness and acceptability of a web-based CFT intervention by creating an online website youngmindbekind.com, and obtaining an initial effect-size estimate for a full scale RCT trial.

Method: A two-arm, pilot, randomised controlled trial comparing a web-based CFT intervention to a waiting list control condition (WL) was carried out with young people aged 16 to 25 from a non-clinical population. Participants had asynchronous contact from the researcher once a week, solely via the internet, to provide instructions for modules. Self-report measures of self-esteem, self-compassion, mental health and quality of life were completed at baseline and post-intervention/wait-list. In addition, the intervention group received them again at a 4 week follow-up.

Results: A total of 40 participants were randomised to either web-based CFT (n=20) or to the WL group (n=20). Study attrition was 12 with 70% of participants completing the post-intervention/wait-list questionnaires. Pre-post change scores on all measures did not significantly differ between groups. The estimated, post-intervention, between groups, effect size for the primary outcome measure, namely the Rosenberg Self Esteem Scale, was d=0.17, with a 95% confidence interval of (0.92, 0.57). Qualitative feedback from questionnaires identified several themes relating to understanding compassion, activating compassion, finding the intervention acceptable, and future recommendations for the website.

Conclusions: YoungMindBeKind.com appears to be an intervention capable of engaging young people. Given the relatively small effect size estimate, further pilot

work to improve the intervention and/or target young people with lower self-esteem may be helpful prior to a full-scale RCT.

Key words: compassion-focused therapy, self-esteem, self-help, online-based intervention, self-compassion.

Introduction

Self-esteem has been defined as a person's subjective appraisal of himself or herself as intrinsically positive or negative (Sedikides & Gregg, 2003) and is a term used to reflect a person's overall evaluation of his or her own worth. The term was first coined by William James in 1890 (James,1890), and as one of the oldest concepts in modern, western psychology, self-esteem is the third most frequently occurring theme in psychological literature (Rodewalt & Tragakis, 2003). Evidence suggests that the majority of people suffering from mental health problems experience low self-esteem (Silverstone & Salsali, 2003), in that these individuals may evaluate their competence and worthiness negatively.

Self-esteem may be viewed as a schema, in that is it a pervasive theme or pattern, comprised of memories, emotions, cognitions and bodily sensation regarding oneself and the relationships with others, which may have developed during childhood or adolescence and continues throughout one's lifetime (Young, Klosko, & Weishaar, 2003). During adolescence, identity exploration is thought to be a process central to this stage of development (Erikson, 1959) and may stimulate individuals to self-reflect and to consider their relationships with others and their role in society. As they compare themselves with their peers, adolescents often engage in self-doubt and self-criticism (Steinberg, 1999), which may lead to a negative self-image. Low self-esteem in adolescents has been associated with dropping out of school (Guillon, Crocq, & Bailey, 2003), higher rates of drug and alcohol dependency (Zimmerman, Copeland, Shope, & Dielman, 1997), self-harm and suicidal behaviour (Kjelsbery, Neegaard, & Dahl, 1994), teen pregnancy (Plotnick, 1992) and more frequent unemployment (Sheeran, Abrams, & Orbell, 2011). Furthermore, it has also been reported that adolescents with low self-esteem exhibit less consistent behaviour

compared to peers, which may make them more prone to succumb to peer pressure (Burns, 1979).

Although low self-esteem is not a psychiatric diagnosis, it has been shown to be far-reaching in association with mental health symptoms, such as depression (Brown, Bifluco, & Andrews, 1990), eating disorders (Button, Sonuga-Barke, Davies, & Thompson, 1996), psychosis (Hall & Tarrier, 2003), obsessive compulsive disorder (Ingham, Kreitman, Miller, Sashidharan, & Surtees, 1986) and chronic pain (Soares & Grossi, 2000). In addition, low self-esteem has been shown to predict poorer outcome in psychological treatment (Fairburn, 1993) and to predict relapse following treatment (Fairburn, 1993; van der Ham, 1998).

While there is an evident association between low self-esteem and many psychiatric conditions, the nature of the relationship remains unclear as some studies report that having a psychiatric disorder lowers self-esteem (Ingham, Kreitman, Miller, Sashidharan, & Surtees, 1987), whereas others suggest that lowered self-esteem can predispose individuals towards a range of psychiatric conditions (Miller et al., 1989). There is also evidence suggesting that changes in either depression or self-esteem can affect the other (Hamilton & Abramson, 1983), which may suggest a bidirectional relationship between low self-esteem and psychological conditions.

A cognitive conceptualisation of low self-esteem has been proposed and a cognitive behaviour intervention (CBT) is commonly followed in clinical practice (Fennell, 1997, 2006). The CBT approach proposes that individuals develop global negative judgements about themselves as a result of early experiences in their lives which lead to dysfunctional assumptions and negative beliefs about themselves (Fennell, 2004). Although CBT for low self-esteem is widely used in clinical practice, the

research to date evaluating the evidence-base for this intervention consists of limited, low quality studies, particularly single case examples (Butler, Fennel, & Hackmann, 2008; Chatterton, Hall, & Tarrier, 2007; Fennell, 1997; McManus, Waite, & Shafran, 2009), small uncontrolled evaluations (Oestrich, Austin, & Lykke, 2007; Rigby & Waite, 2007) and one randomised control trial with a small, not particularly representative sample (Waite, McManus, & Shafran, 2012). Furthermore, previous research has suggested that low self-esteem may be highly resistant to change, as individuals with low self-esteem may be less likely to accept positive feedback and more likely to accept negative feedback leading to the maintenance of a negative self-appraisal (Josephs, Bosson, & Jacobs, 2003). More troubling, there has been negative effects correlated to high self-esteem, which has been contributed to certain problematic behaviours, including bullying, self-enhancing bias aggression, and narcissism .Therefore, there continues to be a need for further outcome-based research, to alert inform mental health practitioners on strategies to inform practice when working with individuals suffering from low self-esteem (Baumeister, Busham & Campbell, 2000; Crocker & Park, 2004). However, the pursuit of high self-esteem among individuals, particular adolescents, may not be necessarily a desired or productive goal.

Self-compassion may offer an alternative conceptualisation when working with individuals with low self-esteem. In the last few years, there has been more research focusing on the construct of self-compassion as an adaptive form of self-to-self relating (Gilbert, 2009; Gilbert & Irons, 2005; Leary, Adams, & Tate, 2005; Leary, 2004; Neff, 2003). Self-compassion involves being caring, understanding and compassionate towards oneself in the face of hardships or feelings of inadequacy (Bennett-Goleman, 2001; Neff, 2011). An individual who is self-compassionate

towards themselves would be warm and non-judgemental when faced with their own suffering, inadequacy or failure, rather than belittling or self-critical. The self-compassion construct provides an appealing complement to the concept of self-esteem, as the concept of self-compassion does not carry the potential costs associated with the pursuit of high self-esteem, such as narcissism (Bushman & Baumeister, 1998), distorted self-perceptions (Alicke & Sedikides, 2009), and prejudice (Aberson, Healy, & Romero, 2000). Self-compassion may provide the same benefits as self-esteem, such as increasing self-affect and providing a stronger sense of self-acceptance. However these feelings would not be based on performance evaluation or comparison to others (Neff, 2003). In addition, there is a growing body of research that suggests that cultivating our compassionate minds can help us to alleviate and prevent a range of psychological problems, including anxiety and shame (Braehler, Harper, & Gilbert, 2012; Leaviss & Uttley, 2015; Lucre & Corten, 2013; Tirch & Gilbert, 2014).

Gilbert (2009) has drawn upon developmental psychology, affective neuroscience, Buddhist practical philosophy, attachment theory and evolutionary theory to develop a comprehensive form of experiential behaviour therapy known as Compassion Focused Therapy (CFT). Within CFT, it is believed that humans have evolved to develop at least three types of emotion regulation systems: the threat (protection) system, the drive (resource–seeking) system, and the soothing (affiliative) system (see Figure 5). Gilbert (1989) proposes that compassion deactivates the threat system (i.e. feelings of insecurity and defensiveness driven by the limbic system) and rather activates the self-soothing systems (i.e. feelings of attachment and safeness, driven by the oxytocin-opiate system). With the use of techniques, such as compassionate mind training, individuals are taught new ways to manage each

system more effectively and respond more appropriately to situations (Gilbert, 2009). The development of the self-soothing system of compassion is believed to provide greater sense of intimacy, effective affect regulation, exploration and coping with difficult environments (Gilbert, 1989, 2005).

Figure 5. CFT emotional regulation systems
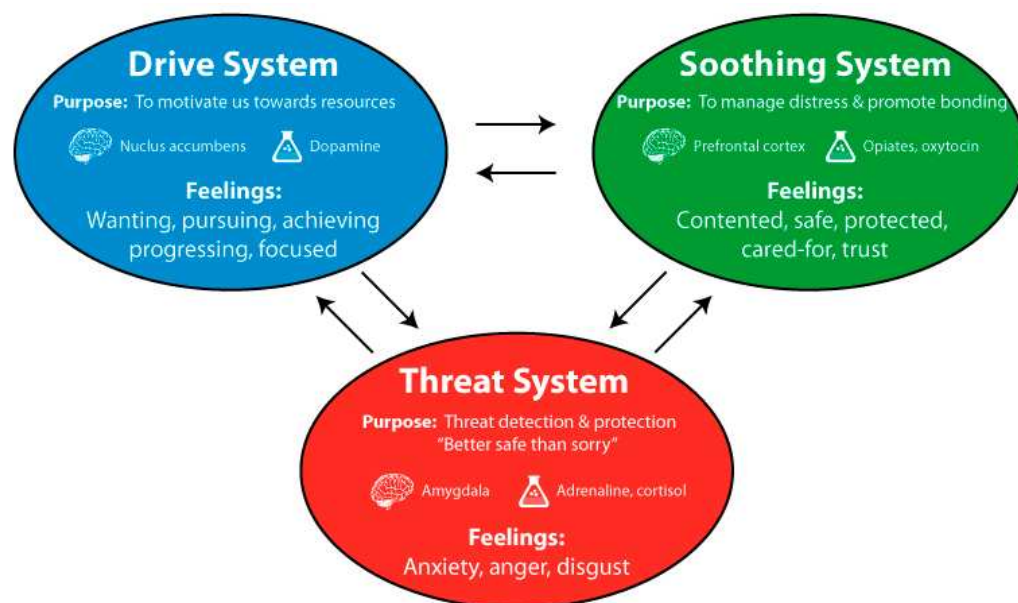
There is growing evidence for the efficacy of psychological therapies, such as compassion focused therapy (CFT), for a range of mental health disorders (Braehler et al., 2012; Heriot-Maitland, Vidal, Ball, & Irons, 2014; Lucre & Corten, 2012) and may lead to a more positive sense of self-worth (Falconer et al., 2014; Gale, Gilbert, Read, & Goss, 2014). However, there is evidence that individuals are not consistently receiving evidence-based psychological therapies in routine clinical care when they are needed (Shafran, Clark, & Fairburn, 2009). Problems with the dissemination of therapies have been identified and include barriers such as the expense associated with service costs, long waiting times for therapy, problems with accessing services, and scarcity of therapies in remote geographical locations

(Shafran et al., 2009). Unfortunately, this is a major concern for younger people as it is estimated that only a quarter of young people with a mental health condition receive treatment (Department of Health, 2014). A former Care and Support Minister, Mr Lamb, stated recently that "children and young people's mental health services need a complete overhaul to stop vulnerable young people missing out on vital support" (Department of Health, 2015, p. 12). In response to these challenges the government published the 'Future in Mind' report (Department of Health, 2015), which has set out a proposal for a five year plan to improve access to care for young people and highlights the need to work in a digital environment in order to provide support for young people that are using online channels to access care.

Due to the difficulties of accessing treatment, there is a movement towards alternative modes of delivering therapies for mild and moderate mood related disorders, including computer software programes, phone apps, websites and chatrooms (Crisp, Griffiths, Mackinnon, Bennett, & Christensen, 2014; Gellatly et al., 2007; Lewis, Pearce, & Bisson, 2012). At present, the NICE guidelines (CG90; National Institute for Health and Clinical Excellence, 2015) recommend the use of low-intensity intervention (such as guided self-help and online-based interventions) for subthreshold to mild-to-moderate depressive and anxiety symptoms. Furthemore, it has been reported that young people, between 16 and 24, are spending more than 27 hours a week on the internet, on average (Ofcom, 2015). Therefore there is a push towards providing online-based programmes as an option for mental health support (Lewis, et al., 2012).

The internet can offer many possibilities for mental health and well-being interventions because of its relative anonymity, widespread and 24-hour access, and low cost to the user (Griffiths & Christensen, 2007). Online-based interventions can

offer support for young people outside of the NHS, whether at school or at home, while promoting a sense of agency, mastery, confidence and learned resourcefulness (Griffiths & Christensen, 2007). Other advantages of online-based self-help interventions that have been proposed include access to a consistent source of therapeutic expertise that can be readily updated, and can incorporate regular problem and symptom monitoring and feedback (Kaltenthaler et al., 2002).

As online mental health interventions is an emerging area, there is a need to increase the evidence base by providing further information on the effectiveness of programmes, guidelines and ethical considerations. Furthermore, as this is a new area of delivering therapeutic support, there is still a limited range of online-based programmes available for young people. In addition, research available on self-compassion among young people is relatively sparse. A previous research has shown a positive association with well-being and self-compassion in adults suggests that it may have similar positive effects for adolescents and young adults (Neff, 2003). Therefore, there is a need for research to investigate the use of CFT in the form of an online based intervention for young people.

The aim of the present study was to develop and begin to evaluate the benefits of a self-help, web-based, CFT intervention for a non-clinical population of young people between the ages of 16 and 25 years. Therefore, an online CFT intervention (YoungMindBeKind.com) was developed, and piloted within a small-scale randomised controlled trial (RCT) in order to determine whether it showed sufficient promise to warrant an application for funding for a subsequent definitive RCT. The pilot study aimed to provide an initial investigation of the effects of YoungMindBeKind.com on self-esteem (primary outcome), as well as self-compassion, depression, anxiety, stress, and quality of life (secondary outcomes).

To the best of the author's knowledge, this is the first study using an online-based CFT intervention for young people. Therefore, the study also sought to gather feedback from participants, in the hope that this might help improve the intervention prior to future research.

Hypotheses

The hypotheses for a large scale, definitive RCT would be that the web-based CFT intervention, YoungMindBeKind.com would significantly improve scores on the primary and secondary outcome measures in comparison to a wait-list control. As per Medical Research Council guidelines (Craig et al., 2006), the aim of this pilot study was to conduct a preliminary investigation of these hypotheses, and in particular to gain an estimate of the post-intervention effect sizes, which could later be used to power a subsequent definitive RCT.

In addition, this pilot study sought to explore four research questions: First, is a web-based CFT intervention acceptable for this age group? Second, what is the level of adherence and attrition? Third, how did the participants experience the intervention? And lastly, what improvements can be made to the intervention?

Methods

Design

The study was a pilot RCT, using a wait-list control, with a four-week follow-up for the intervention group (see Figure 6). In addition, qualitative responses to a feedback questionnaire were analysed using content analysis.

Figure 6. Flow chart of study design and timeline.
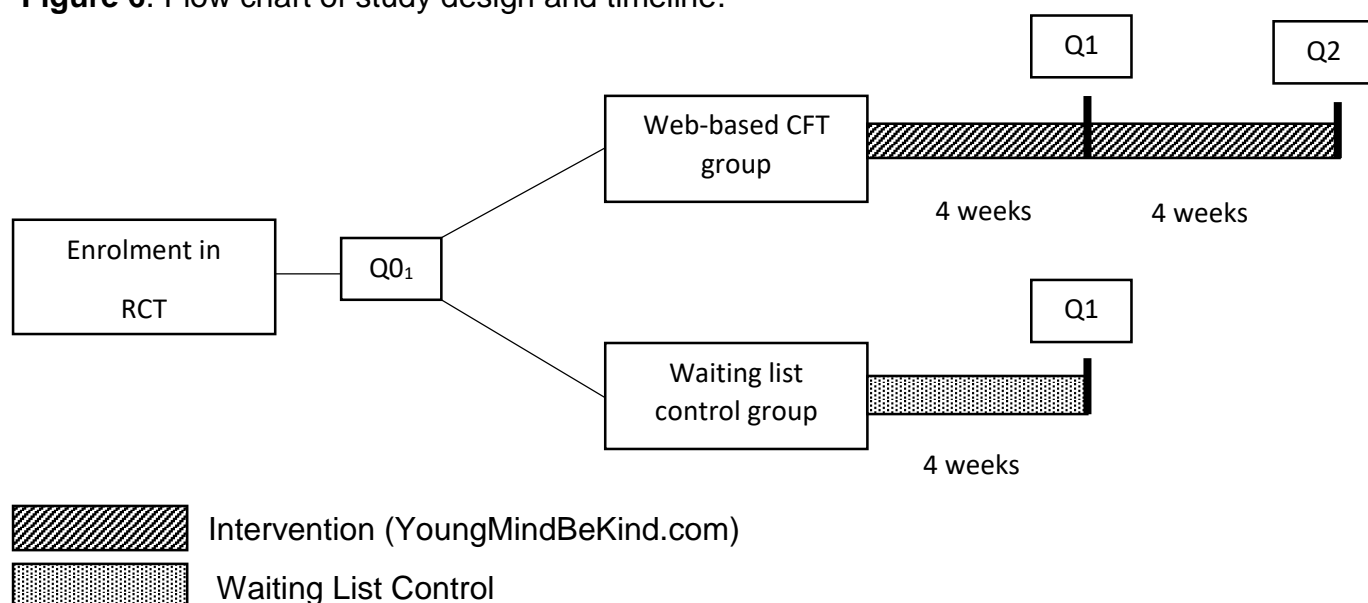
Q0 = Baseline questionnaire

Q1 = Post-test questionnaire

Q2 = Follow-up questionnaire

Participants

Recruitment was through advertisements using a range of recruitment strategies including: 1) posters in university and community centres; 2) emails to schools and charity organisations (i.e. YoungMinds and KidScape); 3) contacting university student unions; 4) using social media by creating a Facebook page and Twitter account; 5) a presentation at the Compassion Focused Therapy 2015 conference, which led to word-of-mouth recommendations to the site.

Recruitment within the educational institutions followed the protocol that was approved by the ethics board in which the researcher first contacted the head teacher or university department head to provide information about the YoungMindBeKind.com programme and offer a meeting to provide a presentation about the study to teachers before approaching students. Participation was entirely voluntary, and the nature of the study was explained to participants in an online information sheet (see Appendix C). Individuals who expressed interest were email information and a link to the consent form, using a well-established online data collection website Qualtrics (www.qualtrics.com) as covered by the Ethics Committee approval. In addition, there was an incentive provided of entry into a draw to win £100 in Amazon vouchers for participants who completed both pre and post measures; participants in the intervention group could stop participating in the intervention at any point and still remain eligible for the prize draw.

Following this initial assessment, participants were randomised to either the YoungMindBeKind.com programme or WL conditions by a researcher who was outside the study team and was blinded to the identity of participants. An online statistical calculator via Sealed Envelope software (www.sealedenvelope.com) was used by this third party, therefore the researcher was unaware of the next assignment in the sequence.

Inclusion and exclusion criteria

There were several inclusion criteria, including being between the ages 16-25 years old, having access to a computer and email, and being fluent in the English language. The intervention was designed for individuals to access the site without needing parental approval, therefore inclusion started at 16 years old. The rationale

for focusing on the age range 16-25 was that they are arguably in a similar developmental stage of middle, late adolescence to young adults, which is influenced by significant cognitive development affecting their prefrontal cortex and influencing their emotional maturity, self-image and judgement (Arnone, 2014). Exclusion criteria included starting formal psychotherapy (e.g. cognitive-behavioural or interpersonal psychotherapy) within the three months prior to the study or planning to initiate such psychotherapy during this study, being currently involved in any other treatment for psychological distress, serious/active suicidal ideation/intent, or no access to computer or email. It was initially intended that an additional inclusion criterion would be for participants to self-identify as having low self-esteem. However this criterion was dropped due to challenges with recruitment.

Measures

Self-report measures were utilised, with four different measures assessing self-esteem, self-compassion, depression, anxiety and stress, and quality of life (see Appendix E for copies of the measures) which were administered online. On providing consent, the participants received the baseline measures via Qualtrics (i.e. a demographic questionnaire and outcome measures).

Self-esteem

The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) was developed as a unidimensional measure of self-esteem in a study of adolescents (Rosenberg, 1965). Several researchers who conducted factor analyses of the ten-item scale have suggested that the scale reflects a two-dimensional construct, comprised of positive and negative images of the self (Bachman & O'Malley, 1986; Kaplan & Pokorny, 1969).The self-administered ten items (e.g. "I feel that I have a number of good

qualities", "At times I feel that I am no good at all") are intend to measure global self-esteem (i.e., a person's overall evaluation of his or her worth) using 4-point Likert scale items ("strongly agree" to "strongly disagree"). The scale ranges from 0-30. Scores between 15 and 25 are within normal range; scores below 15 suggest low self-esteem (Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995).

The RSES has been tested to have good validity (Robins, Hendin, & Trzesniewski, 2001). In addition, the scale showed adequate reliability; internal consistency was 0.77 and the minimum coefficient of reproducibility was at least 0.90 (Rosenberg, 1965). Test-retest reliability for the two-week interval was calculated at 0.85, the 7-month interval was calculated at 0.63 (Silber & Tippett, 1965, Shorkey & Whiteman, 1978). The RSES was chosen as the primary outcome measure as it has been relatively widely used with this age range and therefore has enables greater cross study comparison than self-compassion measures.

Self-compassion

Self-compassion was assessed with the Short Form Self-Compassion Scale ((SCS-SF;Raes, Pommier, Neff, & Van Gucht, 2011).The SCS-SF includes six subscales: Self- kindness, Self-judgement, Common humanity, Isolation, Mindfulness, and Over-identification. This measure consists of 12 items (e.g."I try to be understanding and patient towards those aspects of my personality I don't like") that are rated on a scale from 1 (almost never) to 5 (almost always). To compute a total self-compassion score, the negative subscale items - self-judgment, isolation, and over-identification - are reversed and then a total difference from the total is computed; higher scores indicate higher self-compassion, with total scores ranging from 0 to 60.

The SCS-SF has good psychometric properties, including a Cronbach's alpha ≥ .86 and a high correlation with the long form SCS: r ≥ .97 (Neff, 2003).

Mental Health Symptoms

The Depression, Anxiety and Stress Scales 21 (DASS-21) is a short form of Lovibond and Lovibond's (1995) 42-item self-report measure of depression, anxiety and stress (DASS). The 21-item is composed of three subscales: Depression (DASS-D), Anxiety (DASS-A) and Stress (DASS-S), over the past week. Responses on each item range from 0 (did not apply to me at all) to 3 (applied to me very much). The intensity of any of the three conditions is determined by the sum scores of responses to its seven-item scale. Higher scores indicate greater levels of distress. The cut-off scores recommended for each subscale are shown in Table 3. The DASS-21 has a number of advantages over the full length DASS. It is shorter and, hence, more acceptable for clients with limited concentration, and yet still possesses adequate reliability (Antony, Bieling, Cox, Enns, & Swinson, 1998). The alpha reliability coefficients for the DASS-21 subscales have been examined in clinical and nonclinical samples and reported as .94 for DASS-D, .87 for DASS-A, and .91 for DASS-S (Antony, et al., 1998).

Table 3. DASS-21 cut off scores recommended for each subscale (Antony et al., 1998).

	Depression	Anxiety	Stress
Normal	0-4	0-3	0-7
Mild	5-6	4-5	8-9
Moderate	7-10	6-7	10-12

| Severe | 11-13 | 8-9 | 13-16 |

Quality of life

The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) has been widely used as a measure of the life satisfaction component of subjective well-being. Scores on the SWLS have been shown to correlate with measures of mental health, and be predictive of future behaviours such as suicide attempts (Pavot & Diener, 2008). The scale consists of five items (e.g. "In most ways my life is close to my ideal" and "I am satisfied with my life"), which are rated on a seven-point Likert style response scale (7-strongly agree to 1-strongly disagree). The possible range of scores is 5-35, with a score of 20 representing a neutral point of the scale. Scores between five and nine indicate the respondent is extremely dissatisfied with life, whereas scores between 31 and 35 indicate the respondent is extremely satisfied Pavot & Diener, 2008). The coefficient alpha for the scale has ranged from .79 to .89, indicating that the scale has high internal consistency (Pavot & Diener, 2008).The scale was also found to have good test-retest correlations (.84, .80 over a month interval) and good discriminant validity (Vitaliano, Russo, Young, Becker, & Maiuro, 1991). In addition, it was found that the psychometric properties are not significantly altered when administered online (Howell, Rodzon, Kurai, & Sanchez, 2010).

Ethics

The study was approved by the Canterbury Christ Church University Research Ethics Committee (Protocol number: 075/2014) and an independent research review

panel within Salomons Centre for Applied Psychology (Reference number: PC/VC/083/dissertations; see Appendix B).

All participants were provided with time to understand the nature, purpose and anticipated consequences of research participation and were asked to read a participant information sheet (see Appendix C), before they provided consent to take part in the study (see Appendix D). Furthermore, the researcher's contact information was provided if participants had further questions about the study.

Privacy and confidentiality were maintained as consent was obtained online and stored on a secure password protected area. Confidentiality was further provided as each participant was given a study identification number. Ethical principles for conducting research with human participants were followed in reference to the British Psychological Society guidelines (The British Psychological Society, 2010), the University's research governance framework (Canterbury Christ Church University, 2008), and HCPC ethics regulation for students (The Health and Care Professional Council, 2012).

Particular consideration was given to the possibility of participants experiencing distress, given that the study was being conducted online. In the intervention design specific attention was placed on developing safety procedures for participants completing the programme remotely, who might evoke strong emotions in themselves when completing the compassion-based exercises, such as increased self-criticism and shame (Gilbert & Irons, 2005; Gilbert & Procter, 2006; Rockliff et al., 2011). Participants were encouraged to discontinue the YoungMindBeKind.com programme should they become distressed. Support and useful resources were provided within the informed consent form as well as throughout the intervention on

the website, under the tab 'Feel in Crisis', which contained emergency numbers (NHS emergency line & Samaritans) and advice to contact their local GP.

Procedure

Consultation and Intervention Development

The researcher reviewed the study concept with a team of health professionals (clinical psychologists, researchers, nurses, social workers, and psychotherapists) involved in the London-based CFT Special Interest Group. The CFT Special Interest group members provided recommendations on CFT techniques that could be applied online and on how the experiential exercises might be adapted to the web-based platform. In addition, the study protocol was presented at the Compassionate Mind Foundation conference in a poster presentation (see Appendix J), and this elicited further helpful recommendations. .

Furthermore, the researcher held two focus groups with twelve adolescents and young people, between the ages of 16-20 to brainstorm some names and ideas for the website. The group was asked to vote on their favourite name for the website chose YoungMindBeKind.com. At a second focus group the attendees created a list of important aspects for the websites, which were, attractiveness, colour, games, interaction, easy to understand, limited text, illustrations, fun, and age appropriate. There were also two meeting with researchers who had recently created online-based self-help interventions, to gather further information around website development, ask technical questions and hear about participant feedback gathered from their research. The information gained from these different forms of consultation was taken into account as the intervention was developed.

Following the consultation phase, the researcher and one of her supervisor, Dr Irons from the Compassionate Mind Foundation, met on several occasions to develop module content, session layout, website structure and exercise selection.

Intervention and Control Conditions

Participants assigned to the web-based CFT, YoungMindBeKind.com, started the intervention immediately following randomisation, while control participants had to wait 4 weeks, during which they only received two emails for their baseline questionnaires and post-questionnaires. All control participants were guaranteed access to the programme after the post-wait-list measures had been completed. The web-based CFT group were invited to complete post-test questionnaires after the 4 week period, even if they had not completed the entire online programme or had prematurely ended the intervention, to keep the timing of the assessments the same for the two groups. The web-based CFT group retained access to the online intervention during the 4-week follow-up period following completion of the post-intervention measures.

The intervention, YoungMindBeKind.com, was based on CFT techniques already being used in the clinical setting (Falconer et al., 2014; Paul Gilbert, 2009; Goss & Allan, 2010; Heriot-Maitland et al., 2014). The website was created by developers at Dataphiles (www.dataphiles.co.uk; see Figure 8 & 9). In addition, various artists helped created the website illustrations (see example, Figure 7), videos, and interactive content for the CFT psychoeducational and experiential exercises.

Figure 7. *An example of an illustration from Session 2 depicting CFT's three* systems.

Illustration Description: created by artist Ragaragno (Ukraine). To provide a visual on the website for participants on the 3 systems in CFT for emotional regulation (Drive, Soothing & Threat).

The development of the intervention was an interactive and iterative process, involving several versions for which the researchers and consultations team provided input and feedback on, concerning the content, layout, visual features and ease of navigation. The intervention included a structured 8 session programme (see Table 4, see Figure 8), with two CFT exercises to complete during the week, and ended with a review session (Session 9). Sessions were designed to take about 20-30 minutes. Participants could access the intervention at any time in their personal environment and complete the exercises on their own time.

Appendix G provides a detailed overview of the content of each session. In brief, the first part of the intervention aimed to provide psychoeducation to participants about the core concepts of CFT, such as the definition of compassion (Welford, 2012), the evolved mind (Gilbert, 2010), the 3 affect-regulation system (Gilbert, 2010) and the importance of affiliation, warmth and affection (Gilbert, 2009). The following modules explored imagery and built on this important CFT technique, while working on exercises such as creating a safe place (Gilbert, 2010) and a compassionate self (Gilbert, 2009). The final modules explored being compassionate to oneself and putting it into action with the exercises of compassion thought diary (Welford, 2012)

and compassion letter writing (Gilbert, 2010). The modules were organised in a pre-specified order, and participants were sent a weekly email to notify them which modules to complete each week and homework reminders.

Participants had to log in to the programme via the website with a personal username and password, secured by Dataphilis, and were able to download material from the website or return to listen to the audio files to practise throughout the week. Participants were asked to also rate after each session how helpful or difficult they found the session.

Table 4. Topic of content for each session of YoungMindBeKind.com CFT intervention.

Session	Topic
Session 1	Psycho-education on our evolved mind and CFT
Session 2	Affect regulation: The three affect-regulation systems
Session 3	Introducing imagery & creating a safe place
Session 4	Compassion flowing in: using memory
Session 5	Compassion flowing out
Session 6	Self-compassion: ideal compassionate self
Session 7	Compassionate thought diary
Session 8	Compassionate letter writing
Session 9	Overview of sessions and progress

Figure 8. Website Homepage.

During the web-based CFT intervention, participants normally had asynchronous contact with the researcher once or twice a week, unless the participant requested further contact or had any questions about the session or website. The contact was by email in which the researcher would provide module instructions and/or reminders to complete specific modules for that week. Sessions were designed to take about 20-30 minutes, in which participants were asked to complete 2 per week and practice the homework exercises throughout the week. Participants could access the intervention at any time in their personal environment and complete the exercises on their own time.

Figure 9. Session website page.

Statistical Analyses

All analyses were conducted using SPSS version 22. Baseline differences between the web-based intervention and WL are expressed as differences in proportion for categorical data and as the mean difference for continuous data. Chi square tests were used to compare categorical measures between the groups, and t tests or Mann-Whitney tests to compare continuous measures, depending upon whether the data met t test assumptions.

To explore the efficacy of the web-based CFT intervention programme, data collected at baseline and at second assessment were analysed. Between-group effect sizes were calculated according to Cohen's d. Effect sizes of 0.8 were considered large, effect sizes of 0.5 moderate, and effect sizes of 0.2 small (Cohen, 1992). To ensure quality assurance outcome measures scores were double checked by a third party and the analysis was checked by supervisors and a university statistics consultant.

Content analysis was used to analyse the qualitative data from the feedback provided by participants that had completed the online intervention. All responses were classified into text units, which were allocated accordingly to a data-derived coding frame (see Appendix I). The numbers of respondents that made a comment fitting into a specific category was recorded. The entire questionnaires were rated by an independent coder. The Cohen's kappa coefficient indicated that there was an almost perfect agreement between the two raters coding, $k=.962$, $p <.0005$. Please see Appendix H for coded questionnaires and Appendix I for coding scheme.

Results

Participant Flow

From the 56 participants initially interested in participating in the study, 2 (4%) did not meet the age requirement, 1 (2%) was currently in a form of psychological therapy, 4 (7%) declined to participate, and 9 (16%) lost contact and did not reply to emails. A total of 40 participants were randomised into two groups (see the CONSORT diagram, Figure 6). Within the YMBK web-based CFT group, a total of 13 participants (65%, 13/20) completed the intervention and 7 participants (34%, 7/20) were considered treatment non-completers. Within the WL group, a total of 15 participants (75%, 15/20) completed the intervention and 5 participants (25%, 5/20) were considered treatment non-completers. Participants who did not complete the trial were indistinguishable from completers on any of the baseline psychological variables (see Table 5).

Table 5

Group comparisons on primary outcome measures for baseline between completers and non-completers.

Variables	Completers (n=29)	Non- Completers (n=11)	Between-group difference
Rosenberg self-esteem	18.5(6.0)	17.9(5.1)	$t(38) = .26$, $p= 0.79$
Depression Anxiety and Stress Scale			
Depression	4.7 (3.6)	5.1(4.3)	$t(38) = .27$, $p= 0.79$
Anxiety	4.3 (3.4)	5 (4.3)	$t(38) = .52$, $p= 0.61$
Stress	7.1 (3.1)	9.1 (4.1)	$t(38) = 1.62$, $p= 0.11$
Self-Compassion Scale	33.8 (9.4)	31.7 (6.2)	$t(37) = .65$, $p= 0.52$
Satisfaction with Life Scale	23.6 (6.7)	22.7 (4.3)	$t(38) = .40$, $p= 0.69$

Four-week YMBK group follow-up assessments were completed by 6 participants (40%, 6/15). Reasons for treatment non-completion were given by 57% of the YMBK group non-completers (4/7), which were; starting formal therapy (1), exams (2), and personal engagement (1).

Figure 10. CONSORT diagram: Flow chart of participants through each phase of the study.
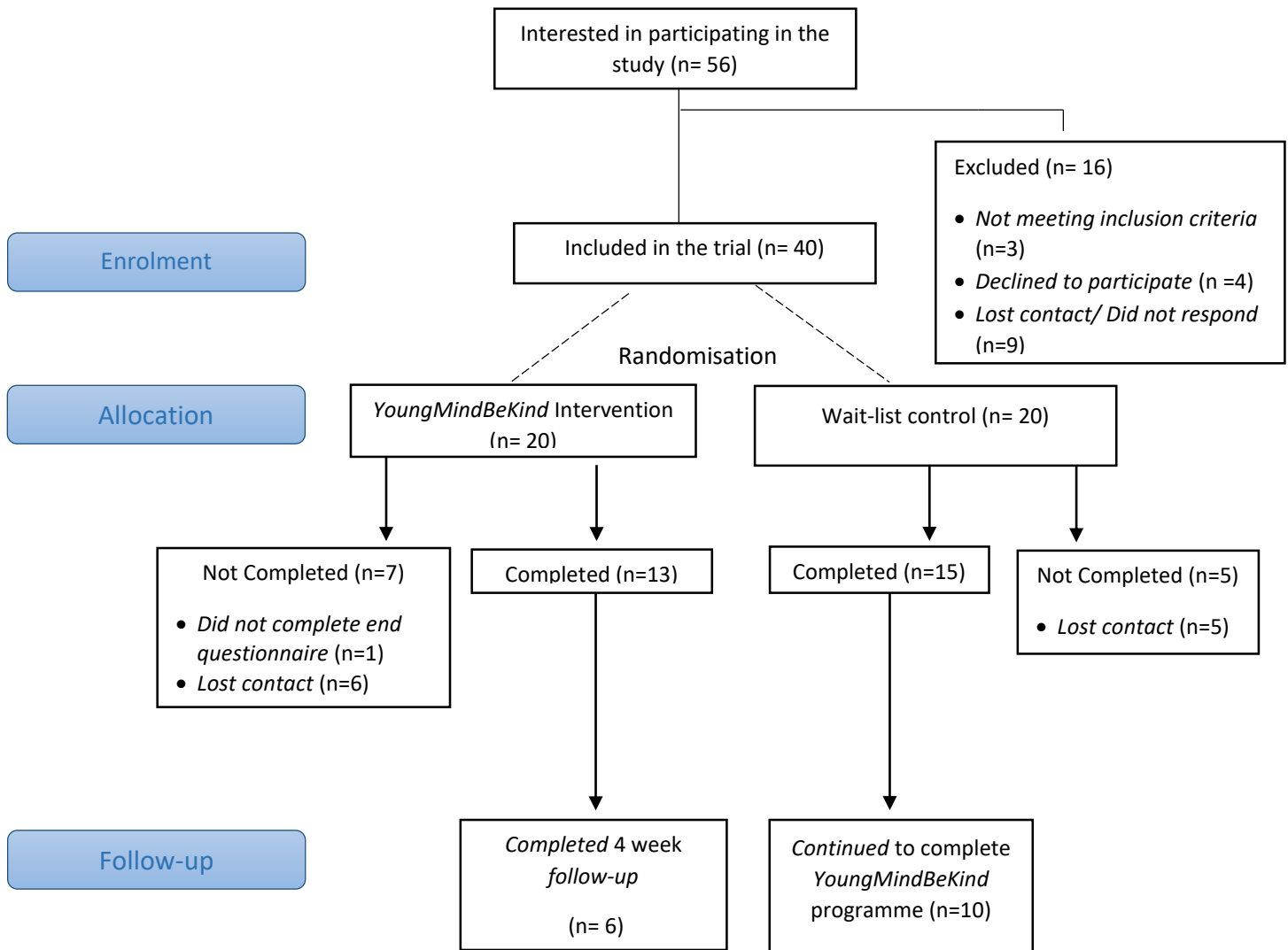
Baseline demographics and clinical characteristics

Baseline sociodemographic and psychopathological characteristics of the treatment and the wait-list group are presented in Table 5. The sample was characterised by a mean age of 21.6 years (SD= 3.0, range 16-25). Approximately 65% of the participants were female. Randomization was successful: no significant between group baseline differences emerged for any of the background or psychopathological variables. Symptom severity at baseline was normal-mild depression symptoms (DASS score: range 0-6), mild anxiety symptoms (DASS score: range 4-5), and normal-mild stress symptoms (DASS scores: range 0-9). Mean scores on other outcomes are reported in Table 6.

It can be seen that participants on average were in the medium range for self-esteem scores (RSES) (M=18.3, SD 5.7); were in the medium range for self-compassion scores (SCS) (M=33.3, SD 8.7); were generally satisfied on the scores of the quality of life scale (SWLS), but had some areas where they would very much like some improvement (M=23.4, SD 6.0).

Table 6. Baseline characteristics of participants

Variable	Overall (n=40)	Intervention (n=20)	Waitlist control (n=20)	Test statistic	df	P value
Age (years), mean (SD)				8.3	9	.51
	21.6 (3.0)	22 (3.0)	21.1 (3.0)			
Gender, n (%)				.4	1	.51
Female	26(65)	12 (60)	14 (70)			
Ethnicity, n (%)				2.6	5	.75
White British	19 (47)	10 (50)	9 (45)			
White Other	14 (35)	6 (30)	8 (40)			
Asian	2 (7.5)	2 (10)	1 (5)			
Asian British						
Black/African/Caribbean	1 (2.5)	1 (5)				
Mixed	1 (2.5)	1 (5)				
Other	2 (5)		2 (10)			
Level of education, n (%)				4.0	5	.55
Primary School	1 (2.5)		1 (5)			
Secondary School	12 (30)	6 (30)	6 (30)			
College	4 (10)	3 (15)	1 (5)			
NVQ	4 (10	1 (5)	3 (15)			
Bachelor's Degree	18 (45)	9 (45)	9 (45)			
Master's Degree	1 (2.5)	1 (5)				
Doctorate Degree						
Professional Degree						
Mental health[a], mean (SD)						
Depression	4.8 (3.8)	5 (3.7)	4.7 (3.9)			
Anxiety	4.5 (3.5)	3.5 (2.8)	5.6 (3.9)			
Stress	7.7 (3.5)	7.2 (3.7)	8.2 (3.2)			
Self-esteem[b], mean (SD)	18.3 (5.7)	18.3 (5.6)	18.5 (5.9)			
Self-compassion[c], mean (SD)	33.3 (8.7)	32.4 (6.4)	34.1 (10.5)			
Quality of life[d], mean (SD)	23.4 (6.0)	23.4 (5.9)	23.4 (6.4)			

[a]Depression Anxiety Stress Scale [b]Roseberg Self-Esteem Scale [c]Self-Compassion Scale - Short Form [d]The Satisfaction with Life Scale

Efficacy of YMBK web-based CFT intervention

Outcome on self-report measures

Table 7 shows results on outcome measures, including change scores. Analyses of independent t-scores between YoungMindBeKind.com group and WL group showed there was no statistically significant between-group difference in pre-post change scores on the primary outcome measure, the RSES. In addition, there was no significant difference in change scores found on the secondary measures: SCS; DASSD; DASSA; DASSS; and SWLS. The corresponding effect sizes (Cohen's d between groups at post-treatment/wait-list) were 0.17 for RSES, 0.11 for DASS, 0.45 for SCS, and 0.01 for SWLS. Therefore, due to the study's small sample size the overall statistical power is low (0.20) creating a reduced change of detecting a true effect. However, this is a pilot study, with a primary aim of estimating an effect size for a subsequent definitive, fully powered trial. The effect size that could be used for this purpose is the point estimate for the primary outcome measure of 0.20. To detect an effect of this magnitude with power set at the conventional level of 0.80, a definitive RCT would need 788 participants. If however the primary outcome measure for the definitive trial was self-compassion then its larger effect size estimate of 0.45 would lead to a required sample size of 158. For the majority of measures, the mean trends were changing in the direction of greater pre to post improvement for the intervention group than the control group; see Figure 11.

Table 7. Treatment outcomes for completed participants in the YMBK group and WL group.

	Web-based CFT (n=13)			WL (n=15)			t-test	
All participants (n= 28)								
	Baseline Mean (SD)	Post-test Mean (SD)	Pre-post difference Mean (SD)	Baseline Mean (SD)	Post-test Mean (SD)	Pre-post difference Mean (SD)	t-value	P
Self-esteem	18.9 (5.4)	19.6 (5.6)	.7 (4.3)	18.3 (6.9)	18.4 (7.9)	0.1 (3.4)	0.44	0.66
Self-compassion	33.9 (6.9)	37.7(8.3)	3.8 (7.6)	33.7 (11.7)	33.9 (12.7)	0.2 (8.5)	1.18	0.25
Mental health								
Depression	4.4 (2.7)	3.5(2.4)	0.9 (2.5)	4.9 (4.4)	4.9 (4.8)	0.0 (2.9)	0.79	0.43
Anxiety	2.9 (1.6)	2.4 (2.6)	0.5 (2.6)	5.5 (4.2)	5.3(4.1)	0.2 (3.7)	0.28	0.78
Stress	5.6 (1.9)	4.9 (2.3)	0.7 (1.4)	8.5 (3.5)	8.9 (4.1)	0.4 (4.5)	0.94	0.36
Quality of Life	24.5 (6.7)	26 (7.5)	1.5 (3.1)	22.9 (7.0)	24.5 (6.8)	1.6 (7.2)	0.03	0.97

Figure 11. Pre-post measure means over time for the web-based YMBK group and the WL control group.

Depression

Anxiety

Stress

Quality of Life
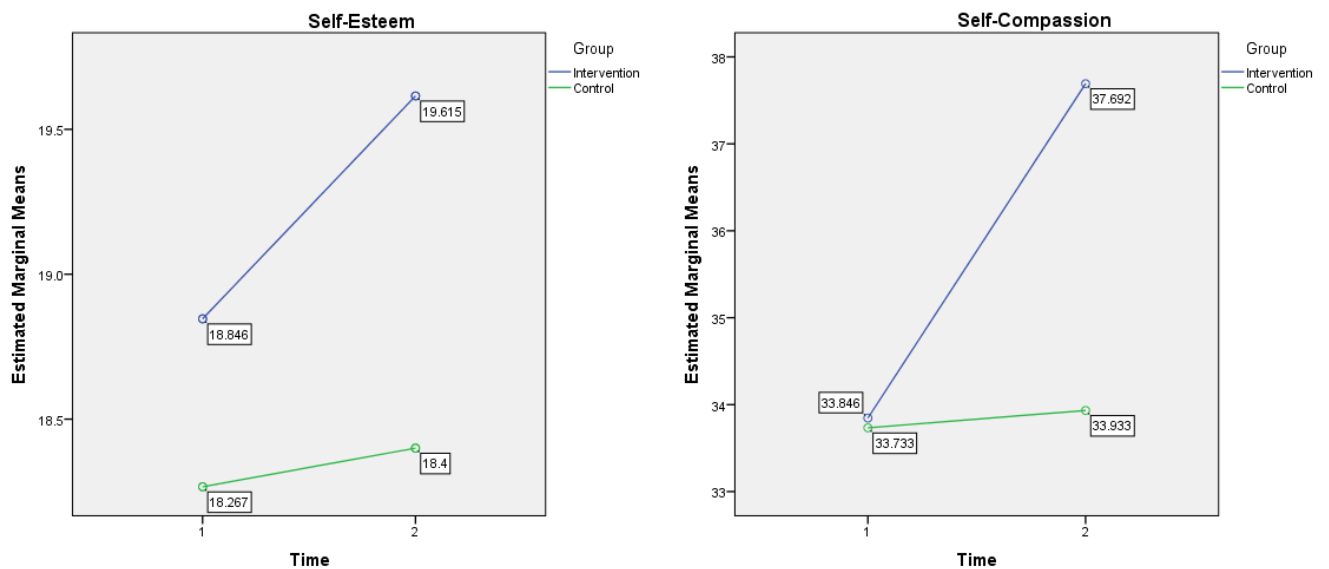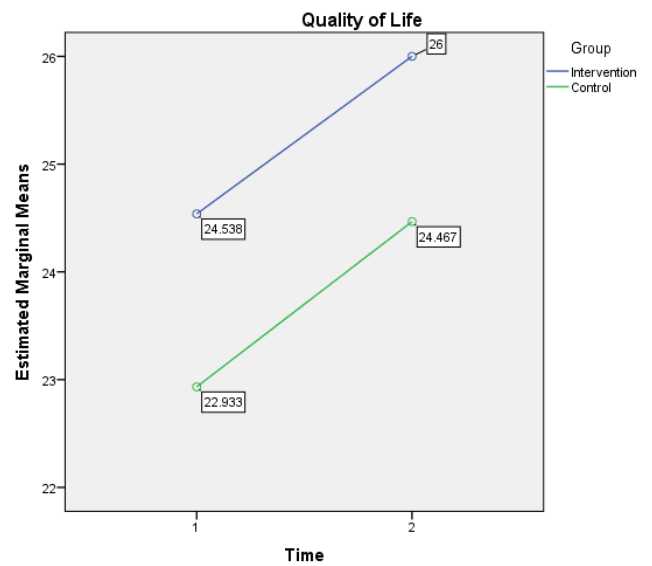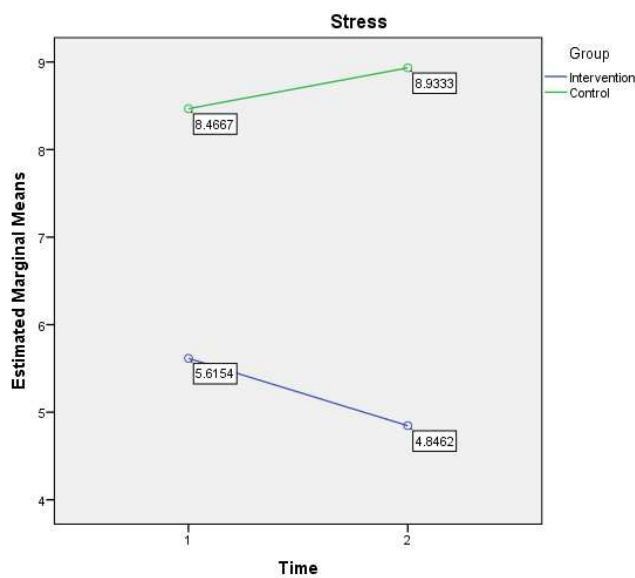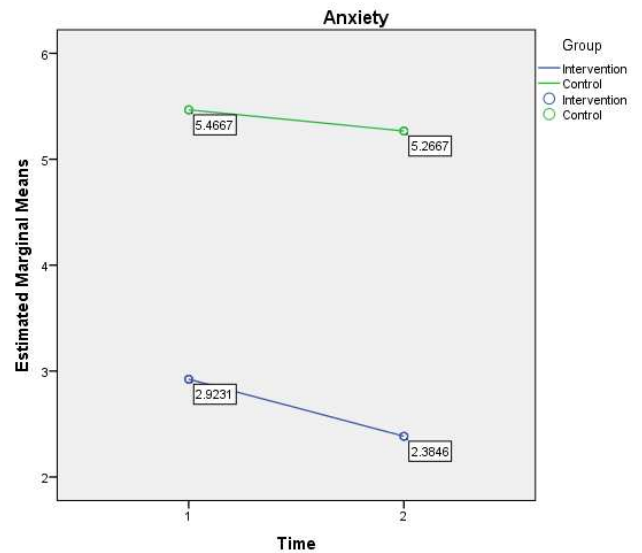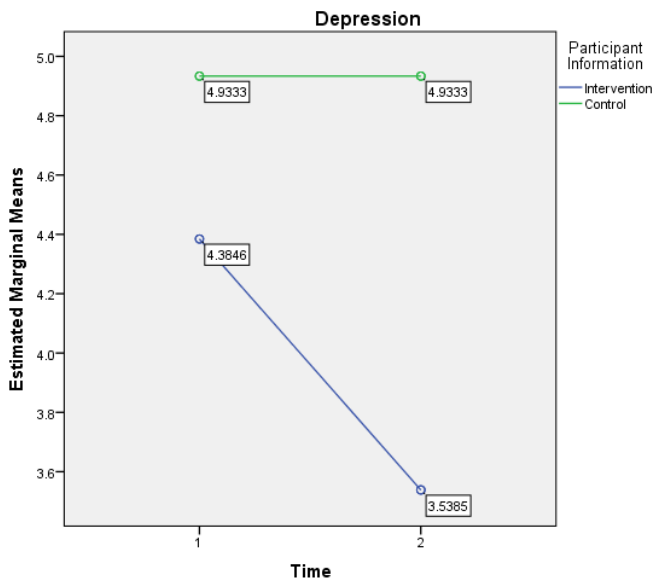
Adherence and modules completed

Participants in the intervention group on average reached at least the fifth module, with 6 out of 13 participants (46%) completing all 8 modules (see Figure 12), and the review session in module 9. The average number of modules reported as being completed was 5.92 (SD = 2.78; Median = 6). The duration and the number of YoungMindBeKind.com sessions completed did not correlate with outcome as indexed by the four measures' change scores: RSES (r= 0.11, p= 0.72); SCS (r= -0.05, p=0.89); DASS-21(r= 0.12, p=.073); SWLS (r= 0.33, p=0.27).

Figure 12. Participants' completion of modules within the intervention.

Adherence to Intervention

(Bar chart showing Total Participants (y-axis, 0 to 14) versus Module Numbers (x-axis, 1 to 9))

- Module 1: 100%
- Module 2: 100%
- Module 3: 85%
- Module 4: 85%,
- Module 5: 62%
- Module 6: 62%
- Module 7: 46%
- Module 8: 46%
- Module 9: 46%
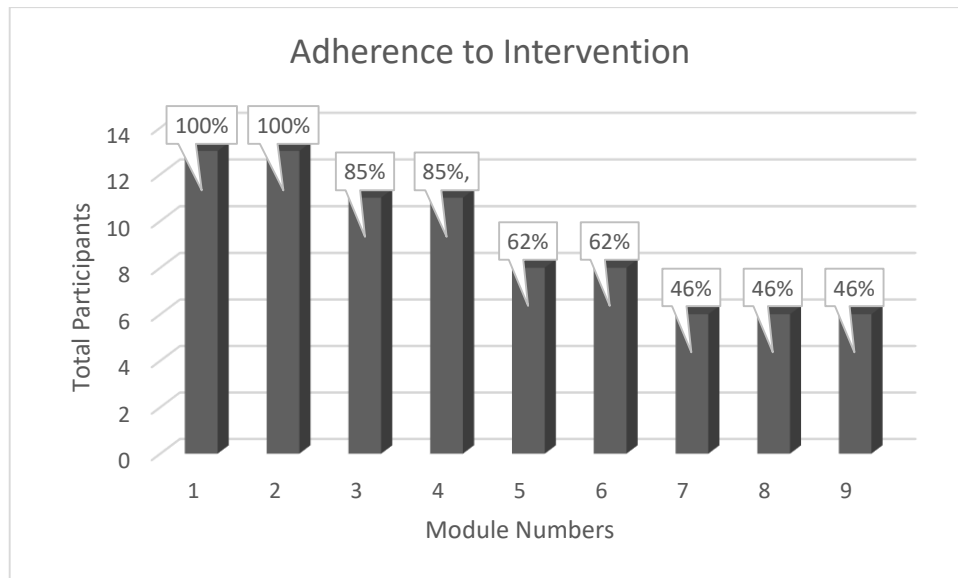
Follow-up

At the post-intervention 4-week follow-up, only 6 YoungMindBeKind.com participants completed the questionnaires, yielding a 60% rate of withdrawal from post-treatment to follow-up. This may have been due to the lack of incentive provided for follow-up measure completion and/or due to time period, which landed during the Christmas holiday and university exam period. Table 8 shows the outcome at follow-up. Analysis of the paired sample tests at follow-up revealed no significant differences were found for the six measures.

Table 8. Follow-up (4-weeks) Treatment outcomes for web-based CFT group

	Web-based CFT (*n*=6)			
	Baseline	Follow-up	*t*	*P*
Self-esteem	20.2 (5.8)	20.7 (4.8)	0.59	0.58
Self-compassion	29.8 (1.7)	29.8 (2.9)	0.10	0.92
Mental health				
Depression	1.8 (1.2)	3.0 (1.7)	1.4	0.22
Anxiety	1.5 (1.8)	1.7 (2.3)	0.31	0.77
Stress	3.8 (1.0)	6.0 (2.7)	1.73	0.14
Quality of Life	29.8 (1.7)	29.8 (2.9)	0.00	1.00

Qualitative Feedback

A content analysis resulted in four main categories (Appendix I). The qualitative feedback was drawn from a small sample (n=7) due to a technical error on the website, which failed to record the written data for the majority of participants. An analysis of the material revealed a number of emerging themes, relating to the experience of the web-based CFT intervention, and key learning points.

I.   Understanding Compassion

One of the core elements of the YMBK programme was providing psychoeducation around the nature of compassion and how it relates to our well-being and positive affect. Participants reported valuing the opportunity to learn more about compassion and becoming more sensitive to how it is important in their lives and others.

> *'I found I learnt more about myself and how to be compassionate to others.'*

> *'It was great to learn m*ore about CFT and how to be more compassionate to *yourself.'*

'I found that I didn't know much about compassion, I thought it was basically empathy when it's more than that.'

One participant observed the impact of compassion in their relationships with others:

'I learnt that compassion is a very important part the human way of interacting with each other and helps calm us down.'

II. Activating Compassion

In CFT, there is an importance placed on practising to generate experiences of receiving compassion from others and from yourself. Several exercises in the YMBK programme focused on the 3 flows of compassion: a) compassion flowing in; b) to others; c) self-compassion. However, in previous compassionate work participants can find these exercises bring up various forms of resistance and fears in which individuals may have thoughts that centre around "not deserving" or "they can not do it" or may even feel a bit frightened (Gilbert, 2010).

Participants noted that some of the CFT exercises were easier than others, in terms of focusing on activating compassion.

*"*I found the soothing breathing exercise helpful but it became more difficult when I had to visualise a compassionate memory.*"*

"I enjoyed the self-compassion exercise, it helped me a lot"

*"I found the brea*thing exercise easier to practise throughout the week then the *compassion exercises"*

Several participants commented on having difficulties with writing compassionate self-reflective comments. The reflective compassion writing exercises ask individuals

to open up about difficulties which may activate the threat system and a sense of shame and fear (Gilbert & Irons, 2005). This exercise may prove to be too difficult as an exercise for an online-based programme or require further guidance from a coach or therapist.

> "I found the self-*reflective questions very difficult to know what to write"*

> *"I was unable to write the compassionate letter to myself, it felt too odd"*

> "…one challenge which was intrinsic in all of them (exercises) was opening up, letting my guard down, and being brutally honest with myself"

> "I found it difficult to relate to bad feelings to how I perceive myself"

In addition, several participants mentioned experiencing difficulties with the imagery exercises (such as safe place and creating a compassionate image.)

> *"I found all the visualisation exercises extremely hard."*

> *"I wasn't able t*o pic*ture a compassionate character"*

III. Found intervention acceptable

Overall, participants tended to report that the YMBK programme was helpful:

> *"I enjoyed taking part in the course and had the inkling throughout that it* would be of great benefit to me but also to others due to the very evidently *thorough research that was behind it all"*
>
> *"It was great!"*
>
> *"It was informative, easy to access, easy to use"*
>
> *"It incorporated various elements of learning – such as reading, listening* *and even speaking out loud"*

IV.   **Recommendations**

Participants also commented on how the YoungMindBeKind.com programme might be improve in the future. These related to providing more interactive elements, improving the layout and decreasing the amount of text in the sessions.

"Would improve with more interactive questionnaires"

"The videos could be a little more advance."

"I think the length of the questions and reading was a lot"

"I think the more interactive the better."

"I would like a journal aspect to the website added"

Discussion

This is the first study to the author's knowledge that has explored the effects of a web-based CFT intervention, YoungMindBeKind.com, for young people and its effects on self-esteem, self-compassion, mental health symptoms and quality of life. The usage patterns indicated that YoungMindBeKind.com was engaging, with 13 out of 20 participants (65%) completing the intervention. When compared to the waitlist control group, a non-significant trend towards improvements in self-esteem, self-compassion and quality of life and reductions in mental health distress was found. However, the estimated effect size for the primary outcome measure was small (RSES; d=0.17) therefore the low power of the pilot study may have created reduced change of detecting a true effect. In addition, the consequent sample size required for a definitive trial with this primary outcome measure is 788 participants. Perhaps given this information it may be more appropriate to have self-compassion as the

primary outcome measure, as it had a larger effect size (SCS-SF; 0.45) and only required a sample size of 158 participants.

The pilot study played a key role in the development and refinement of the YoungMindBeKind.com for young people by helping guide improvements in research procedures in areas such as recruitment, randomisation, and retention of participants. The modest level of engagement and successful recruitment, within a very narrow window of time provided for this pilot study, portrays that there is a need, interest and feasibility for online interventions within a non-clinical population. Attrition rates from the YoungMindBeKind.com study was 30% (12/40 participants) which is comparable to rates of RCTS of other psychological online self-help intervention which have reported an average of 31% (Melville et al., 2010). Furthermore, participants often held generally a favourable view towards the online intervention in terms that they reported that they found it accessible, informative, user-friendly and enjoy the multi-exercise approach to learn about Compassion Focused Therapy.

Several helpful recommendations were provided in regards to intervention revisions to improve retention and increase effectiveness of the online CFT exercises. Some of the recommendations provided by participants focused on improving the interactive elements of the website by providing better quality videos, interactive questionnaires and a personal journal section to the website was proposed. Including a self-monitoring diary within the web-based CFT intervention which may be beneficial to future research to gather data on self-attacking and self-soothing thoughts and feelings. Gilbert and Procter (2006) incorporated weekly diaries within their research design and reported a significant change in which participants found their self-critical thoughts became less frequent, less powerful and less intrusive,

while their self-soothing thoughts became more powerful and accessible following CFT clinical groups. It would be interesting to investigate how thoughts may be influenced by an online-based CFT approach.

In addition, several participants mentioned they found several of the self-reflective CFT exercised difficult and evoking self-critical thoughts. This may have also reflected in the study's adherence rates, in which 54% of participants dropped out before session 7; the later sessions focused on more self-reflective CFT techniques. Participants might have been finding it difficult to generate alternative thoughts or feelings to their self-attacking thoughts, which has been found to be a barrier in CFT clinical practice (Lee, 2005). Within face-to-face CFT practice there is attention placed between the client and therapist to draw feelings back towards soothing image/affect system and focusing on compassion qualities when the threat system is activated (Gilbert & Irons, 2005; Lee, 2005). Future thought is needed on how to provide guidance through such exercises in the online version. One option which has been used within Mindfulness-based online interventions, Mindful Mood Balance course (Boggs et al. 2014; Dimidjian et al. 2014), is using videos which are excerpts of MBCT teaching that help guide participants through difficult mindfulness practice and help them reflect on their own experiences. In summary, the findings suggest that YoungMindBeKind.com may need to be modified into a simpler, possibly shorter, more interactive format so that young people find it easier to engage in the exercises. Future web-based CFT research may wish to apply more supportive videos to help participants in sessions where self-reflective exercises may evoke self-criticism, self-doubt and participants may need further supportive with reframing their thoughts and emotions towards a more compassionate stance.

Strengths & Limitations

There were a number of study limitations that resulted in reduced power and possible selection bias favouring the null outcome. In addition to the small number of participants in the YoungMindBeKind.com group who completed 5 or more modules (35%), there was attrition from both groups that reduced the total number of participants who completed the study and provided end questionnaires (YMBK, 65%; waitlist, 75% retained), and even less providing follow-up data (YMBK, 30% retained). The loss of post-interventions data from the YoungMindBeKind.com participants further reduced the study's power.

We also acknowledge that the low adherence rate, with only 46% completing the entire YoungMindBeKind.com programme (8 sessions), may have limited the potential effectiveness of the intervention. Without full engagement by the majority of participants the quality and benefit obtained in the compassion based exercises within the YoungMindBeKind.com programme may have been reduced. A possible negative of using the general population as a sample is that only 31% (4 out of 13 participants) scored low on self-esteem (score of <15) therefore the intervention may be more meaningful for a clinical population that may be struggling with self-esteem difficulties. In addition, the study's participants were highly educated which brings into question regarding the wider generalisability to users of clinical services. Furthermore, there may have been potential floor/ceiling effects of the DASS, which may thus have limited the factors regarding change for participants.

The study was also limited by the small number of participants who provided qualitative feedback (n=7), which limits the extent to which we can learn from these participants' experiences of using the YoungMindBeKind.com programme. The

limited number of questionnaires was in part due to technical errors on the website which meant the web developers lost six participants' feedback which had not been saved in their database correctly.

Self-report measures were used which may have influenced the validity of the participants' responses on questionnaires. Various biases may affect the results, such as social desirability bias and errors in self-observation (either under or over reporting of severity of symptoms) which must be considered (Hugh & Daniel, 1981). Specifically, with assessing self-esteem there may be self-report biases in which tests are vulnerable to the 'ceiling effect' or the tendency for individuals to show themselves in a positive light when reporting about oneself (Wells & Marvell, 1976). However that they have good psychometric properties, as detailed earlier, suggesting that we can place some trust in them. In future research, it may be beneficial to consider including objective measures of participants' increased activity or observed changes by a third-party in areas of self-esteem and self-compassion.

In addition, the sample was self-selected and there may have been particular reasons why participants volunteered to take part in the study that may have influenced the results. For example, participants may have had an interest in self-compassion thus engaging in other types of self-learning in regards to how to improve this technique. Furthermore, the majority of the study sample were White British therefore generalization is limited. Further research is needed to assess the role of self-help interventions on self-esteem and self-compassion in more heterogeneous samples.

Despite its limitations, the study had various strengths. The YoungMindBeKind.com programme utilised a therapy (CFT) which draws on a theory of affect regulation with

an empirical base in neuroscience and evolutionary psychology (Gilbert, 2000, 2010). This was the first randomised controlled trial of an online version of CFT for young people. Given that, the intervention appeared to be acceptable in terms of the number of people involved, the majority of which completed at least 6 sessions; participants from whom we had feedback spoke positively about their experience and the overall intervention, which reinforces the potential value of providing an online self-help version of CFT for this population.

Implications

As this study is preliminary pilot work and of itself does not support clinical recommendations rather leads to a series of recommendations for the next steps in this research programme which in turn should lead to clinical implications in due course once large, definitive trials have been conducted.

The implications for the next steps of the research programme to consider revisions in session content, improving attrition rate, and also how engagement with the modules may interact and bring change. For example, does revising the website to make sessions to a maximum of 6 modules improve engagement? With further guidance do participants experience greater benefits of the 'imagery' and 'self-reflective' sessions? As previous CFT research has shown that the imagery experiential practice has the largest effect on pre-post session rating distress and calmness (Heriot-Maitland et al., 2014) thus further revisions may allow for participants to connect to the compassionate imagery work, with support around activating positive affect and particularly affiliative emotions (Gilbert, 2009). These may be important questions for future research and adaptations to online CFT interventions.

If a definitive RCT of an online CFT intervention does prove effective, arguably it could potentially be helpfully in regards to working with adolescents and young people from difficult, complex family environment. As Neff and McGehee (2010) have reported that self-compassion is significantly correlated with the degree of family functioning, in that adolescents and young adults from harmonious, close families were more self-compassionate, whereas those from stressful, conflict-filled homes were less self-compassionate. It has been considered that oxytocin may contribute to this link between family variables and self-compassion, in that increased levels of oxytocin have been related to increased feelings of trust, calm, safety, generosity and connectedness (Carter, 1998; Feldman, 2007) and secure attachment (Marazziti, 2005). Therefore, it may be that more supportive, compassionate family increase oxytocin levels created a more conductive mindset to self-compassion for young people. However, as there is encouraging findings that self-compassion can be enhanced with practice (Gilbert & Procter, 2006). Therefore, it may be beneficial and more pragmatic for some individuals in clinical practice to learn how to be more self-compassionate as a complement to other interventions that address improving complicated family dynamics.

Conclusions

In conclusion, the pilot RCT sought to evaluate the effectiveness and acceptability of a web-based CFT intervention by creating an online website YoungMindBeKind.com, and obtaining an initial effect-size estimate for a full scale RCT trial. It found that pre-post change scores on all measures were not significantly different between groups. However effect size on the main primary measure was small (RSES; d=0.17), indicating that the low power of the pilot study may have created reduced change of

detecting a true effect. Qualitative feedback from questionnaires identified several

themes relating to understanding compassion, activating compassion, finding the

intervention acceptable, and providing valuable future recommendations for the

website. As the internet delivery offers flexibility and sustainability, the implications of

these findings for the next steps in this research programme are to focus on

identifying better ways to improve adherence, retention and explore the required

level of guidance (in the form of a therapist or coach) needed to improve the

understanding of CFT techniques for young people. Finally, future recruitment may

wish to focus on a more clinical population in which low self-esteem may be a

significant concern.

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Section C:

Appendix of supporting material

Appendix A

CONSORT: quality criteria for evaluation of RCTS (Schulz, Altman & Moher, 2011)

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Appendix B

Ethics approval

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Appendix C

Participant information sheet

The Compassionate Mind Foundation

PARTICIPANT INFORMATION SHEET

You are being invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others, including your parents, if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the research about?

Researchers at the Canterbury Christ Church University and The Compassionate Mind Foundation have identified the difficulties experienced by a significant number of young people that experience low self-confidence and a need to provide education and skills to develop self-compassion and compact self-criticism. With the help of young people *Young Mind Be Kind* has been developed by psychologists, students and researchers with an expertise in providing specialist support. This study is part of a doctoral thesis at Canterbury Christ Church University.

Young Mind Be Kind is for young people aged between 16 and 25 years old. It uses a variety of interactive and learning activities to help young people feel more confident, think more positively and learn skills of self-compassion. Illustrations and films teach skills to help develop and learn the techniques of Compassion Focused Therapy. Compassion Focused Therapy, as the name suggests, involves the use of approaches intended to bolster self-compassion. In Compassion Focused Therapy, we will use specific methods for learning to work with our minds and our emotions.

This is the first test of *Young Mind Be Kind* and involves asking young people to complete 9 sessions and give their feedback. We need to be sure that the programme is user-friendly and addresses the concerns of young people.

Do I have to take part?

No, it is up to you to decide. If you don't want to take part it will not impact on any care you receive either now or in the future. If you do decide to take part, please keep this information sheet. You are still free to withdraw at any time and without giving a reason. Nobody will be upset if you do decide not to take part.

What will happen to me if I take part?

If you choose to enrol, we will ask you to complete a few questionnaires at the beginning. Then, you have a 50/50 chance to be in one of two groups; 1) you will be asked to visit the Young Mind Be Kind website right away and take part in 9 sessions of Compassion Focused Therapy 2) you will be asked to visit the Young Mind Be Kind website after a short delay after a 10 weeks period. You will be asked to record your opinions (what you liked and what you disliked?) at the end of the program. Once completing the 9 sessions you will be placed in a draw for a £100 voucher (for Amazon). You will be asked to complete 9 sessions, two sessions each week. One session will take approximately 20-30 minutes to review.

If you would like to know more about the study before you make your decision, please contact the researcher, Diana Ierfino via the contact details at the foot of this sheet. Diana will then contact you to discuss this in more detail.

What are the benefits of taking part?

The website contains information that you may find interesting. Your involvement and feedback is essential to help improve the programme and to investigate how helpful it is for adolescents and young adults. Your contribution may help numerous young people who experience low self-confidence and might use Young Mind Be Kind in the future.

What are the possible disadvantages and risks of taking part?

We are always required to tell you about any risks should you agree to take part in research. Young Mind Be Kind has been designed to be a positive and supportive programme. However, the programme does refer to common concerns that some young people with low self-confidence may experience, for example, distress as a result of negative thoughts and evaluations.

If you become upset when reading the programme you can stop taking part at any time, without providing us with an explanation. If you feel distressed after completing the study or if you're are unhappy with any part of the research you can discuss your concerns and your support options with the Researcher, Diana Ierfino at the address below. You can withdraw your responses from

the study without providing an explanation by contacting the researcher within one month of participating in the study.

Will taking part in this trial be kept confidential?

Yes. We will not include your name in our study; you will only be identified in our records by an identification number. Any data or responses to questionnaires will be kept in a secure place and will only used for research purposes.

Who has reviewed the study?

This study has been approved by the Canterbury Christ University Ethics committee.

What do I have to do if I want to take part?

Thank you for reading this. If you would like more information or would like to take part please let the researcher Diana Ierfino know (contact details below) and she will provide a consent form for you to complete.

Further Information

Diana Ierfino

Researcher

Dr Fergal Jones,

Lead Supervisor

Appendix D

Consent form

The Compassionate Mind Foundation

CONSENT FORM

Study title: Building self-compassion and combating low self-esteem: effectiveness of an online-based CFT intervention for adolescence and young people.

Please Click to Confirm

1. I confirm that I am not under 16 years of age and not older than 25 years of age. ☐

2. I confirm that I have read and understand the information sheet, version 1
for the above study and have had the opportunity to ask questions. ☐

3. I understand that my participation is voluntary and that I am free to withdraw at any time,

without giving any reason.

☐

4. I understand that all the information I provide will be treated as confidential and used

for research purposes only. ☐

5. I understand that the results of the study will be written up for a doctoral thesis and

submission to a professional journal

☐

6. I am aware that the findings may be published in an anonymised form and that any quotes
provided will be anonymised and may be included in publications.

☐

7. I would like to request a brief summary report when the study is completed. ☐

Appendix E

Outcome Measures

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Appendix F

Research summary for study participants

Dear study participant,

Many thanks again for taking part in the Young Mind Be Kind study.

Your help was tremendously appreciated! We have managed to get some initial results for our pilot study in which 40 individuals participated in the study.

The study investigated how an online-based self-help programme, Young Mind Be Kind, providing Compassion Focused Therapy psychoeducation and techniques may influence self-esteem, self-compassion, mental health symptoms and quality of life. The Compassion Focused Therapy provides an understanding that we are evolved beings with brains that share many basic emotions and desires with other animals on this planet. We were born with this brain and its capacity for difficult emotions like anger, anxiety, and joy and having a human life means that we all have to cope with these sorts of emotions from time to time.

It is important to recognize that we all just find ourselves here with a brain that creates all kinds of powerful emotions that we did not choose or design. And we are born into social conditions we didn't choose but which play a large part in shaping our behaviours, values, and emotional reactions. In recognizing this, we can become aware that much of what goes on in our minds is not our fault we didn't choose or intend to be this way. However, if we want to live more peaceful, happy lives, it can be useful to understand our minds better, so that we can learn ways to take responsibility for working with the difficult experiences our minds and brains can create, and for how we treat others.

The Young Mind Be Kind programme is still in the pilot stages and we appreciate your valuable recommendations on suggested revisions to the site and your feedback on how you found each sessions. While we did not find a significant difference in the scores at this time, given this is a pilot study we would not necessary expect to find it at the stage as we had a very small sample size. We will be continuing to recruit participants over the next year to increase our sample size and overall data. We are thinking about the feedback that has been provided as to how we can adapt the intervention and whom we might aim towards to increase the potential effect. One future possibility proposed is that we may recruit from a clinical population, young people suffering from depression and anxiety, rather than the general non-clinical population.

Many thanks again for taking part in this research. Please do not hesitate to contact me should you have any further questions (removed). If you indicated that you are interested in receiving a copy of the scientific paper, you will receive this as soon as it will be published.

Yours sincerely, Diana Ierfino

Appendix G

Young Mind Be Kind Programme Content

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Appendix H

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Appendix I

Coding frame

Main categories and Description Identified within Content Analysis

Main Category	Description	Highlighted Colour	Frequency counts
Understanding Compassion	Developing a greater understanding of the importance of compassion and relating compassionately to others through the psychoeducation providing on the website	Code Colour	3
Activating Compassion	Benefits and difficulties of activating compassion (either self-compassion, compassionate ideal, compassion to others) through the exercises provided on the website.	Code Colour	7
Found intervention acceptable	How acceptable participants found the intervention. Positives about the intervention that they found had an impact or were beneficial.	Code Colour	7
Recommendations	Recommendations and improvements suggested by participants on how to improve or refine the website.	Code Colour	5

Appendix J

Young Mind Be Kind Poster

(from the 4th International Compassionate Mind Conference 2015)

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Appendix K

Guideline notes for Mindfulness Journal publication

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Appendix L

Research summary for university ethics

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