



THE UNIVERSITY *of* EDINBURGH

This thesis has been submitted in fulfilment of the requirements for a postgraduate degree (e.g. PhD, MPhil, DClinPsychol) at the University of Edinburgh. Please note the following terms and conditions of use:

This work is protected by copyright and other intellectual property rights, which are retained by the thesis author, unless otherwise stated.

A copy can be downloaded for personal non-commercial research or study, without prior permission or charge.

This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the author.

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the author.

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given.



The relationships between self-compassion, attachment
and interpersonal problems in patients with mixed
anxiety and depression

Kate Mackintosh

Doctorate in Clinical Psychology

The University of Edinburgh

May 2016

DClinPsychol Declaration of Own Work

Name: Kate Mackintosh

Title of Work: The relationships between self-compassion, attachment and interpersonal problems in patients with mixed anxiety and depression

I confirm that this work is my own except where indicated, and that I have:

- Read and understood the Plagiarism Rules and Regulations
- Composed and undertaken the work myself
- Clearly referenced/listed all sources as appropriate
- Referenced and put in inverted commas any quoted text of more than three words (from books, web, etc.)
- Given the sources of all pictures, data etc. that are not my own
- Not made undue use of essay(s) of any other student(s), either past or present (or where used, this has been referenced appropriately)
- Not sought or used the help of any external professional agencies for the work (or where used, this has been referenced appropriately)
- Not submitted the work for any other degree or professional qualification except as specified
- Acknowledged in appropriate places any help that I have received from others (e.g. fellow students, technicians, statisticians, external sources)
- Complied with other plagiarism criteria specified in the Programme Handbook
- I understand that any false claim for this work will be penalised in accordance with the University regulations
- Received ethical approval from the School of Health in Social Science, University of Edinburgh
OR
- Received ethical approval from an approved external body and registered this application and confirmation of approval with the School of Health in Social Science's Ethical Committee

Signature *K. Mackintosh*

Date *28/04/16*

Please note:

- If you need further guidance on plagiarism, you can:
 - Speak to your personal tutor or supervisor
 - View university regulations at <http://www.ed.ac.uk/schools-departments/academic-services/policies-regulations>
- Referencing for most assessed work should be in the format of the BPS style guide, which is freely available from the BPS web site

Acknowledgements

Firstly I would like to thank all the participants who gave up their time to take part in this project. I am also incredibly grateful to the Angus Psychological Therapies Team, who supported this project from the beginning and worked so hard to recruit participants. Without them this thesis would not have been possible – many thanks to you all.

I am also extremely grateful to my academic supervisors Dr Stella Chan and Professor Matthias Schwannauer, and my clinical supervisor Professor Kevin Power, for all their expert guidance, help and encouragement throughout this thesis.

On a personal note, I would like to say massive thanks to my parents and brother (and wider family) for continuing to take an interest in what I am doing and for all their unconditional love and support along the way: I could not have done this without them. Thanks also to my lovely friends who have done such a great job in supporting me, and distracting me when needed!

Finally, I would like to give the biggest thanks to my husband, who has been there for me no matter what; encourages me, puts up with me, and keeps me sane. Gavin – thank you for everything.

TABLE OF CONTENTS

Abstract	1
SYSTEMATIC REVIEW	3
Abstract	4
1. Introduction	6
1.1. Self-compassion.....	6
1.2. Self-compassion and psychopathology	6
1.3. Self-compassion and psychotherapeutic interventions	6
1.3.1. <i>Self-compassion and mindfulness</i>	7
1.3.2. <i>Compassion-focused therapy and Compassionate-mind training</i>	8
1.3.4. <i>Acceptance and Commitment Therapy (ACT) and Dialectical Behaviour Therapy (DBT)</i>	9
1.5. Summary and review aims	10
2. Method	11
2.1. Literature search strategy	11
2.2. Inclusion and exclusion criteria	12
2.2.1. <i>Study design</i>	12
2.2.2. <i>Population</i>	12
2.2.3. <i>Interventions</i>	12
2.2.4. <i>Outcome measure</i>	12
2.2.5. <i>Inclusion criteria</i>	13
2.2.6. <i>Exclusion criteria</i>	13
2.3. Additional searches	13
2.4. Data extraction and quality criteria of included studies	14
2.4.1. <i>Data extraction</i>	14
2.4.2. <i>Quality criteria</i>	14
3. Results	15
3.1. Study characteristics	15
3.1.1. <i>Study design and treatment conditions</i>	16
3.1.2. <i>Sample characteristics</i>	16
3.1.3. <i>Comparison and control groups</i>	17
3.1.4. <i>Outcome measures</i>	17
3.2. Assessment of methodological quality	25
3.3. Do compassion-focused therapies improve levels of self-compassion?	28
3.4. Do mindfulness-based therapies improve levels of self-compassion?.....	31
3.5. Do therapies that include elements of compassion and mindfulness training improve levels of self-compassion?	33
4. Discussion	34

4.1. Summary of research findings	34
4.1.1. <i>Clinical Presentation</i>	34
4.1.2. <i>Type of intervention</i>	35
4.1.3. <i>Symptom improvement</i>	36
4.1.4. <i>Self-compassion changes in comparison groups</i>	37
4.2. Measuring self-compassion.....	37
4.3. Implications for clinical practice.....	38
4.4. Future research.....	38
4.5. Limitations of this review	39
4.6. Conclusion	39
References.....	40
5. INTRODUCTION TO EMPIRICAL STUDY	47
5.1. Overview of Attachment Theory	47
5.1.1. <i>Attachment theory and mental health</i>	48
5.1.2. <i>Attachment theory and self-compassion</i>	49
5.1.3. <i>Attachment theory and interpersonal functioning</i>	50
JOURNAL ARTICLE.....	52
Abstract.....	53
6. Introduction.....	54
7. Methodology	57
7.1. Design	57
7.2. Participants.....	57
7.3. Procedure	58
7.4. Measures	59
7.5. Ethical Approval	61
7.6. Power Analyses.....	61
7.7. Statistical Analyses	61
7.7.1. <i>Data screening</i>	62
7.7.2. <i>Missing data</i>	62
8. Results	63
8.1. Descriptive statistics	63
8.2. Covariate analysis	63
8.3. Bivariate correlations	63
8.4. Correlations between predictor variables and dependent variables	64
8.4.1. <i>Attachment and emotional distress</i>	64
8.4.2. <i>Interpersonal problems, self-compassion and emotional distress</i>	65
8.5. Mediation analysis	65

8.5.1. Mediation analysis: avoidant attachment, interpersonal problems, self-compassion and overall emotional distress	65
8.5.2. Mediation analysis: avoidant attachment, interpersonal problems, self-compassion and anxiety	67
8.5.3. Mediation analysis: avoidant attachment, interpersonal problems, self-compassion and depression	70
9. Discussion.....	70
References.....	76
References for whole thesis	81
Table of Appendices.....	92
Appendix A: Journal of Affective Disorders Author Guidelines.....	93
Appendix B: Data extraction form.....	105
Appendix C: Quality assessment checklist	107
Appendix D: Reasons for excluding studies	111
Appendix E: List of additional outcome measures	112
Appendix F: Journal of Personality Author Guidelines	114
Appendix G: Participant Information Sheet.....	117
Appendix H: Participant Consent Form.....	120
Appendix I: Demographics form	121
Appendix J: Self-compassion Scale	122
Appendix K: Hospital Anxiety and Depression Scale	124
Appendix L: Inventory of Interpersonal Problems-32	126
Appendix M: Experiences in Close Relationships-Revised.....	127
Appendix N: East of Scotland Ethics Service Communication	129
Appendix O: Additional results	133

Total word count excluding references, tables and figures: 17, 697

Abstract

Background: There has been growing interest and research into the construct of self-compassion. Self-compassion has been positively associated with psychological well-being, and negatively associated with a range of psychological difficulties. The origins of self-compassion have been linked to early attachment experiences, with poor attachment relationships proposed to result in an inability to self-soothe and take a compassionate stance towards the self. Whilst research in nonclinical populations provides some initial support for these hypotheses, there is a lack of research conducted in clinical populations.

Given a large effect size has been found for the association between self-compassion and psychological difficulties, this suggests it may be an important target for therapeutic change. There is a growing evidence-base for the use of compassion-focused therapies, with research suggesting they are effective in reducing mood symptomology. However, less is known about the impact of these therapies on levels of self-compassion, or whether reductions in mood symptomology occur as a causal effect of increased self-compassion. In addition, other ‘third wave’ therapies may also indirectly increase self-compassion.

Aims: The research aims were two-fold. The first aim was to conduct a systematic literature review to evaluate the effectiveness of compassion-focused and mindfulness-based interventions in increasing levels of self-compassion. The second aim was to examine the role of self-compassion and its relationships with attachment and interpersonal problems in adults attending a primary care psychological therapies service. Specifically, self-compassion and interpersonal problems were hypothesised as potential mediators between insecure attachment and anxiety and depression.

Method: To address the first research aim, a systematic search was conducted to identify studies that utilised a compassion and/or mindfulness-based intervention with a clinical population, and included self-compassion as an outcome measure. To address the second research aim, a cross-sectional, quantitative study was conducted. Participants ($N=74$; 60% female, mean age = 40 years) attending a primary care psychological therapies service completed four self-report questionnaires assessing self-compassion, attachment, interpersonal problems and anxiety and depression.

Results: The findings of the systematic review suggested that self-compassion can be increased through both compassion-focused and mindfulness-based interventions. However, methodological weaknesses across studies highlighted that further research is needed and definitive conclusions cannot be drawn. The results of the empirical study indicated that low self-compassion, attachment avoidance and high levels of interpersonal problems were all associated with increased emotional distress. Furthermore, self-compassion mediated the relationship between attachment avoidance and emotional distress and anxiety. Interpersonal problems was not a significant mediator.

Conclusions: Taken collectively, the findings here suggest that self-compassion may be an important target in psychological therapy. In addition, results of the mediation analysis indicated that low self-compassion can be a pathway to overall emotional distress and anxiety for individuals with attachment avoidance. This provides support for the theory that self-compassion is linked to early attachment experiences.

SYSTEMATIC REVIEW

The effectiveness of compassion-focused and/or mindfulness-based psychological interventions in improving self-compassion in clinical populations: a systematic review

Kate Mackintosh^{ab*}, Kevin Power^a and Stella Chan^b

^aNHS Tayside Psychological Therapies Service

^bSection of Clinical Psychology, School of Health in Social Science, University of Edinburgh

* Corresponding author: Perth City Community Mental Health Team, Cairnwell,
Perth Royal Infirmary, Perth, PH1 1NX
Tel.:01738 413070 Email: katemackintosh@nhs.net

This review has been written in accordance with Journal of Affective Disorders
(see Appendix A)

Abstract

Background: There has been growing interest in the development of interventions that aim to enhance self-compassion. In a recent meta-analysis, a large effect size was found for the association between self-compassion and psychological difficulties, suggesting it may be an important target for therapeutic change. The present systematic literature review aimed to evaluate the effectiveness of compassion-focused and mindfulness-based interventions in increasing levels of self-compassion.

Method: Four databases were searched to identify studies that utilised a compassion and/or mindfulness-based intervention with a clinical population, and included self-compassion as an outcome measure.

Results: Twelve studies met the inclusion and exclusion criteria, of which half included control or comparison groups, including four randomised controlled trials. Six studies examined compassion-based therapies, five were mindfulness-based therapies, and one included elements of both mindfulness and compassion (Acceptance and Commitment Therapy). Quality of studies was mixed; main weaknesses were lack of adequate comparison groups and low study numbers. Ten studies reported increases in self-compassion post-intervention. These included studies that utilised compassion and mindfulness-based interventions.

Limitations: There was a wide variety of presenting problems and interventions, thus limiting comparisons across studies, and a statistical meta-analysis was not possible.

Conclusions: The findings of the review suggest that compassion-focused and mindfulness-based interventions are effective in improving self-compassion. It could not be concluded whether improvements in self-compassion are related to changes in clinical symptoms. Further well-designed studies are required before definitive conclusions can be drawn.

Keywords: Self-compassion, Compassion, Mindfulness, ACT, Review, Clinical

Highlights:

- Twelve compassion and/or mindfulness-based clinical intervention studies were reviewed
- Results suggest self-compassion can be improved through therapeutic intervention
- Limitations included lack of comparison groups and small sample sizes
- Further research addressing methodological weaknesses of studies is required

1. Introduction

1.1. Self-compassion

Self-compassion has been described as one's attitude towards and relationship with the self (Neff, 2003a). Neff proposes that self-compassion consists of three components: self-kindness (being kind to the self during times of difficulty), common humanity (recognising that difficulties are part of life and shared by others) and mindful acceptance (being aware of and accepting painful thoughts and feelings). Gilbert (2010) explains compassion in terms of the interaction between three types of neurophysiological emotion regulation systems: threat, soothing and incentive seeking (Depue & Morrone-Strupinsky, 2005). According to Gilbert (2005, 2010) the threat system detects threat and is closely linked to negative emotions such as anxiety, anger and disgust. The incentive-seeking system serves to motivate, excite and drive. Finally, the soothing system is proposed to be linked to the human attachment system and serves to manage distress and promote bonding. The three affective systems are believed to balance each other and allow for the regulation and management of emotions (Gilbert, 2010). Within this model, self-compassion is therefore understood as the ability to soothe the self with kindness and non-judgemental understanding when presented with threat or negative affect.

1.2. Self-compassion and psychopathology

Although different models of compassion exist, they share a commonality in predicting a link between self-compassion and positive psychological wellbeing and functioning. In support of this, research has indicated that self-compassion is linked to greater life satisfaction, social connectedness and emotional intelligence (Neff, 2003a), with further research suggesting individuals with higher levels of self-compassion tend to be more extraverted and agreeable, show greater optimism, happiness, curiosity, and positive affect, are less neurotic, and report lower negative affect (Neff *et al.*, 2007). Furthermore, higher levels of self-compassion have been linked to lower levels of anxiety, depression, rumination, shame and self-criticism (Neff, 2003a; Neff & McGehee, 2010; Raes, 2010). Finally, a recent meta-analysis indicated a large effect-size for the association between higher levels of self-compassion and lower levels of psychopathology (MacBeth & Gumley, 2012).

1.3. Self-compassion and psychotherapeutic interventions

Given the recognised link between self-compassion and psychopathology, it would seem reasonable to assume that improvements in self-compassion will lead to reductions in

psychopathology. It should be noted however that such causation has not been directly established. Nevertheless, there has been growing interest in the development of psychotherapeutic interventions that aim to enhance self-compassion. Compassion-focused Therapy (CFT; Gilbert, 2005, 2009) was developed specifically with this aim in mind. However, other therapeutic approaches, such as ACT, DBT and mindfulness-based interventions, also indirectly foster taking a compassionate approach to the self, suggesting that these therapies may share common features with CFT. In addition, ACT, DBT and CFT all include elements of mindfulness practice, thereby overlapping with the core component of mindfulness-based interventions. It therefore follows that these interventions could be considered to be trans-theoretical. That is, they share common features, whilst also drawing upon their own unique processes. The similarities and differences between these approaches will now be discussed further.

1.3.1. Self-compassion and mindfulness

Mindfulness is generally defined as being in the present moment, taking a non-judgmental and accepting stance towards the self and experiences (Kabat-Zinn, 2013). Two established mindfulness-based interventions, Mindfulness-based Cognitive Therapy (MBCT; Segal *et al.*, 2013) and Mindfulness-based Stress Reduction (MBSR; Kabat-Zinn, 2013), have been found to be effective in improving physical and psychological functioning for a wide range of clinical and nonclinical populations (e.g. Chiesa & Serretti, 2009; Hofmann *et al.*, 2010).

Self-compassion has been closely linked to mindfulness. In Neff's (2003) conceptualisation of self-compassion, mindfulness forms one of the three core components, and is seen as necessary for the other two components (self-kindness and common humanity) to arise. Alternatively, self-compassion may be an outcome of practising mindfulness rather than a component of it. There is some evidence that MBCT and MBSR programmes lead to increases in self-compassion (Birnie *et al.*, 2010; Kuyken *et al.*, 2010; Lee & Bang, 2010; Shapiro *et al.*, 2005; Shapiro *et al.*, 2007). In addition, improved self-compassion has been found to mediate the treatment effects of MBCT on recurrent depression (Kuyken *et al.*, 2010), and the treatment effects of MBSR on stress levels in health care professionals (Shapiro *et al.*, 2005).

Although both MBCT and MBSR have been found to lead to increased self-compassion, neither directly teach self-compassionate skills beyond mindfulness teaching. As such, Neff and Germer (2013) developed the Mindful self-compassion (MSC) programme, with the

primary intention to teach participants ways to increase self-compassion, although mindfulness skills are also taught as a secondary aim. Results from a pilot study and randomised controlled trial (RCT) indicated that the MSC programme was effective in improving self-compassion in a nonclinical population (Neff & Germer, 2013). However, MSC has not yet been applied or evaluated within clinical populations.

1.3.2. Compassion-focused therapy and Compassionate-mind training

Gilbert (2005, 2009) proposed CFT as a way of applying a compassion model to psychotherapy. CFT was developed for individuals with chronic mental health problems, particularly for those experiencing high levels of shame and self-criticism, with the aim to aid the development of self-compassion through enhancing the ability to self-soothe and regulate emotions (Gilbert, 2009). Gilbert describes CFT as an integrated therapy, drawing on different therapeutic models, and social, developmental, evolutionary and Buddhist psychology. Compassionate-mind training (CMT) is a core component of CFT. The model of CMT highlights the key aspects and attributes of compassion (care for well-being, sensitivity, sympathy, distress tolerance, empathy and non-judgement), and the skills training that is required to develop them. These skills include compassionate attention training, compassionate reasoning, compassionate behaviour, compassionate imagery, compassionate feeling and compassionate sensation.

Despite the correlations demonstrated between self-compassion and psychopathology, there is still a scarcity of empirical research investigating CFT/CMT as a psychotherapeutic intervention. This was highlighted in a recent systematic review regarding the effectiveness of CFT/CMT (Leaviss & Uttley, 2015): 14 studies were included in the review, of which only three were RCTs (Braehler *et al.*, 2013; Kelly *et al.*, 2010; Shapira & Mongrain, 2010). In addition, four involved non-clinical populations (Kelly *et al.*, 2010; Kelly *et al.*, 2009; Shapira & Mongrain, 2010; McEwan & Gilbert, unpublished data), including two of the three RCTs. There was also a lack of comparison group and small sample sizes across the majority of studies. In addition, the CFT/CMT interventions varied in terms of duration and delivery, from short self-help based interventions with no therapist input, to 32 hours of therapist led CMT. Nevertheless, Leaviss and Uttley (2015) concluded that, despite the clear methodological weaknesses of the included studies, there is preliminary support for the effectiveness of CFT/CMT as an intervention for mood disorders, although clearly further high quality trials are necessary before more definitive conclusions can be drawn.

Of particular interest for the current review is that only eight of the papers reviewed by Leaviss and Uttley (2015) assessed changes in self-compassion following intervention. Hence, no robust conclusions can be drawn about the impact of CFT/CMT on levels of self-compassion, or whether reductions in mood symptomology occur as a causal effect of increased self-compassion. Of the eight studies that did assess self-compassion, one did not report whether changes in self-compassion were observed (Kelly *et al.*, 2010), six reported improvements in self-compassion (Beaumont *et al.*, 2012; Braehler *et al.*, 2013; Gilbert & Irons, 2004; Gilbert & Procter, 2006; Mayhew & Gilbert, 2008) including one unpublished study (McEwan & Gilbert, unpublished data), and one reported no changes in self-compassion (Laithwaite *et al.*, 2009). However, it is noteworthy that three of the studies did not use a standardised measure of self-compassion, and instead changes in self-compassion were based on diary ratings (Gilbert & Irons, 2004; Gilbert & Procter, 2006) or semi-structured interview (Braehler *et al.*, 2013), thus limiting the validity of the findings.

1.3.4. Acceptance and Commitment Therapy (ACT) and Dialectical Behaviour Therapy (DBT)

Whilst CFT/CMT was developed specifically to teach self-compassionate skills, other ‘third wave’ behaviour therapies, namely DBT and ACT, share common features with compassion-focused and mindfulness-based interventions, and therefore may also indirectly cultivate self-compassion. That is, both ACT and DBT teach mindfulness skills, and share the aim of promoting a compassionate approach to the self and problems.

It has been suggested that there is an overlap between the theory and goals of ACT and conceptualisation of self-compassion (Neff & Tirsch, 2013). The aim of ACT is to increase psychological flexibility through six core processes: acceptance, cognitive diffusion, present moment awareness, self as context, values and committed action (Hayes *et al.*, 1999). Dahl *et al.* (2009) describe how these processes affect compassion for the self and others. They suggest that self-compassion involves being willing to experience difficult emotions, being mindful and observing distressing or shaming thoughts without allowing them to dominate behaviour, and to use self-kindness and self-validation to engage with life’s pursuits, thus linking to Neff’s (2003a) three central components of self-compassion: self-kindness, mindful acceptance and common humanity. ACT has a growing evidence base for various conditions including anxiety disorders, depression, psychosis and chronic pain (Hacker *et al.*, 2016; Öst, 2014; Powers *et al.*, 2009; Swain *et al.*, 2013). In addition, there is some tentative

evidence that ACT increases mindfulness (Forman *et al.*, 2007) and self-compassion (Yadavaia *et al.*, 2014).

DBT was developed originally for patients with Borderline Personality Disorder (BPD; Linehan *et al.*, 1991). The aim in DBT is to aid the acceptance of thoughts, desires and behaviours of patients, alongside encouraging change through the teaching of specific skills to help patients regulate their emotions and modulate unhelpful behaviours (Linehan *et al.*, 1999). The skills are taught in four modules: mindfulness, interpersonal effectiveness, emotion regulation and distress tolerance. Adopting a compassionate approach to the self is interwoven throughout the modules, with the aim of helping the individual to learn to self-soothe and develop inner-compassion (Linehan, 1993). Whilst there have been a number of empirical studies supporting the efficacy of DBT for treating BPD (Valentine *et al.*, 2015), the underlying mechanisms of change have remained relatively unknown. Some initial research indicates that DBT training leads to increased mindfulness (Perroud *et al.*, 2012). Surprisingly however, to date there appears to be no research exploring changes in self-compassion following DBT.

It is also important to note that the above therapies were not designed to target the same presenting problems. Therefore, given that they share the common features of fostering self-compassion, it may be that low self-compassion is a transdiagnostic feature across various presenting problems. As such, targeting self-compassion in therapy could be a useful transdiagnostic approach.

1.5. Summary and review aims

Given the established link between self-compassion and psychopathology it is not surprising that there is a growing body of psychological interventions aimed at improving self-compassion. Although research in this area is in early stages, particularly within clinical populations, there is some initial support for the effectiveness of compassion-focused interventions in terms of symptom improvement. What is less clear is the impact these interventions have on levels of self-compassion. In addition, other established therapeutic interventions including mindfulness-based interventions, ACT and DBT, share commonalities with compassion-focused interventions, and therefore may also directly or indirectly lead to changes in levels of self-compassion. Understanding whether these approaches lead to changes in self-compassion could provide useful information about self-compassion as a mechanism of change in psychological interventions, and whether focusing

on improving self-compassion is an important therapeutic target. It may also provide useful information about whether self-compassion is transdiagnostic

Therefore, the aim of the current review is to examine whether compassion-focused and mindfulness-based interventions improve self-compassion in adults experiencing clinical levels of mental health problems. For the purpose of this review, the following interventions are of interest due to their implicit or explicit focus on teaching self-compassion skills and/or mindfulness skills: CFT/CMT, MBCT, MBSR, ACT and DBT.

The main questions to be answered are:

- 1) Do compassion-focused therapies improve levels of self-compassion in those experiencing mental health problems?
- 2) Do mindfulness-based therapies improve levels of self-compassion in those experiencing mental health problems?
- 3) Do therapies that include elements of compassion and mindfulness training improve levels of self-compassion in those experiencing mental health problems?

2. Method

The review was conducted following the guidance for undertaking systematic reviews detailed by the Centre of Reviews and Dissemination (CRD; 2009). A protocol for the review was submitted to the PROSPERO International prospective register of systematic reviews.

2.1. Literature search strategy

Studies for the systematic review were identified by searching for articles published in peer-reviewed journals. The following four electronic databases were searched up to the end of November 2015:

- PsycINFO (from 1906)
- Medline (from 1946)
- Embase (from 1947)
- CINAHL (from 1937)

The literature search combined the following keywords: ‘compassion focused therapy*’ or ‘compassionate mind training’ or ‘mindful self-compassion’ or (‘mindfulness based’ or ‘MBCT’ or ‘MBSR’ or ‘acceptance and commitment therapy*’ or ‘ACT’ or ‘dialectical behaviour* therapy*’ or ‘DBT’ and ‘self-compassion’). The literature search identified 492 studies.

2.2. Inclusion and exclusion criteria

Although there has been growing research into psychological approaches that aim to improve self-compassion, initial searches indicated that this has not been widely researched in clinical populations, hence criteria for the current review were kept relatively inclusive.

2.2.1. *Study design*

To enable maximum breadth of the review, intervention studies published in English were included if they were RCTs, non-RCTs, single-case studies, case series, or within-subjects, repeated measures, published in a peer-reviewed journal. Qualitative studies were excluded.

2.2.2. *Population*

Studies were included if they involved adults over the age of 18 years with a clinical or subclinical mental health problem assessed by clinical diagnosis or by a validated assessment measure. Given the recent meta-analysis by MacBeth and Gumley (2012) indicated a strong linkage between self-compassion and general psychopathology, no restrictions were placed on type of disorder.

2.2.3. *Interventions*

Whilst specific compassion-based therapies have been developed to target self-compassion, other ‘third wave’ behavioural interventions, including ACT, DBT and mindfulness-based therapies, share a common factor of promoting a compassionate approach to the self and problems (e.g. Hayes, 2004). Therefore studies were included if the intervention was compassion based (CMT, CFT or MSC), mindfulness-based (MBCT or MBSR), or an intervention that indirectly targets self-compassion and mindfulness (ACT or DBT).

2.2.4. *Outcome measure*

As this review aimed to examine whether levels of self-compassion change following a psychotherapeutic intervention, only studies that included an outcome measure of self-compassion were included.

To summarise, the 492 studies identified through the literature search were checked against the following criteria:

2.2.5. *Inclusion criteria*

- Written in English
- Published in a peer-reviewed journal
- Adult participants (aged ≥ 18) with a clinical or subclinical mental health problem assessed by clinical diagnosis or by a validated assessment measure
- Design: RCTs, non-RCTs, single-case studies, case series, or within-subjects, repeated measures.
- Intervention: CMT, CFT, MSC, DBT, ACT, MBCT or MBSR

2.2.6. *Exclusion criteria*

- Published in non-peer-reviewed sources such as book chapters and unpublished thesis
- Review articles
- No outcome measure of self-compassion
- Mental health problem without clinical diagnosis or assessment by a validated measure
- Qualitative studies

2.3. Additional searches

Twelve studies were identified as meeting the above criteria for this review. The reference lists of these studies were screened for any additional studies, along with the reference lists of two recent reviews (Leaviss & Uttley, 2015; MacBeth & Gumley, 2012). An additional search was conducted based on two key authors in the field of self-compassion – Kirsten Neff and Paul Gilbert. The lists of published articles on relevant websites (www.self-compassion.org and www.compassionatmind.co.uk) were also searched. No further papers were identified from these additional searches. Figure 1 provides a detailed breakdown of the literature search procedure.

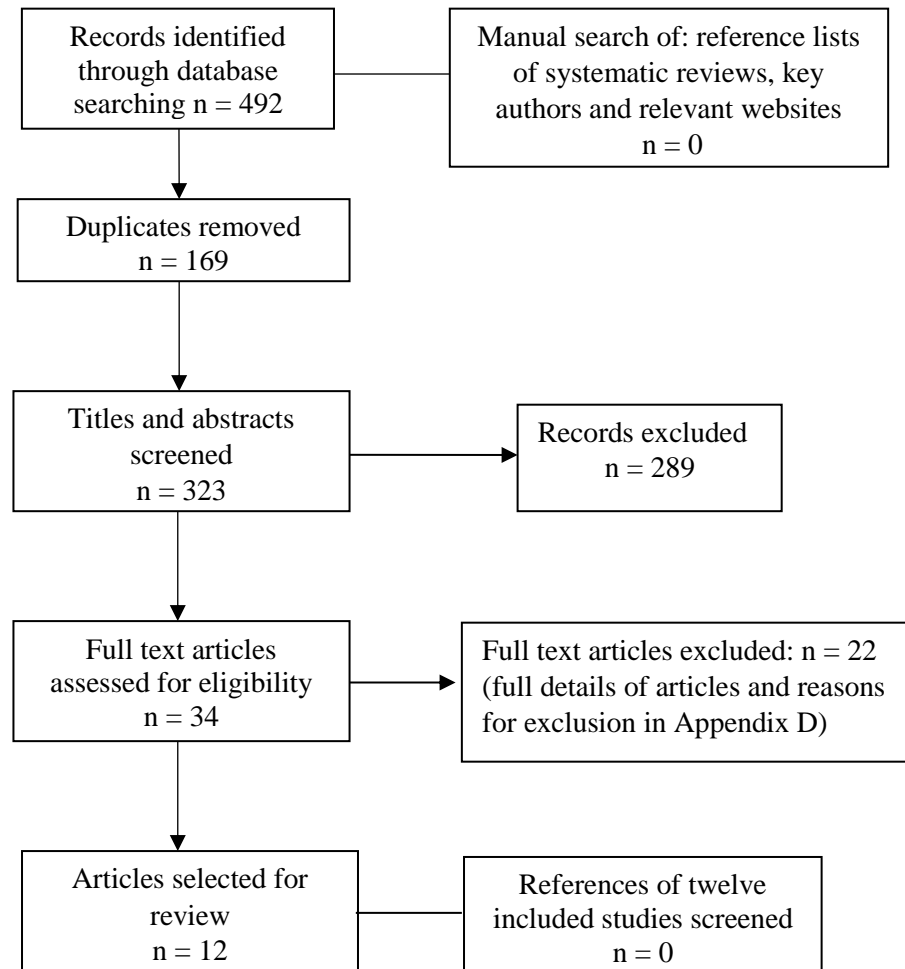


Figure 1: Flow diagram of the literature search procedure

2.4. Data extraction and quality criteria of included studies

2.4.1. Data extraction

Data for all of the included papers was extracted using a standardised template developed by the author (see Appendix B). The data extracted included study and participant characteristics, treatment conditions and treatment outcomes.

2.4.2. Quality criteria

Many quality assessment tools developed for use in systematic reviews are aimed at the evaluation of RCTs, including those developed by the Scottish Intercollegiate Guidelines Network (SIGN, 2014) and the CRD (2009). However, as the current review expected heterogeneity among study design, the author consulted a review of 60 quality assessment tools for evaluating non-randomised intervention studies (Deeks *et al.*, 2003). This review

concluded that six tools were suitable for purpose, including the checklist for measuring study quality developed by Downs and Black (1998). This was considered the most relevant checklist for the current review. However, it is widely recognised that whilst many tools exist for assessing the methodological quality of papers, no single approach is appropriate for all systematic reviews. The Cochrane Handbook for Systematic Reviews of Interventions (Higgins & Green, 2011) recommends that existing rating tools should be adapted, or new tools created, in order to answer the specific review question. The Downs and Black (1998) checklist was therefore adapted to suit the aims of the current review, taking into consideration the changes made by Cahill *et al.* (2010) for assessing practice-based research on psychological therapies.

The final checklist for assessing the methodological quality of the studies included in the current review consisted of 27 items covering four areas: ‘reporting’ (11 items), ‘external validity’ (4 items), ‘internal reliability of measurement and treatment’ (5 items) and ‘internal reliability of confounding variables/selection bias’ (7 items). Each item was rated as ‘yes’ (1 point), ‘no’ (0 points) or ‘unable to determine’ (0 points) based on whether the paper had addressed the item appropriately (see Appendix C). This allowed a total score for each study to be calculated, out of a maximum 27 points. Data extraction and the rating of the studies was initially completed by the first author of this review. A Psychology PhD student independently reviewed six of the studies (50%). Initial agreement between raters was 84%. All differences between raters were thoroughly discussed and amended appropriately.

3. Results

Twelve studies were deemed eligible for this review, meeting inclusion and exclusion criteria. The reasons for exclusion of 22 studies that were excluded after full review are summarised in Appendix D. The primary reason for exclusion was lack of self-compassion outcome measure.

3.1. Study characteristics

The main characteristics and findings of the studies included in the review are summarised in Table 1.

3.1.1. Study design and treatment conditions

Of the twelve studies included in the review, there were four RCTs, two non-randomised controlled trials, three within-subjects, and three case series/single case studies. Interventions included ACT (one study), MBSR (one study), MBCT (four studies) and CFT/CMT (six studies). Table 2 outlines the key details of the interventions used in each study. Of the six CFT/CMT studies, one described the treatment as “CBT+CFT” (CBT: Cognitive Behavioural Therapy) and one described it as “EMDR+CFT” (EMDR: Eye Movement Desensitisation and Reprocessing). No DBT studies were identified that met inclusion/exclusion criteria. The interventions varied in terms of format and duration: eight involved a group format and five involved individual treatment. All studies involved the delivery of therapy, with the exception of one which involved a self-help intervention with no therapist contact. Treatment duration varied, with the self-help intervention lasting 3 weeks, individual treatment ranging from 8 to 12 sessions, and group treatment ranging from a single workshop of six hours to 20 sessions. One study did not report the number of sessions.

3.1.2. Sample characteristics

All studies recruited adult participants with clinical or subclinical mental health problems. Five studies assessed participants according to the relevant DSM criteria, through the use of clinical interview and/or standardised self-report measures. Three studies used self-report measures and/or clinical interview, one study relied on GP diagnosis and three studies did not describe assessment of diagnosis. The investigated conditions were anxiety disorders (n=5), including social anxiety (n=2); Post-Traumatic Stress Disorder (PTSD)/trauma symptoms (n=2) and perinatal anxiety (n=1); depression (n=2); mixed anxiety and depression (n=1); psychosis (n=2); binge eating disorder (BED; n=1) and “high psychological distress”, assessed by a score of 10 or higher on the General Health Questionnaire, (n=1). The majority (n=10) of interventions were conducted in community or clinical outpatient settings. One study involved inpatients in a secure forensic setting, and one study was a self-help intervention, completed by participants at home. The total sample size included in this review was 465. The range across all studies was 1 – 114 (mean = 39). Across the 11 studies that reported gender, three included only males, and one included only females. Of the remaining seven studies, the average percentage of females was 67%.

3.1.3. Comparison and control groups

Six studies did not utilise a control or comparison group. Of the six remaining studies, two used waiting list controls and four used active treatment controls, namely CBT, aerobic exercise (AE) and maintenance anti-depressant medication (mADM).

3.1.4. Outcome measures

In order to assess levels of self-compassion, all studies used the Self-compassion Scale (SCS), or SCS-Short Form (SCS-SF), developed by Neff (2003a), which has been validated for use in adult populations. Studies also used other valid and reliable outcome measures to assess mood symptomology. Full details of outcome measures used are presented in appendix E.

Table 1: Key characteristics of included studies

Authors, year	Design	Population: diagnosis/presenting problem (assessment tool)	Intervention and control/comparison (N)	Mean age (years) at baseline (SD); % female	Self-compassion measure	Assessment points	Main self-compassion outcome and effect size	Other key findings
Beaumont <i>et al.</i> (2012)	Non-RCT	Requiring treatment after trauma (not reported)	CBT + CMT (16) vs. CBT (16)	Not reported	SCS	Pre- and post-intervention	Both interventions led to significant increase in SC. CBT+CMT group had higher levels of SC post-therapy compared to the CBT only group. Fear of SC moderated the benefits of the intervention: those with lower fear ratings benefitted more than those with higher fear ratings. Effect size not reported	Both groups showed significant reductions in anxiety, depression, intrusive thoughts, hyper-arousal symptoms and avoidance.
Beaumont and Martin (2013)	Single case study	Trauma related phobic symptoms (HADS, IES-R, DES-11)	EMDR + CMT (1) No control	58 0%	SCS-SF	Pre-, mid-, post-treatment and 9 month follow-up	SC moved from 'low' range pre-treatment to 'high' range post-treatment; maintained at 9-month follow-up Effect size n/a	Anxiety and depression reduced to 'normal' range post-treatment; hyperarousal, intrusive thoughts and avoidance all reduced post-treatment

Boersma <i>et al.</i> (2015)	Single case series	Social Phobia (fulfilling DSM-IV criteria as measured by the SPSQ)	CFT (6) No control	Age range 20-32 years; mean not reported 83%	SCS	Pre- and post-treatment and 2-4 week follow-up.	5 out of 6 participants showed significant improvements in SC post-treatment Effect size n/a	3 participants' social anxiety scores reduced post-treatment
Goodman <i>et al.</i> (2014)	Within-subjects	Pregnant women with elevated anxiety symptoms (self-report questionnaires and clinical interview)	CALM pregnancy programme based on MBCT (24) No control	33.5 (4.40) 100%	SCS	Pre- and 1 week post-intervention	Intervention led to significant increases in SC Effect size not reported	Significant improvements in anxiety, worry and depression; significant increase in mindfulness
Jazaieri <i>et al.</i> (2012)	RCT	Social Anxiety Disorder (fulfilling DSM-IV criteria assessed by structured clinical interview)	MBSR (31) vs. AE (25) Untreated control (29)	MBSR: 32.9 (8.83) 61% AE: 32.9 (7.97) 40% Control: 32.3 (90.4) 44.8%	SCS	Pre- and post-intervention and 3 month follow-up	MBSR and AE led to significant improvements in SC Compared to untreated controls, AE showed significant improvement in SC Effect size not reported	Both groups showed significant increases in self-esteem, social integration and satisfaction with life and reductions in social anxiety and depression post-intervention and at follow-up.
Kelly and Carter (2015)	RCT	Binge Eating Disorders (meeting DSM-5 criteria assessed by self-report questionnaire and interview)	CFT-based self-help intervention (15) vs. CBT based self-help intervention (13) vs. WL control (13)	45 (15) 83%	SCS	Pre- and post-intervention	CFT intervention led to significant increase in SC CFT intervention produced greater improvements in SC	CFT and CBT interventions both reduced weekly binge days compared to WL control. CFT group showed greater reductions in global

							compared to other conditions.	eating disorder pathology, eating concerns and weight concerns compared to other conditions.
							$r = .25$ (small to medium effect size)	
Kuyken <i>et al.</i> (2010)	RCT	Recurrent depression (3+ previous episodes meeting DSM-IV criteria assessed from medical records and screening interviews)	MBCT (52) vs. mADM (62)	MBCT: 50 (10.64); 79% mADM: 49 (11.84); 76%	SCS	Pre- and 1 month post-intervention	MBCT group showed significant increase in SC. MBCT group had significantly greater improvements in SC and mindfulness compared to mADM group.	
							Cohen's $d = .50$ (medium effect size)	
							SC and mindfulness mediated the effect of MBCT on depressive symptoms.	
Laithwaite <i>et al.</i> (2009)	Within-subjects	Schizophrenia, schizo-affective disorder or bi-polar affective disorder (not reported)	CMT (18) No control	36.9 (9.09) 0%	SCS	Pre-, mid-, post-intervention and 6-week follow-up	No significant changes in SC $r = .22$ (small to medium effect size)	Significant improvements in depression, self-esteem, shame, social comparison and general psychopathology
Mayhew and Gilbert (2008)	Case series design	Schizophrenia (not reported)	CMT (3) No control	44.7 (not reported)	SCS	Pre- and post-intervention	One out of three participants showed	All participants showed decreases in depression, anxiety,

				0%			and 6 month follow-up	improvement in SC post intervention Effect size n/a	paranoia, OCD, psychoticism, interpersonal sensitivity. All voices reported as less malevolent and less persecuting.
Radford <i>et al.</i> (2012)	Within-subjects	Vulnerable to depressive relapse, mild-moderate symptoms of anxiety, depression or CFS (GP)	MBCT (17) No control	48 (8) 71%	SCS	Pre- and post-intervention and 6 month follow-up	Significant increase in SC from pre- to post- intervention, maintained at follow-up Cohen's $d = .67$ (medium effect size)	Significant improvements in depression, anxiety and rumination	
Schoenberg and Speckens (2014)	Non-RCT	Depression (meeting DSM-IV criteria as assessed by consultant psychiatrist)	MBCT (26) vs. WL (25)	MBCT: 47.8 (12.1); 77% WL: 51.2 (8.5); 48%	SCS	Pre- and post-intervention	MBCT led to significant improvements in SC Effect size not reported	Significant changes on all clinical scales in MBCT group only	
Yadavaia <i>et al.</i> (2014)	RCT	Undergraduates with low SC and high psychological distress (assessed by scores on SCS and GHQ)	ACT (30) vs. WL (43)	ACT: 19.9 (4.05); 70% WL: 20.83 (4.61); 77%	SCS	Pre- and post-intervention and 8-9 weeks follow-up	ACT led to significant increases in SC. The ACT group showed greater improvements in SC compared to waiting list control. Cohen's $d = 1.06$ (large effect size)	The ACT group showed greater improvements in general psychological distress and anxiety compared to waiting list control	

SC: self-compassion; RCT: randomised controlled trial; CBT: cognitive behavioural therapy; CFT: compassion-focused therapy; CMT: compassionate mind training; MBCT: mindfulness-based cognitive therapy, MBSR: mindfulness-based stress reduction; ACT: acceptance and commitment therapy; CALM: coping with anxiety through living mindfully; WL: waiting list; SCS: self-compassion scale; SCS-SF: self-compassion scale short form; GHQ: general health questionnaire; OCD: obsessive compulsive disorder; SPSQ: Social Phobia Screening Questionnaire, mADM: maintenance anti-depressant medication

Table 2: Summary of interventions

Authors, year	Key components of treatment	Format	Length	Follow-up period post intervention
Compassion-based interventions				
Beaumont <i>et al.</i> (2012)	CMT: compassionate imagery, letter writing, grounding work (+ CBT)	Individual	Not specified	None
Beaumont and Martin (2013)	CMT: compassionate imagery, letter writing, mindful breathing (+ EMDR)	Individual	8 sessions	9 months
Boersma <i>et al.</i> (2015)	CFT: compassionate imagery, thoughts, and letter writing, mindful breathing, values	Individual	8 weekly sessions of 1 hour	4 weeks
Kelly and Carter (2015)	CFT: SC imagery exercises, SC letter writing, compassionate self-talk	Individual (self-help: no therapist contact)	3 weeks following a self-help programme	None
Laithwaite <i>et al.</i> (2009)	CMT: understanding compassion and the 'ideal friend'; compassionate letter writing	Group	2 sessions per week for 10 weeks (20 sessions total)	6 weeks
Mayhew and Gilbert (2008)	CMT: discussions about SC, generating feelings of warmth, compassionate imagery, re-evaluating critical thoughts	Individual	12 sessions of 1 hour	6 months
Mindfulness-based interventions				
Kuyken <i>et al.</i> (2010)	MBCT protocol (Segal <i>et al.</i> , 2002)	Group	8 weekly sessions of 2 hours	1 month
Goodman <i>et al.</i> (2014)	MBCT protocol (Segal <i>et al.</i> , 2002)	Group	8 weekly sessions of 2 hours	1 week
Jazaieri <i>et al.</i> (2012)	MBSR protocol (Kabat-Zinn, 1990)	Group	8 weekly sessions of 2.5 hours, plus 1 day meditation retreat	3 months

Radford <i>et al.</i> (2012)	MBCT protocol (Segal <i>et al.</i> , 2002)	Group	8 weekly sessions	6 months
Schoenberg and Speckens (2014)	MBCT protocol (Segal <i>et al.</i> , 2002)	Group	8 weekly sessions of 2.5 hours	None
Compassion and mindfulness-based interventions				
Yadavaia <i>et al.</i> (2014)	ACT: defusion from self-criticism, cultivating self-kindness and acceptance, compassionate imagery	Group	6 hours	8-9 weeks

3.2. Assessment of methodological quality

Table 3 presents the results of the assessment of methodological quality of the included studies. The results revealed a high level of variability across quality criteria items. Overall scores ranged from 12/27 to 25/27, with the mean score 18/27. The highest scoring studies were all RCTs (Jazaieri *et al.*, 2012; Kelly & Carter, 2015; Kuyken *et al.*, 2010; Yadavaia *et al.*, 2014). On the whole, these RCTs were well-designed, ensuring most threats to validity were addressed. Participants were randomly allocated to treatment conditions, intent-to-treat analysis was performed and treatment compliance was monitored. Four of the lowest scoring studies had no form of control group (Beaumont & Martin, 2013; Boersma *et al.*, 2015; Laithwaite *et al.*, 2009; Mayhew & Gilbert, 2008). In addition, sample sizes were small and generalisability was limited.

The majority of studies used valid and reliable outcome measures. One study used measures that had not been validated for the population (Laithwaite *et al.*, 2009). Eleven studies provided an adequate description of the treatment intervention programme, and ten detailed that the intervention was delivered by competent and trained therapists (see Table 3). Checks for treatment compliance was addressed by nine studies. Attrition was dealt with appropriately by all but one study (Schoenberg & Speckens, 2014), who did not report attrition in sufficient detail or consider in the data analysis.

Some aspects of methodological quality were not well addressed by any of the studies. For example, only one study reported the use of a power analysis (Schoenberg & Speckens, 2014), and sample sizes were relatively small across most studies. In terms of design, the lack of a control or comparison group in six studies, and the use of waiting list controls in three studies, limits the conclusions that can be drawn (see Table 1). In addition, many of the studies failed to have an adequate follow-up period. Effect sizes were calculated by five studies (Kelly *et al.*, 2014; Kuyken *et al.*, 2010; Laithwaite *et al.*, 2009; Radford *et al.*, 2012; Yadavaia *et al.*, 2014).

In terms of sample representativeness, some studies failed to include sufficient information about the source population of participants, the proportion who were asked to participate and those that agreed. Although eight studies were considered to have recruited from a representative population, only two were deemed to have a representative sample of participants (Jazaieri *et al.*, 2012; Kuyken *et al.*, 2010).

Table 3: Quality assessment of studies

Study	Beaumont <i>et al.</i> (2012)	Beaumont and Martin (2013)	Boersma <i>et al.</i> (2015)	Goodman <i>et al.</i> (2014)	Jazaieri <i>et al.</i> (2012)	Kelly and Carter (2015)	Kuyken <i>et al.</i> (2010)	Laitthwaite <i>et al.</i> (2009)	Mayhew and Gilbert (2008)	Radford <i>et al.</i> (2012)	Schoenberg and Speckens (2014)	Yadavaia <i>et al.</i> (2014)
Quality criteria												
1. Aims/ hypothesis	1	1	1	1	1	1	1	1	1	1	1	1
2. Outcomes	1	1	1	1	1	1	1	1	1	1	1	1
3. Characteristics of participants	0	1	1	1	1	1	1	1	1	1	1	1
4. Description of treatment	1	1	1	1	1	1	1	1	1	1	1	1
5. Confounders	0	0	1	1	1	1	1	1	1	1	0	1
6. Main findings	1	1	1	1	1	1	1	1	1	1	1	1
7. Variability	1	1	1	1	1	1	1	1	0	1	1	1
8. Adverse events	0	0	1	1	1	1	1	1	1	1	0	1
9. Attrition characteristics	0	1	1	1	1	1	1	1	1	1	1	1
10. Probability values	1	0	0	1	1	0	1	1	0	0	1	1
11. Effect sizes	1	0	1	1	1	1	1	1	0	1	1	1
12. Representative population – recruitment	0	0	1	1	1	1	1	0	1	1	0	1
13. Representative population – participants	0	0	0	0	1	0	1	0	0	0	0	0
14. Competence of therapists	1	0	0	1	1	0	1	1	1	1	1	1
15. Generalisability of findings	1	0	0	0	0	0	0	0	0	0	0	0
16. Data dredging	1	1	1	1	1	1	1	1	1	1	1	1
17. Appropriate statistical tests	1	1	1	1	1	1	1	1	1	1	1	1
18. Treatment compliance	0	1	1	1	1	1	1	0	1	1	0	1
19. Valid and reliable outcome measures	1	1	1	1	1	1	1	0	1	1	1	1
20. Adjustment for follow-up period	0	0	0	0	1	1	1	0	0	0	1	1

21. Adequate control or comparison group	1	0	0	0	1	1	1	0	0	0	1	1
22. Groups recruited from same population	1	0	0	0	1	1	1	0	0	0	1	1
23. Groups recruited over same time period	1	0	0	0	1	1	1	0	0	0	0	1
24. Randomisation	0	0	0	0	1	1	1	0	0	0	0	1
25. Adjustment for confounding variables	0	0	0	0	1	1	1	0	0	1	0	0
26. Intention to treat and attrition	0	1	1	1	1	1	1	1	1	1	0	1
27. Sample size and power	0	0	0	0	0	0	0	0	0	0	1	0
“total score”	15	12	16	18	25	22	25	15	15	18	17	23

The main aim of this review was to assess whether changes in levels of self-compassion are observed following an intervention that is compassion-focused, mindfulness-based, or an intervention that indirectly targets self-compassion and mindfulness i.e. ACT and DBT. A narrative synthesis of the results by type of intervention is provided below.

3.3. Do compassion-focused therapies improve levels of self-compassion?

Six studies assessed whether CMT/CFT increase levels of self-compassion and Table 2 provides a summary of the interventions utilised. Of note, three studies used a 'pure' CFT/CMT intervention, whilst two combined CFT/CMT with other psychological interventions (CBT, EMDR). Only one study delivered CMT in a group setting. All studies provided an adequate description of the intervention that was delivered, and four studies monitored treatment compliance (Beaumont & Martin, 2013; Boersma *et al.*, 2015; Kelly & Carter, 2015; Mayhew & Gilbert, 2008). None of the studies conducted power calculations.

Two CMT/CFT studies utilised comparison groups. Kelly and Carter (2015) carried out a pilot RCT comparing the effectiveness of a CFT-based self-help intervention with a CBT-based self-help intervention for individuals with BED, whilst Beaumont *et al.* (2012) carried out a non-RCT comparing CBT+CMT with CBT only for participants who were requiring therapy post-trauma. Both studies reported statistically significant increases in self-compassion post-intervention. In addition, the results of Kelly and Carter (2015) indicated that the CFT-based intervention produced greater improvements in self-compassion compared to the other conditions, with a small to medium effect size. In their study, Beaumont *et al.* (2012) reported the CBT+CMT group developed more self-compassion than the CBT only group. However, no effect sizes were reported.

The RCT by Kelly and Carter (2015) was overall well-designed. However, the small sample size and lack of follow-up period compromises the validity of the study. Participants did not receive any therapist input and the intervention was relatively short in duration: participants completed the self-help intervention on their own over a three-week period. The external validity of this study was compromised due to the recruitment process, which included advertising for participants in hospitals and in the community. This may have resulted in highly motivated participants being selected, limiting the generalisability of the findings. In addition, participants were predominately white females, again limiting the generalisability to other populations. Nevertheless, this study provided some preliminary evidence that brief CFT is effective in increasing levels of self-compassion.

The non-RCT by Beaumont *et al.* (2012) had a low quality criteria rating. There was a lack of information provided about the characteristics of the participants. For example, it was not reported whether participants had a diagnosis of PTSD or any other clinical diagnosis. The small number of participants were randomised into one of the two treatment conditions based on type of trauma they experienced. This meant the allocation of participants to the treatment groups was not fully randomised. The exact number of therapy sessions each participant received was not recorded, only that participants received up to 12 weeks of therapy. The study did not consider potential confounding factors that may have influenced outcomes. The lack of follow-up period is an additional risk to the validity of this study. In addition, treatment compliance was not assessed. The ability to generalise the findings more widely is compromised due to these limitations. However, it is worth noting that the ecological validity is relatively high due to the study being conducted in a real-life setting with participants who had been referred for therapy.

The findings of the two studies that utilised a comparison group indicate suggest that CFT/CMT is effective in increasing levels of self-compassion. However, the methodological weaknesses of the studies suggest that these findings must be interpreted with caution.

Three studies carried out case series/single case studies. Boersma *et al.* (2015) carried out a single case experimental design to explore the effectiveness of CFT in the treatment of social phobia. CFT was delivered on an individual basis and the participants acted as their own control. Five out of the six participants were found to have significant improvements in self-compassion post-treatment. Mayhew and Gilbert (2008) carried out a case series design to explore the effectiveness of CMT for individuals with psychosis. Three participants completed 12 sessions of individual CMT. One participant was found to show an increase in self-compassion post intervention and at six month follow-up. Beaumont and Martin (2013) carried out a single case study to explore the impact of combining CMT with EMDR to treat post-trauma symptoms. The participant received eight sessions of EMDR+CMT. Self-compassion was found to increase, moving from the 'low' range pre-treatment, to the 'high' range post-treatment. In addition, this study had a good follow-up period of 9 months, and the increase in self-compassion was found to be maintained at this point.

Although all three were well-designed case studies, due to the nature of the design, they all had similar weaknesses and therefore had low quality criteria ratings. The small sample sizes

and lack of control or comparison group compromises the internal and external validity of all three studies. In addition, Boersma *et al.* (2015) used a relatively short baseline measurement and follow-up period. Conversely, the length of follow-up period was a strength of Mayhew and Gilbert (2008) and Beaumont and Martin (2013). It is also worth noting in Boersma *et al.* (2015) that although the participants met criteria for social phobia as per DSM-IV, they were not recruited from a clinical population and involved students responding to advertisements. Thus they may have been highly motivated individuals and the findings may have limited generalisability. In addition, although the intervention was manualised, it was delivered by two different clinicians who were not highly trained to deliver the intervention, threatening the internal validity of the study. Finally, because the intervention delivered by Beaumont and Martin (2013) was combined EMDR and CMT, the study design does not allow the individual contributions of CMT and EMDR to the observed increase in self-compassion to be assessed.

Laithwaite *et al.* (2009) conducted the only group intervention of CMT included in this review. The study was a within-subjects design, to explore the effectiveness of group CMT for individuals with psychosis in a forensic setting. Despite reductions in clinical symptoms, no significant changes in self-compassion were found, with a small to medium effect size reported. This study had a small sample size with only 18 participants completing the group, which consisted of 20 sessions over 10 weeks. In addition, a number of the outcome measures used have not been validated for use within a forensic population. It also lacked an adequate control or comparison group. All of this threatens the internal validity of the study and limits the conclusions that can be drawn. However, although these weaknesses also limit the generalisability of the findings, it does have good ecological validity in the naturalistic aspect of its design: it was conducted in a real-life forensic setting.

To conclude, of the six studies that assessed whether compassion-focused therapies are effective in increasing levels of self-compassion, four reported findings in support of this. However, given the methodological weaknesses of the included studies, the findings should be considered preliminary with further research warranted. In particular, the lack of control and comparison groups makes it difficult to conclude the findings were as a result of the intervention or other extraneous variables.

3.4. Do mindfulness-based therapies improve levels of self-compassion?

Five studies assessed whether mindfulness-based interventions improve levels of self-compassion. Table 2 provides details of the interventions used: four studies utilised the eight week MBCT group program developed Segal *et al.* (2002), and one MBSR study followed the MBSR group programme developed by Kabat-Zinn (1990). All studies provided an adequate description of the intervention or referenced the appropriate manual, but only three studies adequately checked for treatment compliance (Goodman *et al.*, 2014; Kuyken *et al.*, 2010; Radford *et al.*, 2012). Only one study conducted a power analysis (Schoenberg & Speckens, 2014).

Three studies included a comparison group, two of which were RCTs and one a non-randomised design. Jazaieri *et al.* (2012) carried out a well-designed RCT comparing the effectiveness of MBSR with AE and an untreated control group for individuals with social anxiety disorder. Participants were randomly assigned to either MBSR or AE. The untreated control group were recruited as part of a separate RCT, but were matched to the participants of the current RCT. MBSR led to significant improvements in self-compassion. However, this was comparable with the AE participants. No effect sizes were reported.

Kuyken *et al.* (2010) explored self-compassion and mindfulness as mechanisms of change in MBCT. Their study was embedded in an RCT comparing the effectiveness of MBCT with mADM over a 15 month study period (Kuyken *et al.*, 2008). Participants were randomly assigned to either MBCT plus support to taper or discontinue anti-depressant medication (ADM), or mADM alone. Although Kuyken *et al.* (2010) were assessing self-compassion as a mediator rather than outcome of MBCT, significant improvements in self-compassion were reported for MBCT compared to mADM, with medium effect size. Self-compassion was also found to mediate the effect of MBCT on depression.

Both RCTs were well-designed with minimal most threats to validity: the randomisation procedure was described, attrition rates were detailed, intent-to-treat analysis was conducted, and potential confounding variables were considered and controlled for. In addition, Kuyken *et al.* (2010) videotaped all trial groups to control for treatment compliance. However, treatment compliance was not monitored by Jazaieri *et al.* (2012). Kuyken *et al.* (2010) had a short follow-up period of only one month and did not include a placebo comparison group.

In both RCTs, the generalisability of findings is compromised. Jazaieri *et al.* (2012) recruited participants through web-based community listings, requiring participants to volunteer, which may have resulted in an unrepresentative population with high levels of motivation. Kuyken *et al.* (2010) excluded a large number of potential participants: those included were in remission from depression, treated with ADM and willing to try the MBCT approach, thereby limiting generalisability of the findings.

Schoenberg and Speckens (2014) conducted a non-RCT looking at neural working mechanisms in MBCT. However, because the study involved participants completing an MBCT programme and included a measure of self-compassion, it was felt relevant to include this study in this review. Participants with depression were allocated to either complete the MBCT programme or to a waiting list control, although there was a lack of information provided about the recruitment process. Completion of the MBCT programme led to significant improvements in self-compassion. Whilst this study had a number of strengths including conducting a power calculation, there was no randomisation, no intent-to-treat analysis conducted, no effect sizes calculated, there was not an adequate follow-up period and the generalisability of the findings was compromised.

The findings from the two RCTs and one non-RCT suggest that MBCT is effective in improving self-compassion. However, methodological weaknesses across all studies must be taken into consideration when interpreting this finding.

The two remaining studies were within-subjects, repeated measures in design, thereby a key weakness of both was the lack of control and comparison groups. Both also lacked adequate sample sizes. Goodman *et al.* (2014) recruited a small sample of participants to explore the effectiveness of a MBCT programme for pregnant women with elevated anxiety symptoms. Following completion of the group, significant increases in self-compassion were found. However, the study lacked power. Although confounding variables were identified, these were not controlled for. The participant demographics (well-educated, older women) limits generalisability to other groups of women, and there was no adequate follow-up period.

Radford *et al.* (2012) also conducted a repeated measures design to explore the effectiveness of a MBCT programme for primary care patients. Participants were referred to the programme by their GP, and had mixed diagnoses, including depression, anxiety and chronic fatigue syndrome (CFS). The MBCT programme led to significant improvements in levels of

self-compassion, with medium effect size, and this was maintained at six month follow-up. Strengths of this study were that intent-to-treat analysis was conducted and effect sizes calculated. It has high ecological validity and provides some tentative support for the effectiveness of MBCT in increasing levels of self-compassion.

To conclude, all studies reported improvements in self-compassion following completing of MBCT or MBSR. However, as there were only two well-designed RCTs, again methodological weaknesses suggest further research is required before firm conclusions are drawn.

3.5. Do therapies that include elements of compassion and mindfulness training improve levels of self-compassion?

Only one study assessed whether ACT increases levels of self-compassion. Yadavaia *et al.* (2014) completed a RCT comparing the effectiveness of a 6-hour ACT workshop with a waiting list control for a small sample of undergraduates with low self-compassion and high psychological distress. Table 2 provides a summary of the intervention. Participants were randomly allocated to either the active treatment or the waiting list control. Significant increases in self-compassion were found in those who attended the ACT workshop compared to the waiting list control. Post-intervention changes yielded a medium effect size, whilst a large effect size was observed at follow-up, although this follow-up period was short in duration.

Overall, this was a well-designed RCT controlling for the majority of potential threats to validity. Intent-to-treat analysis was performed and treatment compliance was monitored. The use of a waiting list control group, rather than an active treatment comparison, limits the conclusions that can be drawn. The external validity of this study is potentially compromised due to the population sampled: undergraduates are unlikely to be representative of the general population, limiting the generalisability of the findings. Nevertheless, this study provides some preliminary evidence that ACT is effective in increasing levels of self-compassion. Although minimal conclusions can be drawn based on one study, the findings do suggest that further research in this area is warranted.

4. Discussion

The aim of this systematic review was to examine whether compassion-focused and mindfulness-based interventions improve self-compassion in adults experiencing clinical levels of mental health problems. There has been growing interest in the application of compassion-focused and mindfulness-based therapies. A recent systematic review (Leaviss & Uttley, 2015) of the effectiveness of compassion-focused interventions included studies utilising clinical and nonclinical populations. It also included studies that did not report whether self-compassion changed following the intervention. This review therefore adds to the current literature by looking specifically at changes in levels of self-compassion in those with clinical presentations. This is pertinent given self-compassion has been strongly linked with psychological distress, and as such may be a potential mechanism for therapeutic change. As other established therapeutic approaches have conceptual links with self-compassion, this review extends previous literature by including those studies that may directly or indirectly lead to changes in self-compassion.

4.1. Summary of research findings

Twelve studies were identified in the review, and all but two of the studies found that self-compassion levels increased post intervention. Although effect sizes were not reported by all studies, of the five that did, in general moderate effect sizes were found.

4.1.1. Clinical Presentation

This review included a wide range of presenting problems and clinical presentations. Improvements in self-compassion were found across the range of these presentations, excluding psychosis: the two studies that found nonsignificant changes were the two studies of participants with psychosis. However, these studies both had methodological weaknesses that limit the validity and generalisability of the findings. It is also difficult to draw firm conclusions by clinical presentation given that the different presenting problems were examined only by a small number of studies using different interventions. The recruitment of participants was also a common limitation across the studies: recruiting participants through advertisements is likely to result in a bias towards highly motivated participants, and not a representative sample of the target presenting problem. For example, Jazaieri *et al.* (2012) required individuals with social anxiety disorder to voluntarily respond to advertisements. Thus, it is possible that the individuals motivated to do this may have had less severe social anxiety symptoms than those clinically referred for treatment.

4.1.2. Type of intervention

The most commonly used therapeutic intervention included in this review was CFT/CMT (six studies). The findings from four of these studies suggest that CFT/CMT is effective in improving levels of self-compassion. However, it is also worth noting that of these four studies, two lacked any control or comparison group, making it difficult to conclude that the observed changes were down to the CFT/CMT intervention alone. Across all studies the small sample sizes were a significant cause for concern, highlighting a likely lack of statistical power. In addition, within the CFT/CMT studies there was wide variability in terms of the nature of the intervention, making it difficult to compare studies. For example, all interventions were delivered on an individual basis, bar one that was delivered in a group setting and one that involved no therapist contact. Most were delivered over eight sessions, but longer and shorter interventions were also utilised. It is therefore unclear at this stage what the dose-response relationship is for CFT/CMT. Interestingly, the group-based intervention was also the longest in duration and led to no significant changes in self-compassion. However, as this study was the only one conducted in a forensic setting, this restricts the conclusions that can be drawn regarding the effectiveness of CFT/CMT delivered in this format, and for this population.

Of the individual interventions, in two studies CFT/CMT was combined with other established psychological therapies (CBT and EMDR), thereby limiting the comparisons that can be made with the other 'pure' CFT/CMT interventions. However, the findings of this review suggest self-compassion improved whether CFT/CMT was delivered as a standalone treatment, or when it was combined with another treatment, although future research is required to address this fully. It would also be pertinent to assess whether CFT/CMT adds to the effectiveness of established therapies, such as CBT and EMDR. Further robust research would allow this through comparing effect sizes between CFT/CMT when it is delivered as a sole intervention and when it is used as an adjunct to other treatments, and also comparing it with other established psychological therapies.

Mindfulness-based interventions were the second most commonly used therapeutic intervention (five studies). These studies fared better in terms of methodological quality, and as these studies all followed the same established treatment protocols for MBCT or MBSR, comparisons across studies is easier. All studies found significant improvements in levels of self-compassion. However, there was a lack of adequate comparison groups: no study

compared MBCT with any established therapy, such as CBT, therefore it cannot be fully concluded that the observed effects were due to the intervention. Most studies also had an inadequate follow-up periods, so it is unclear whether the observed increases in self-compassion were maintained over time. Due to populations sampled and recruitment processes, generalisability of the findings was compromised in most studies as well. Power analysis was only reported by one study. Nevertheless, despite not directly targeting self-compassion, results suggest mindfulness-based interventions do appear to lead to improved self-compassion.

Only one study involved ACT as the therapeutic intervention, limiting the conclusions that can be drawn. Notwithstanding this, it is worth highlighting that the ACT study was felt to be a well-designed RCT, despite some methodological weaknesses limiting the validity and generalisability of the findings. This suggests that future research into whether ACT improves self-compassion is warranted. As this study delivered ACT in a workshop setting, it could be beneficial to explore whether ACT delivered on an individual basis also leads to increased self-compassion.

4.1.3. Symptom improvement

The majority of studies reported significant improvements in the range of other clinical outcomes they assessed, such as mood and anxiety symptomology, post-traumatic symptoms, binge eating and psychotic experiences. This suggests that targeting self-compassion could be a useful transdiagnostic approach. Of note, Boersma *et al.* (2015) reported that despite five participants showing significant improvements in self-compassion, only three social anxiety scores reduced post-treatment. Conversely, Laithwaite *et al.* (2009) found no significant improvements in self-compassion, but did find improvements across a range of outcomes including depression, self-esteem and shame. Similarly, Mayhew and Gilbert (2008) reported only one participant showed improvement in self-compassion, whilst all three participants showed decreases across a wide range of other outcomes including depression, anxiety and paranoia. This suggests that improvements in clinical symptoms and self-compassion may not necessarily occur concurrently. However, again the small number of studies and methodological weaknesses indicate that further longitudinal research is required to explore this fully. For example, it would be valuable to assess whether baseline self-compassion prospectively predicts symptom change in patients receiving psychological therapy for mental health problems, and/or whether levels of self-compassion change as symptoms improve.

4.1.4. *Self-compassion changes in comparison groups*

Four studies utilised an active treatment comparison: CBT+CMT was compared with CBT; MBSR was compared with AE; CFT self-help was compared to CBT self-help; MBCT was compared with mADM. In three studies, the intervention of interest produced greater improvements in self-compassion compared to the treatment comparison. However, there was no difference found between MBSR and AE: both led to significant improvements in self-compassion. Future studies would benefit from further comparisons of CFT/CMT with established treatments, such as CBT and MBCT, to establish whether CFT/CMT leads to greater increases in self-compassion.

4.2. Measuring self-compassion

All studies used the SCS (Neff, 2003a) to assess self-compassion (one used the SCS-SF). The SCS covers six factors associated with self-compassion: self-kindness, self-judgment, common humanity, isolation, mindfulness and over-identified. A total score indicating overall self-compassion is calculated from the six subscales. At present, no other validated measure of self-compassion exists. However, the SCS has been criticised as a measure of self-compassion as it was developed using a student sample and its psychometric properties have been commonly tested in college students. Therefore, further validation within other populations is required. Williams *et al.* (2014) and López *et al.* (2015) both conducted studies in attempt to address this gap in the literature. López *et al.* (2015) examined the psychometric properties of the SCS with a large community sample. They reported that they were unable to replicate the six-factor structure of the SCS, and concluded that the SCS total score should not be used to assess self-compassion (López *et al.*, 2015). Similarly, Williams *et al.* (2014) concluded that the SCS is not a psychometrically robust measure of self-compassion following testing with an unspecified community sample of adults, a sample of adults who practice meditation, and a sample of adults who suffer from recurrent depressive disorder in remission. Costa *et al.* (2015) reported similar results to Williams *et al.* (2014) and López *et al.* (2015) when testing the six-factor SCS structure with samples of patients with borderline personality disorder, anxiety disorders, eating disorders, and a sample from the general population. They did however find support for a two-factor SCS model. Thus, they concluded that when used in this way, the SCS a reliable tool to use with clinical and nonclinical populations (Costa *et al.*, 2015).

Neff (2015) has responded to these criticisms, highlighting reasons why the SCS can be considered a valid and reliable measure of self-compassion, using the six-factor model, or an

overall score, with further research in preparation. At present, there appears to be an ongoing debate regarding whether the SCS is a suitable measure to use, and should be considered when interpreting the results of this review.

4.3. Implications for clinical practice

The findings suggest that self-compassion may be an important target of therapeutic change, although a small number of studies included in this review indicated that symptom change and self-compassion did not occur concurrently. That the MBCT/MBSR and ACT studies found significant improvements in self-compassion is an interesting finding given that these interventions do not target self-compassion skills directly. Therefore, targeting self-compassion does not necessarily mean using CFT/CMT: other psychotherapeutic interventions may produce similar results, thus suggesting that the different interventions may share underlying commonalities that lead to improvements in self-compassion, thus suggesting it may be a trans-theoretical construct.

4.4. Future research

It is evident that further research into whether compassion-focused and mindfulness-based interventions increase self-compassion is required. The main weakness of research to date is the lack of well-designed RCTs comparing the intervention of interest with active treatment comparison and control groups. Future studies are required to compare the effectiveness of compassion-focused and mindfulness-based interventions with other established interventions, such as CBT. The use of control and comparison groups would help conclude whether observed changes can be attributed to the intervention, which the design of the majority of studies in this review did not allow. In addition, larger sample sizes need to be tested and longer follow-up periods are required.

Further research is also required to assess whether self-compassion is a mechanism of change in psychological interventions. The nature and design of the studies in this review did not allow this to be answered, although it is worth noting that the study by Kuyken *et al.* (2010) found self-compassion to be a mechanism of change in MBCT. Longitudinal and mediational studies are required to assess this further.

It may also be important to assess the patient population who will benefit most from targeting self-compassion. CFT/CMT was originally developed for those with chronic mental health difficulties and high levels of shame. The findings of the current review

suggest that self-compassion may be useful to target with anxiety and depressive disorders. However, further research designed to specifically answer this question is required.

4.5. Limitations of this review

Whilst every effort was made to identify all relevant research related to increasing self-compassion, it is a possibility with every review that some studies may be missed. Additionally, because studies were limited to being published in English and in peer reviewed journals, this means there is a chance some interesting research may have been excluded. As this review aimed to examine whether levels of self-compassion change following a psychotherapeutic intervention, studies were excluded if there was no standardised outcome measure of self-compassion. However, there are studies that have measured self-compassion in alternative ways (Braehler *et al.*, 2013; Gilbert & Irons, 2004; Gilbert & Procter, 2006) and the inclusion of these may have added to the findings of this review. This may be particularly relevant given the ongoing debate of the use of the SCS.

This review used composite numerical scores to critically evaluate the methodology of the papers. It should be noted that some (e.g. Greenhalgh, 2014) argue that composite scores may be neither valid nor reliable, and this should be taken into consideration when interpreting the evaluation of the papers in this review. Related to this, because the inclusion criteria for this review was kept broad to capture as much of the research as possible, it does mean that there was wide variability in study design, intervention and population included. For example, including case study designs was understandably going to lead to lower quality ratings due to the nature of the study design. In addition, the variability among studies made synthesis of the results more challenging. However, given this is a relatively novel and developing area or research, it was felt appropriate to include all the relevant research in this area.

4.6. Conclusion

The aim of this review was to examine whether compassion-focused and mindfulness-based interventions improve self-compassion in adults experiencing clinical levels of mental health problems. Whilst the literature was characterised by methodological weaknesses, the current findings suggest that compassion-focused and mindfulness-based interventions are effective in improving self-compassion. Interestingly the support was strongest for mindfulness-based interventions but this may be accounted for by the higher quality ratings of these studies. More research is needed to extend the findings to enable more definitive conclusions to be

drawn. Specifically, well-designed comparison studies with larger sample sizes and longer follow-up periods are required. Nevertheless, self-compassion appears to be an important construct to consider when delivering psychotherapeutic interventions and it is hoped that the results of this review will support future research in this area.

Acknowledgments

The first author would like to thank research supervisors Dr Stella Chan and Professor Kevin Power for their comments, Ms Antonia Klases for her assistance in second rating the review studies, and Ms Rowena Stewart for her advice regarding the systematic searching of databases.

The authors declare that they have no conflicts of interest.

References

- Beaumont, E., Galpin, A., & Jenkins, P. (2012). 'Being kinder to myself': A prospective comparative study, exploring post-trauma therapy outcome measures, for two groups of clients, receiving either Cognitive Behaviour Therapy or Cognitive Behaviour Therapy and Compassionate Mind Training. *Counselling Psychology Review*, 27(1), 31-43.
- Beaumont, E., & Martin, C.J. (2013). Using compassionate mind training as a resource in EMDR: A case study. *Journal of EMDR Practice and Research*, 7(4), 186-199. doi: <http://dx.doi.org/10.1891/1933-3196.7.4.186>
- Birnie, K., Speca, M., & Carlson, L.E. (2010). Exploring self-compassion and empathy in the context of mindfulness-based stress reduction (MBSR). *Stress and Health*, 26(5), 359-371. doi: <http://dx.doi.org/10.1002/smi.1305>
- Boersma, K., Hakanson, A., Salomonsson, E., & Johansson, I. (2015). Compassion focused therapy to counteract shame, self-criticism and isolation. A replicated single case experimental study for individuals with social anxiety. *Journal of Contemporary Psychotherapy*, 45(2), 89-98. doi: <http://dx.doi.org/10.1007/s10879-014-9286-8>
- Braehler, C., Gumley, A., Harper, J., Wallace, S., Norrie, J., & Gilbert, P. (2013). Exploring change processes in compassion focused therapy in psychosis: Results of a feasibility randomized controlled trial. *British Journal of Clinical Psychology*, 52(2), 199-214 116p. doi: 10.1111/bjc.12009

- Cahill, J., Barkham, M., & Stiles, W.B. (2010). Systematic review of practice-based research on psychological therapies in routine clinic settings. *British Journal of Clinical Psychology, 49*(4), 421-453. doi: 10.1348/014466509X470789
- Centre for Reviews and Dissemination. (2009). *Systematic Reviews: CRD's guidance for undertaking reviews in healthcare*. York: CRD, University of York.
- Chiesa, A., & Serretti, A. (2009). Mindfulness-based stress reduction for stress management in healthy people: A review and meta-analysis. *Journal of Alternative and Complementary Medicine, 15*(5), 593-600. doi: <http://dx.doi.org/10.1089/acm.2008.0495>
- Costa, J., Marôco, J., Pinto-Gouveia, J., Ferreira, C., & Castilho, P. (2015). Validation of the psychometric properties of the self-compassion scale. Testing the factorial validity and factorial invariance of the measure among borderline personality disorder, anxiety disorder, eating disorder and general populations. *Clinical Psychology & Psychotherapy*. doi: 10.1002/cpp.1974.
- Dahl, J.C., Plumb, J.C., Stewart, I., & Lundgren, T. (2009). *The Art and Science of Valuing in Psychotherapy: Helping Clients Discover, Explore, and Commit to Valued Action Using Acceptance and Commitment Therapy*. Oakland, CA: New Harbinger Publications, Inc.
- Deeks, J.J., Dinnes, J., D'amico, R., Sowden, A., Sakarovitch, C., Song, F., *et al.* (2003). Evaluating non-randomised intervention studies. *Health Technology Assessment 7*(27), 1-173.
- Depue, R.A., & Morrone-Strupinsky, J.V. (2005). A neurobehavioral model of affiliative bonding: Implications for conceptualizing a human trait of affiliation. *Behaviour and Brain Sciences, 28*, 313-395.
- Downs, S.H., & Black, N. (1998). The feasibility of creating a checklist for the assessment of the methodological quality both of randomised and non-randomised studies of health care interventions. *Journal of Epidemiology and Community Health, 52*(6), 377-384. doi: 10.1136/jech.52.6.377
- Forman, E.M., Herbert, J.D., Moitra, E., Yeomans, P.D., & Geller, P.A. (2007). A randomized controlled effectiveness trial of acceptance and commitment therapy and cognitive therapy for anxiety and depression. *Behavior Modification, 31*(6), 772-799.
- Gilbert, P. (2005). *Compassion: Conceptualisations, research and use in psychotherapy*. New York, NY: Routledge; US.

- Gilbert, P. (2009). Introducing compassion-focused therapy. *Advances in Psychiatric Treatment, 15*(3), 199-208. doi: <http://dx.doi.org/10.1192/apt.bp.107.005264>
- Gilbert, P. (2010). An introduction to compassion focused therapy in cognitive behavior therapy. *International Journal of Cognitive Therapy, 3*(2), 97-112.
- Gilbert, P., & Irons, C. (2004). A pilot exploration of the use of compassionate images in a group of self-critical people. *Memory, 12*(4), 507-516.
- Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism: Overview and pilot study of a group therapy approach. *Clinical Psychology and Psychotherapy, 13*(6), 353-379. doi: <http://dx.doi.org/10.1002/cpp.507>
- Goodman, J.H., Guarino, A., Chenausky, K., Klein, L., Prager, J., Petersen, R., *et al.* (2014). CALM pregnancy: Results of a pilot study of mindfulness-based cognitive therapy for perinatal anxiety. *Archives of Women's Mental Health, 17*(5), 373-387. doi: <http://dx.doi.org/10.1007/s00737-013-0402-7>
- Greenhalgh, T. (2014). *How to read a paper: The basics of evidence-based medicine*: John Wiley & Sons.
- Hacker, T., Stone, P., & MacBeth, A. (2016). Acceptance and commitment therapy – Do we know enough? Cumulative and sequential meta-analyses of randomized controlled trials. *Journal of Affective Disorders, 190*, 551-565. doi: <http://dx.doi.org/10.1016/j.jad.2015.10.053>
- Hayes, S.C. (2004). Acceptance and commitment therapy, relational frame theory, and the third wave of behavioral and cognitive therapies. *Behavior Therapy, 35*(4), 639-665. doi: [http://dx.doi.org/10.1016/S0005-7894\(04\)80013-3](http://dx.doi.org/10.1016/S0005-7894(04)80013-3)
- Hayes, S.C., Strosahl, K., & Wilson, K.G. (1999). *Acceptance and Commitment Therapy: An experiential approach to behavior change*. New York: Guilford Press.
- Higgins, J.P.T., & Green, S., (Editors). (2011). *Cochrane Handbook for Systematic Reviews of Interventions Version 5.1.0 [updated March 2011]*. The Cochrane Collaboration: Available from www.cochrane-handbook.org.
- Hofmann, S.G., Sawyer, A.T., Witt, A.A., & Oh, D. The Effect of Mindfulness-Based Therapy on Anxiety and Depression: A Meta-Analytic Review.
- Hofmann, S.G., Sawyer, A.T., Witt, A.A., & Oh, D. (2010). The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. *Journal of Consulting and Clinical Psychology, 78*(2), 169.

- Jazaieri, H., Goldin, P.R., Werner, K., Ziv, M., & Gross, J.J. (2012). A Randomized Trial of MBSR Versus Aerobic Exercise for Social Anxiety Disorder. *Journal of Clinical Psychology, 68*(7), 715-731. doi: <http://dx.doi.org/10.1002/jclp.21863>
- Kabat-Zinn, J. (1990). *Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness*: Delta Trade Paperbacks.
- Kabat-Zinn, J. (2013). *Full catastrophe living, revised edition: how to cope with stress, pain and illness using mindfulness meditation*: Hachette UK.
- Kelly, A.C., & Carter, J.C. (2015). Self-compassion training for binge eating disorder: A pilot randomized controlled trial. *Psychology and Psychotherapy: Theory, Research and Practice, 88*(3), 285-303. doi: <http://dx.doi.org/10.1111/papt.12044>
- Kelly, A.C., Carter, J.C., & Borairi, S. (2014). Are improvements in shame and self-compassion early in eating disorders treatment associated with better patient outcomes? *International Journal of Eating Disorders, 47*(1), 54-64. doi: <http://dx.doi.org/10.1002/eat.22196>
- Kelly, A.C., Zuroff, D.C., Foa, C.L., & Gilbert, P. (2010). Who benefits from training in self-compassionate self-regulation? A study of smoking reduction. *Journal of Social and Clinical Psychology, 29*(7), 727.
- Kelly, A.C., Zuroff, D.C., & Shapira, L.B. (2009). Soothing oneself and resisting self-attacks: The treatment of two intrapersonal deficits in depression vulnerability. *Cognitive Therapy and Research, 33*(3), 301-313. doi: <http://dx.doi.org/10.1007/s10608-008-9202-1>
- Kuyken, W., Byford, S., Taylor, R.S., Watkins, E., Holden, E., White, K., *et al.* (2008). Mindfulness-based cognitive therapy to prevent relapse in recurrent depression. *Journal of Consulting and Clinical Psychology, 76*(6), 966.
- Kuyken, W., Watkins, E., Holden, E., White, K., Taylor, R.S., Byford, S., *et al.* (2010). How does mindfulness-based cognitive therapy work? *Behaviour Research and Therapy, 48*(11), 1105-1112. doi: <http://dx.doi.org/10.1016/j.brat.2010.08.003>
- Laithwaite, H., O'Hanlon, M., Collins, P., Doyle, P., Abraham, L., Porter, S., *et al.* (2009). Recovery After Psychosis (RAP): a compassion focused programme for individuals residing in high security settings. *Behavioural and Cognitive Psychotherapy, 37*(5), 511-526.
- Leaviss, J., & Uttley, L. (2015). Psychotherapeutic benefits of compassion-focused therapy: An early systematic review. *Psychological Medicine, 45*(5), 927-945. doi: <http://dx.doi.org/10.1017/S0033291714002141>

- Lee, W.K., & Bang, H.J. (2010). The effects of mindfulness-based group intervention on the mental health of middle-aged Korean women in community. *Stress and Health*, 26(4), 341-348. doi: <http://dx.doi.org/10.1002/smi.1303>
- Linehan, M.M. (1993). *Cognitive behavioral treatment of borderline personality disorder*. New York: Guilford.
- Linehan, M.M., Armstrong, H.E., Suarez, A., Allmon, D., & Heard, H.L. (1991). Cognitive-behavioral treatment of chronically parasuicidal borderline patients. *Archives of General Psychiatry*, 48(12), 1060-1064.
- Linehan, M.M., Schmidt, H., Dimeff, L.A., Craft, J.C., Kanter, J., & Comtois, K.A. (1999). Dialectical behavior therapy for patients with borderline personality disorder and drug-dependence. *The American Journal on Addictions*, 8(4), 279-292.
- López, A., Sanderman, R., Smink, A., Zhang, Y., van Sonderen, E., Ranchor, A., *et al.* (2015). A reconsideration of the Self-Compassion Scale's total score: self-compassion versus self-criticism. *PloS one*, 10(7), e0132940.
- MacBeth, A., & Gumley, A. (2012). Exploring compassion: A meta-analysis of the association between self-compassion and psychopathology. *Clinical Psychology Review*, 32(6), 545-552. doi: 10.1016/j.cpr.2012.06.003
- Mayhew, S.L., & Gilbert, P. (2008). Compassionate mind training with people who hear malevolent voices: A case series report. *Clinical Psychology and Psychotherapy*, 15(2), 113-138. doi: <http://dx.doi.org/10.1002/cpp.566>
- Neff, K.D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity*, 2, 223-250. doi: 10.1080/15298860390209035
- Neff, K.D. (2015). The Self-Compassion Scale is a Valid and Theoretically Coherent Measure of Self-Compassion. *Mindfulness*, 7(1), 264-274.
- Neff, K.D., & Germer, C.K. (2013). A pilot study and randomized controlled trial of the Mindful Self-Compassion program. *Journal of Clinical Psychology*, 69(1), 28-44. doi: <http://dx.doi.org/10.1002/jclp.21923>
- Neff, K.D., Kirkpatrick, K.L., & Rude, S.S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality*, 41(1), 139-154. doi: 10.1016/j.jrp.2006.03.004
- Neff, K.D., & McGehee, P. (2010). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity*, 9(3), 225-240. doi: 10.1080/15298860902979307

- Neff, K.D., & Tirsch, D. (2013). *Self-compassion and ACT Mindfulness, acceptance, and positive psychology: The seven foundations of well-being*. Oakland, CA: Context Press/New Harbinger Publications; US.
- Öst, L.-G. (2014). The efficacy of Acceptance and Commitment Therapy: An updated systematic review and meta-analysis. *Behaviour Research and Therapy*, *61*, 105-121. doi: <http://dx.doi.org/10.1016/j.brat.2014.07.018>
- Perroud, N., Nicasastro, R., Jermann, F., & Huguelet, P. (2012). Mindfulness skills in borderline personality disorder patients during dialectical behavior therapy: preliminary results. *International Journal of Psychiatry in Clinical Practice*, *16*(3), 189-196.
- Powers, M.B., Zum Vörde Sive Vörding, M.B., & Emmelkamp, P.M. (2009). Acceptance and commitment therapy: A meta-analytic review. *Psychotherapy and Psychosomatics*, *78*(2), 73-80.
- Radford, S.R., Crane, R.S., Eames, C., Gold, E., & Owens, G.W. (2012). The feasibility and effectiveness of mindfulness-based cognitive therapy for mixed diagnosis patients in primary care: A pilot study. *Mental Health in Family Medicine*, *9*(3), 191-200.
- Raes, F. (2010). Rumination and worry as mediators of the relationship between self-compassion and depression and anxiety. *Personality and Individual Differences*, *48*(6), 757-761. doi: 10.1016/j.paid.2010.01.023
- Schoenberg, P.L.A., & Speckens, A.E.M. (2014). Multi-dimensional modulations of alpha and gamma cortical dynamics following mindfulness-based cognitive therapy in Major Depressive Disorder. *Cognitive Neurodynamics*, *9*(1), 13-29. doi: <http://dx.doi.org/10.1007/s11571-014-9308-y>
- Scottish Intercollegiate Guidelines Network. (2014). *SIGN 50: A guideline developer's handbook*. Edinburgh: SIGN; 2014.
- Segal, Z.V., Williams, J.M.G., & Teasdale, J.D. (2002). *Mindfulness-based cognitive therapy for depression*: Guilford Press.
- Segal, Z.V., Williams, J.M.G., & Teasdale, J.D. (2013). *Mindfulness-based cognitive therapy for depression (2nd ed.)*. New York, NY: Guilford Press; US.
- Shapira, L.B., & Mongrain, M. (2010). The benefits of self-compassion and optimism exercises for individuals vulnerable to depression. *The Journal of Positive Psychology*, *5*(5), 377-389.
- Shapiro, S.L., Astin, J.A., Bishop, S.R., & Cordova, M. (2005). Mindfulness-Based Stress Reduction for Health Care Professionals: Results From a Randomized Trial.

International Journal of Stress Management, 12(2), 164-176. doi:

<http://dx.doi.org/10.1037/1072-5245.12.2.164>

- Shapiro, S.L., Brown, K.W., & Biegel, G.M. (2007). Teaching self-care to caregivers: Effects of mindfulness-based stress reduction on the mental health of therapists in training. *Training and Education in Professional Psychology*, 1(2), 105-115. doi: <http://dx.doi.org/10.1037/1931-3918.1.2.105>
- Swain, J., Hancock, K., Hainsworth, C., & Bowman, J. (2013). Acceptance and Commitment Therapy in the treatment of anxiety: A systematic review. *Clinical Psychology Review*, 33(8), 965-978. doi: <http://dx.doi.org/10.1016/j.cpr.2013.07.002>
- Valentine, S.E., Bankoff, S.M., Poulin, R.M., Reidler, E.B., & Pantalone, D.W. (2015). The use of dialectical behavior therapy skills training as stand-alone treatment: A systematic review of the treatment outcome literature. *Journal of Clinical Psychology*, 71(1), 1-20.
- Williams, M.J., Dalgleish, T., Karl, A., & Kuyken, W. (2014). Examining the factor structures of the five facet mindfulness questionnaire and the self-compassion scale. *Psychological Assessment*, 26(2), 407-418. doi: <http://dx.doi.org/10.1037/a0035566>
- Yadavaia, J.E., Hayes, S.C., & Vilaradaga, R. (2014). Using Acceptance and Commitment Therapy to increase self-compassion: A Randomized Controlled Trial. *Journal of Contextual Behavioral Science*, 3(4), 248-257. doi: 10.1016/j.jcbs.2014.09.002

5. INTRODUCTION TO EMPIRICAL STUDY

The findings of the systematic review suggest that self-compassion can be enhanced by psychological therapies that are compassion and/or mindfulness-based. This would indicate that self-compassion may be a potential mechanism of therapeutic change, although as research in this area is in its infancy, further robust research is required before firm conclusions are drawn.

The aim of the current empirical study is to further explore the role of self-compassion and its relationships with attachment and interpersonal problems in adults attending a primary care psychological therapies service presenting with mixed anxiety and depression. A brief overview of literature pertinent to this is provided below.

5.1. Overview of Attachment Theory

Attachment is an affectional bond to another person. Attachment theory proposes that the relationship experience an individual has with their primary caregiver in childhood will go on to affect how they view relationships in adulthood (Bowlby, 1969, 1973). According to Bowlby (1988), the early care giving experiences an individual experiences will be internalised, and working models about the self, others, emotions and expectations of social relationships are formed. These working models underlie the person's attachment style. When a caregiver is consistent and responsive to meeting the needs of the infant, a positive internal working model of the self and others develops, and therefore a secure attachment style. On the other hand, if an infant experiences an inconsistent, unresponsive and/or unavailable caregiver, this can lead to a negative internal working model of the self and/or others developing, and thus an insecure or disorganised attachment style (Ainsworth *et al.*, 1978; Bowlby, 1988).

Ainsworth *et al.* (1978) distinguished three different measurable patterns of attachment in infants: secure, insecure-avoidant and insecure-ambivalent. Although attachment theory originally focused on explaining the bond between infants and their caregivers, Bowlby (1988) asserted that the attachment system is active throughout the life span, and that adults continue to rely on attachment relationships in times of emotional distress. In addition, although Bowlby's work strongly implicated early experiences with caregivers in the development of enduring attachment patterns, it was also recognised that later life experiences could lead to revisions of internal working models (Bowlby, 1969, 1988).

Adult attachment is generally conceptualised in terms of two orthogonal dimensions: attachment avoidance and attachment anxiety, and can be partially assessed through self-report measures (Fraley *et al.*, 2000). It is proposed that an individual's scores on these dimensions will indicate their sense of attachment security and how they deal with threat and distress (Mikulincer & Shaver, 2010). Low scores for attachment anxiety and avoidance can be taken as indicative of secure attachment, and therefore the use of effective emotion-regulation strategies (Fraley *et al.*, 2000). Those who score high on either, or both, dimensions can be described as having an insecure attachment style, and will rely on secondary attachment strategies to cope with threats, through either deactivating or hyperactivating their attachment system (Cassidy & Kobak, 1988).

An individual scoring high for attachment anxiety is likely to have a negative model of the self, and will rely on hyperactivating strategies, over-emphasising the need for protection and intimacy (Mikulincer & Shaver, 2010). This may present as an overly demanding interpersonal style, seeking attention and support from attachment figures, with intensified expressions of distress and a fear of abandonment and rejection. On the other hand, those scoring high for attachment avoidance are likely to have a negative model of others and will rely on deactivating strategies, overemphasising the need for autonomy and independence (Mikulincer & Shaver, 2010). This is associated with avoidance of being close to others, denying attachment needs, along with being excessively independent and self-reliant in relationships.

5.1.1. Attachment theory and mental health

Attachment theory provides a framework to help explain why some individuals may be more vulnerable to developing mental health problems such as depression and anxiety, and research indicates a strong link between insecure attachment types and psychological problems (Dozier *et al.*, 2008; Mickelson *et al.*, 1997; Shorey & Snyder, 2006). Mikulincer and Shaver (2010) reviewed a large number of studies, including cross-sectional and longitudinal designs involving clinical and nonclinical populations, and found that attachment insecurity was common across a wide range of mental health problems, including anxiety and depression. However, although an established link, it is important to note that not everyone with an insecure attachment style will go on to develop mental health problems. As such, insecure attachment should be seen as a risk factor for developing psychological problems, rather than a sole causal factor (Daniel, 2006).

This therefore leaves an interesting question as to what mechanisms mediate the relationship between attachment and mental health problems. The current study proposes two potential mechanisms: self-compassion and interpersonal problems.

5.1.2. Attachment theory and self-compassion

Bowlby (1988) proposed that individuals are likely to treat themselves and others in a similar way in which they were treated in childhood by their primary caregivers, although it is likely that other factors contribute to intra- and interpersonal functioning as well. However, from a theoretical perspective, it follows that self-compassion will be linked to attachment style. That is, if an individual is brought up in a nurturing environment where their needs are consistently and responsively met by their caregiver, they are likely to develop the ability to be self-compassionate (Neff & McGehee, 2010). On the other hand, if an individual is brought up in an inconsistent, threatening or stressful environment, they are more likely to be critical, rather than compassionate, towards themselves (Gilbert & Procter, 2006). In support of this, secure attachment has been found to predict higher levels of self-compassion (Neff & Beretvas, 2013; Neff & McGehee, 2010), whilst insecure attachment has been linked with lower levels of self-compassion (Raque-Bogdan *et al.*, 2011).

However, it is worth noting that there are theoretical reasons to suggest there may be differences in the relationship between attachment anxiety and self-compassion, and attachment avoidance and self-compassion. In terms of attachment anxiety, if an individual develops a negative internal model of the self they are likely to be self-critical rather than kind towards themselves (Cantazaro & Wei, 2010); are likely to look to others for validation (Wei *et al.*, 2005); and to feel overwhelmed by their own distress (Mikulincer & Shaver, 2010). Thus, it follows that developing a compassionate stance towards the self may be challenging for individuals with high attachment anxiety (Wei *et al.*, 2011). By contrast, it has been suggested that those with attachment avoidance may have a positive model of the self, and therefore feel more worthy of being compassionate towards themselves than those with attachment anxiety (Wei *et al.*, 2011). Alternatively, because those with high attachment avoidance are more likely to have a negative working model of others, they will be less dependent on others for validation due to their mistrust and fears of abandonment. As a result, they may be more self-reliant, setting themselves high standards to live up to, and thereby being less self-compassionate (Wei *et al.*, 2011). Empirical research has not provided clarity to these theoretical perspectives: some studies have found that attachment

anxiety, but not attachment avoidance, is associated with self-compassion (Neff & McGehee, 2010; Wei *et al.*, 2011), whilst others have found that both insecure attachment styles are associated with self-compassion (Raque-Bogdan *et al.*, 2011), indicating the need for further research.

5.1.3. Attachment theory and interpersonal functioning

According to attachment theory, attachment styles will affect interpersonal behaviour, and influence the quality of social interactions and close relationships (Mikulincer & Shaver, 2010). Haggerty *et al.* (2009) explored the relationship between attachment styles and interpersonal problems in a clinical population. They found that high scores for attachment anxiety and avoidance were related to high levels of interpersonal problems. In addition, individuals with secure attachment styles report having larger social support networks and more positive social interactions than those with insecure attachment styles (Anders & Tucker, 2000). It is therefore not surprising that greater levels of interpersonal problems are associated with psychological difficulties, including various anxiety disorders and depression (Borkovec *et al.*, 2002; Eng & Heimberg, 2006; McEvoy *et al.*, 2013; Petty *et al.*, 2004; Vittengl *et al.*, 2003). In addition, Hankin *et al.* (2005) found that interpersonal stressors mediated the relationship between insecure attachment and increases in emotional distress. In their longitudinal study, those with an insecure attachment style experienced an increase in interpersonal stressors over time compared to those who had a secure attachment style, and the additional interpersonal stressors predicted increases in depressive and anxiety symptoms (Hankin *et al.*, 2005). This finding provides some initial support that interpersonal problems serve as a mediator between attachment and mental health problems.

Interestingly, despite the link between self-compassion and attachment, and that self-compassion is viewed as an interdependent mode of being (Neff & Beretvas, 2013), it is worth noting that the interpersonal aspect of self-compassion has not been widely explored. Preliminary research indicates that self-compassion is associated with greater levels of social connectedness (Neff, 2003b), and is associated with healthy interpersonal functioning in romantic relationships (Neff & Beretvas, 2013). This suggests that, conversely, low levels of self-compassion may be associated with greater levels of interpersonal problems. However, it also indicates that further research exploring the relationship between these concepts is warranted.

The aim of the following study is therefore to examine the relationships between self-compassion, attachment and interpersonal problems in a clinical population.

It is hypothesised that:

- i) anxious and/or avoidant attachment styles will be associated with lower levels of self-compassion and higher levels of interpersonal problems
- ii) higher levels of interpersonal problems will be associated with lower levels of self-compassion
- iii) self-compassion and interpersonal problems will mediate the relationship between attachment style and symptoms of anxiety and depression

JOURNAL ARTICLE

The relationships between self-compassion, attachment and interpersonal problems in patients with mixed anxiety and depression

Kate Mackintosh^{ab*}, Kevin Power^a, Matthias Schwannauer^b and Stella Chan^b

^aNHS Tayside Psychological Therapies Service

^bSection of Clinical Psychology, School of Health in Social Science, University of Edinburgh

* Corresponding author: Perth City Community Mental Health Team, Cairnwell,
Perth Royal Infirmary, Perth, PH1 1NX
Tel.:01738 413070 Email: katemackintosh@nhs.net

This study has been written in accordance with Journal of Personality (Appendix F)

Abstract

Objective: Self-compassion has been consistently linked to psychological well-being. The ability to be self-compassionate may be shaped by early attachment experiences. Research suggests that self-compassion mediates the relationship between attachment and psychopathology but evidence has yet to be extended to clinical populations. The aim of this study therefore was to examine the role of self-compassion and its relationship with attachment and interpersonal problems in patients with anxiety and depression.

Method: A cross-sectional, quantitative design was utilised. Participants ($N=74$; 60% female, mean age 40 years) were recruited from a primary care psychological therapies service. Participants completed four self-report questionnaires assessing self-compassion, attachment, interpersonal problems and emotional distress.

Results: Attachment avoidance, low self-compassion and high interpersonal problems were all associated with higher levels of overall emotional distress and anxiety. Attachment anxiety was not significantly associated with emotional distress. Attachment avoidance predicted low self-compassion and high interpersonal problems. Self-compassion mediated the relationship between attachment avoidance and overall emotional distress and anxiety.

Conclusions: Low self-compassion may be one reason that attachment avoidance can lead to emotional distress. Results support the hypothesis that negative attachment experiences result in an under-developed soothing system and therefore an inability to be compassionate towards the self.

Keywords: Self-compassion, attachment, interpersonal problems, anxiety, depression

6. Introduction

In the UK, 1 in 4 adults experience mental health problems in any one year, with anxiety and depression being the most common mental health problems (Singleton *et al.*, 2000). There has been a growing focus within psychological research on the mechanisms by which individuals may be protected from developing mental health problems.

One such mechanism that has become the focus of increasing research is self-compassion. Neff (2003a) conceptualised self-compassion as consisting of three components: self-kindness, common humanity and mindful acceptance. Self-kindness involves being emotionally warm and non-judgemental towards the self in times of difficulty; common humanity relates to recognising that life's difficulties are part of human experience, and mindful acceptance refers to being able to acknowledge and observe painful thoughts and feelings, as opposed to over-identification with them (Neff, 2003). It therefore follows that the ability to be self-compassionate may be a protective factor for psychological wellbeing. Research supports this theoretical link, indicating that self-compassion is linked to greater life satisfaction, social connectedness, emotional intelligence, greater optimism, happiness, curiosity, and positive affect (Neff, 2003a; Neff *et al.*, 2007). Those with higher levels of self-compassion have also been shown to be less neurotic and have lower negative affect (Neff *et al.*, 2007). Higher levels of self-compassion have also been consistently linked with lower levels of depression and anxiety, with a recent meta-analysis indicating a large effect-size for the association between higher levels of self-compassion and lower levels of psychopathology (MacBeth & Gumley, 2012).

However, the majority of studies included in the meta-analysis were conducted with students or community clinical samples: of the 20 included samples, only one explored self-compassion in a clinical population. One recent study comparing self-compassion in depressed outpatients and never-depressed individuals found that depressed patients showed lower levels of self-compassion than the never-depressed group, and self-compassion was negatively related to depressive symptoms, rumination and avoidance (Krieger *et al.*, 2013). Similarly, Werner *et al.* (2012) found that people with social anxiety reported less self-compassion than healthy controls. Van Dam *et al.* (2011) reported that level of self-compassion predicted symptom severity in a community sample seeking treatment for depressive and anxiety symptoms. Finally, Gilbert *et al.* (2014) found that depressed patients report fears of compassion from both the self and others.

Whilst there is a strong link between self-compassion and positive psychological wellbeing, less is known about the origins of self-compassion. Both Gilbert (2005) and Neff and McGehee (2010) have linked the development of self-compassion with early attachment experiences. Gilbert (2005, 2009) proposed that self-compassion is the ability to soothe the self with kindness and non-judgemental understanding when presented with threat or negative affect. His proposed model of compassion is theoretically linked to three interacting emotion regulation systems: threat, soothing and incentive seeking (Depue & Morrone-Strupinsky, 2005). The threat system detects threat and is closely linked to negative emotions such as anxiety, anger and disgust. The incentive-seeking system serves to motivate, excite and drive. Finally, the soothing system serves to manage distress and promote bonding. The three affective systems are believed to balance each other, therefore allowing for the regulation and management of emotions (Gilbert, 2010).

Gilbert (2010) hypothesised that negative attachment experiences may result in an over-developed threat system and an under-activated soothing system, therefore potentially leaving the child struggling to feel safe on their own and/or with others, leading to reduced ability to be compassionate.. Similarly, Gillath *et al.* (2005) also suggested that the ability to self-soothe develops through being comforted by attachment figures in early life. Therefore, if this comfort is missing or inconsistent, the ability to self-soothe may not fully develop.

Consistent with the theory that compassion is rooted in early attachment experiences, Neff and McGehee (2010) found that greater maternal support and family functioning was associated with higher levels of self-compassion. Similarly, Pepping *et al.* (2014) found that low self-compassion was predicted by high parental rejection and overprotection, and low parental warmth. Tanaka *et al.* (2011) found that higher levels of childhood emotional abuse, physical abuse and emotional neglect were associated with lower levels of self-compassion in adolescents. Finally, Vettese *et al.* (2011) found a significant link between childhood maltreatment and self-compassion in a group of young adults receiving treatment for substance misuse. These suggest that early experiences influence the development of self-compassion.

Consistent with the above, self-compassion has been linked to attachment style. Specifically, adolescents with a secure attachment style reported greater self-compassion, whilst those with preoccupied or fearful attachment styles demonstrated lower levels of self-compassion

(Neff & McGehee, 2010). Attachment anxiety has also been found to predict low self-compassion in university students (Pepping *et al.*, 2014). Low self-compassion was found to be significantly correlated with anxious and avoidant attachment (Raque-Bogdan *et al.*, 2011). Notably, self-compassion has been found to mediate the relationship between attachment anxiety and well-being (Neff & McGehee, 2010; Wei *et al.*, 2011) and mediates the relationship between anxious and avoidant attachment and mental health outcomes (Raque-Bogdan *et al.*, 2011). Finally, Gilbert *et al.* (2014) found that insecure attachment is associated with a fear of compassion from others. These findings further suggest that enhancing self-compassion can potentially be an important therapeutic target.

However, apart from Gilbert *et al.* (2014), all of the above studies have all involved non-clinical populations. Therefore, to be clinically useful, it is important to examine whether the link between attachment and self-compassion, along with the mediating role of self-compassion between attachment and psychopathology, can be replicated in a clinical sample.

In Neff's (2003) conceptualisation of self-compassion, one of the three core components is the interpersonal component of common humanity. Although research has shown that self-compassion is related to greater levels of social connectedness (Neff, 2003a), and appears to be linked to attachment experiences (Neff & McGehee, 2010; Raque-Bogdan *et al.*, 2011), the interpersonal aspect of self-compassion has not been widely explored. Neff and Beretvas (2013) suggested that being self-compassionate is associated with positive romantic relationships. Additionally, Yarnell and Neff (2013) found that when resolving romantic relationship conflicts, those with higher levels of self-compassion were more likely to compromise and balance the need of self and other, and less likely to experience emotional turmoil. Therefore, self-compassionate people may engage in more adaptive social interactions and relationships and have more adaptive reactions to difficult interpersonal situations, which may serve as protective factors for developing psychopathology. Furthermore, as interpersonal problems have been demonstrated to be linked to both insecure attachment and psychopathology (Mikulincer & Shaver, 2005), and to mediate the relationship between insecure attachment and emotional distress (Hankin *et al.*, 2005), it is important to explore the relationship between these variables further, especially in clinical populations.

Taken together, there is a growing body of literature indicating the link between self-compassion and psychological well-being, thereby supporting the development of therapies

that enhance self-compassion. It has been proposed that the ability to be compassionate towards the self may be shaped by early attachment experiences, and there is some initial evidence that self-compassion mediates the relationship between attachment and psychopathology. However, to date there has been no research exploring the relationships of these constructs in a clinical population. Additionally, interpersonal functioning is linked to both attachment and psychopathology, and in theory will be related to self-compassion. Therefore, the main aim of this study is to explore the relationships between attachment, self-compassion, interpersonal problems and mental health in a clinical population with specific hypotheses as follows:

Firstly, anxious and/or avoidant attachment styles will be associated with lower levels of self-compassion and higher levels of interpersonal problems.

Secondly, higher levels of interpersonal problems will be associated with lower levels of self-compassion.

Thirdly, self-compassion and interpersonal problems will mediate the relationship between attachment style and symptoms of anxiety and depression.

7. Methodology

7.1. Design

The study employed a cross-sectional design. Four questionnaires were used to measure attachment, self-compassion, emotional distress and interpersonal problems. Demographic information was also gathered using a brief demographic questionnaire.

7.2. Participants

To be included in the study, participants were adults aged 18 upwards, presenting with mixed anxiety and depressive disorders to a primary care psychological therapies service in NHS Tayside. They were required to self-certify to have a command of English to the extent required to complete the questionnaires, and had to be able to give informed consent. Participants were excluded if they had a diagnosis of an intellectual disability, an Axis II disorder, Psychosis or current substance misuse.

134 individuals (age range 18 – 64 years) consented to take part in the study. Of these, 74 participated in the study by returning completed questionnaire packs, indicating a 55% response rate. Demographics of the sample are presented in Table 1. The Scottish Index of Multiple Deprivation (SIMD) was unable to be calculated due to not having participants' full postcodes.

Table 1: Demographic characteristics of sample

Demographic variable	N = 74
Age in years	
mean (SD)	40.3 (12.0)
range	18 – 64
missing	2
N (%)	
Gender	
Female	44 (59.5%)
Male	26 (35.1%)
Missing	4 (5.4%)
Ethnicity	
White British	69 (93.2%)
White Other	3 (4.1%)
Asian British	1 (1.4%)
Missing	1 (1.4%)
Relationship status	
Married	24 (32.5%)
In a relationship	21 (28.4%)
Divorced	4 (5.4%)
Widowed	4 (5.4%)
Separated	2 (2.7%)
Single	17 (23%)
Other	1 (1.4%)
Missing	1 (1.4%)
Employment status	
Employed	48 (64.9%)
Unemployed	9 (12.2%)
Student	9 (12.2%)
Retired	1 (1.4%)
Unable to work	6 (8.1%)
Missing	1 (1.4%)

7.3. Procedure

Patients attending the Psychological Therapies Service who met the inclusion criteria were initially given the participant information sheet (see Appendix G) by their clinician. They were asked to read the information sheet at home, which explained the purpose of the study

and what participation would involve. At their next appointment, if they expressed interest in participating in the study, they were asked to read and complete the consent form (see Appendix H) with their clinician. The participant was then provided with the study pack containing the questionnaires to take home and complete. They were asked to return the questionnaires to the researcher either via post or by handing the pack back to their clinician in the sealed envelope.

7.4. Measures

7.4.1. *Demographic information*

A short questionnaire was developed to collect demographic information (see Appendix I). Participants were asked to specify their gender, age, ethnicity, marital status and employment status. They were also asked to provide part of their postcode to allow identification of the associated deprivation index category by means of the SIMD (The Scottish Government, 2012). The SIMD rates small areas of Scotland over seven domains, to derive an overall deprivation score between 1 and 10, where 1 indicates the highest level of deprivation and 10 indicates the lowest level of deprivation.

7.4.2. *The Self-Compassion Scale (SCS; Neff, 2003a)*

The SCS (see Appendix J) measures levels of self-compassion. It is a self-report measure with 26 items across six subscales: Self-Kindness, Self-Judgement, Common Humanity, Isolation, Mindfulness, and Over-Identification. The items are rated on a 5-point Likert scale, ranging from 1 (almost never) to 5 (almost always). A higher overall total score indicates a higher level of self-compassion. A score for each subscale can also be used. Neff (2003a) reported high internal consistency for the total measure (.92), strong validity, and good test-retest reliability for the six subscales (.80 to .93). Studies using the SCS in clinical samples have reported good internal consistency, with Cronbach's alpha for the full scale reported at .91 by Krieger *et al.* (2013) and .96 by Werner *et al.* (2012), who only used the total score in their study. In the current study, Cronbach's alpha for the full scale was .71. This is lower than has been reported in previous studies.

7.4.3. *Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983)*

The HADS (see Appendix K) is a commonly used self-rating scale for measuring anxiety and depression in clinical practice and research. It consists of 14 items split equally into two subscales: anxiety and depression. Each item has four potential responses which are scored from 0 to 3. The total scoring range for each subscale is therefore 0 – 21. A total score,

indicating overall emotional distress, can also be calculated by summing all the items (Crawford *et al.*, 2001). Interpretation of the scores for both subscales are based on the following cut-offs: 8 – 10 mild symptoms, 11 – 15 moderate symptoms, 16 or above, severe symptoms (Snaith & Zigmond, 1994). Bjelland *et al.* (2002) conducted a literature review of 747 studies and concluded that the HADS demonstrated good concurrent validity, internal reliability and discriminant validity. Although the majority of studies involved patients from non-psychiatric clinics, the review reported that similar findings were demonstrated in both psychiatric and non-clinical populations. In line with previous findings, in the current study Cronbach's alpha for the full scale was .87, for the anxiety scale .78 was and for the depression scale was .82.

7.4.4. Inventory of Interpersonal Problems 32 (IIP-32; Barkham et al., 1996)

The IIP-32 (see Appendix L) is a 32-item self-report measure assessing difficulties in interpersonal relationships. Items are split to reflect interpersonal skills that people may find “too hard” (e.g. joining in on groups) or responses that they do “too much” (e.g. get irritated). Items are scored on a 5-point scale ranging from 0 (not at all) to 4 (extremely). The IIP-32 has eight subscales, and a total score can be calculated by summing the scores from the subscales. This study used the total score as an indicator of severity of interpersonal problems. Barkham *et al.* (1996) reported the IIP-32 to have good test-re-test reliability, and adequate internal consistency across the subscales. In a clinical sample of participants, McEvoy *et al.* (2014) reported Cronbach's alpha at .88 for the total score. Similarly, in the current study, Cronbach's alpha for the full scale was .82.

7.4.5. The Experiences in Close Relationships-Revised (ECR-R; Fraley et al., 2000)

The ECR-R (see Appendix M) is a self-report measure with 36 items measuring adult romantic attachment across two subscales: anxiety (fear of abandon and rejection) and avoidance (fear of closeness and discomfort with dependence on others). Participants rate on a 7-point Likert scale (1 – disagree strongly, 7 – agree strongly) how accurately each item describes their experience of close relationships. Sibley *et al.* (2005) provided support for its short-term temporal stability, two-factor structure, and convergent and discriminant validity. Good internal consistency was reported by Raque-Bogdan *et al.* (2011), with Cronbach's alpha at .92 and .94 for the avoidance and anxiety subscales respectively. In the current study, Cronbach's alpha for the avoidance subscale scale was .78 and for the anxiety subscale was .91

7.5. Ethical Approval

Ethical approval was granted by the East of Scotland Research Ethics Committee (see Appendix N) and Tayside Medical Science Centre Research and Development Office.

7.6. Power Analyses

Power analysis was conducted a priori to estimate the necessary sample size. A review of previous literature suggested small to medium effect sizes between attachment and self-compassion (Raque-Bogdan *et al.*, 2011; Wei *et al.*, 2011), with one large effect size found between attachment anxiety and self-compassion (Raque-Bogdan *et al.*, 2011). Given the variability of effect sizes, the current study assumed a medium effect size.

Calculations outlined by Cohen (1988) suggest that in order to have .8 power to detect a medium effect size when carrying out correlation/multiple regression analysis with three independent variables, a sample size of 76 would be required. A calculation was also carried out using Green's (1991) formula ($N \geq 50 + 8m$) for determining the sample size required to conduct multiple regression analysis. In this calculation, m equals the number of independent variables. Based on this equation, a sample size of 74 would be required to achieve sufficient power. For mediation analysis using a bootstrapping approach, Fritz and Mackinnon (2007) recommended that in order to achieve a power of .8 to detect a medium effect size of the indirect effect, a sample size of 71 would be required. Based on these calculations, the current study aimed to recruit 71-76 participants.

7.7. Statistical Analyses

All statistical analysis was conducted in IBM SPSS Statistics Version 21. Mediation analysis was conducted using the computational and modelling tool PROCESS v.2.15 developed by Hayes (2013). The main hypotheses were explored using correlation and mediation analysis. Pearson correlations were used initially to explore the associations between attachment, self-compassion, interpersonal problems, and emotional distress. Multiple mediation analysis was then carried out to explore self-compassion and interpersonal problems as possible mediators in the relationship between adult attachment style and emotional distress. Mediation analysis was conducted using the bootstrapping re-sampling method using 5000 bootstrap resamples (Preacher & Hayes, 2008). Bootstrapping is a nonparametric method that estimates the indirect effect and its 95% confidence intervals. When the bias corrected confidence intervals (BC CI) do not contain zero, it is assumed that the indirect effect is significantly different from zero at $p < 0.05$. In other words, if the upper and lower boundaries of the BC

CI do not cross zero, it can be assumed that the effect of the independent variable on the dependent variable is mediated by the proposed mediating variables. Preacher and Hayes (2008) state that it is possible to have a non-significant indirect effect, but significant individual mediators.

7.7.1. Data screening

Firstly, data was screened to ensure assumptions for further analysis were met. Box plots were examined for any outliers that could bias the data set. To establish whether data was normally distributed, values of skewness and kurtosis were converted to z-scores, (Field, 2013). This data is presented in Appendix O. It is suggested that z greater than +/-2.58 indicates significant skewness or kurtosis ($p < .01$). All z-scores were non-significant indicating that the data could be assumed to be normally distributed.

Linearity and homoscedasticity were investigated by plotting the standardised residuals against the standardised predicted values (Field, 2013). The scatterplots showed no obvious pattern, indicating that the assumptions linearity and homogeneity of variance were met.

Finally, data was assessed for multicollinearity. High correlations between independent variables (.80 or greater) may indicate collinearity between variables, which would suggest they may not be appropriate to include in mediational analysis. Pearson correlations were all less than .80 suggesting no evidence of collinearity. The variance inflation factor (VIF) and tolerance statistics (see Appendix O) were also used to assess for collinearity in the data. All the VIF values were well below 10 and the tolerance statistics all above 0.2, with the average VIF 1.261.

7.7.2. Missing data

Following Fox-Wasylyshyn and El-Masri (2005), if more than 10% of items were missing on any questionnaire, it was excluded from further analysis. This resulted in four participant's ECR-R data and two participant's IIP-32 data being excluded from the analysis involving these variables.

Sixteen questionnaires had $\leq 10\%$ missing data (three SCS, two HADS, three ECR-R and eight IIP-32). Various methods for imputing missing data have been described in the literature (e.g. Fox-Wasylyshyn & El-Masri, 2005; Roth *et al.*, 1999; Shrive *et al.*, 2006).

The person mean substitution method was used in the current study: the individual's mean for the relevant scale/subscale was used to replace the missing values.

8. Results

8.1. Descriptive statistics

Descriptive statistics are presented in Table 2. Mean scores for HADS anxiety and depression indicated moderate levels of anxiety and mild levels of depression within the sample. Paired samples t-test indicated that participants reported significantly higher anxiety symptoms compared to depressive symptoms ($t(73) = 10.61; p < .001$). Independent samples t-tests indicated there were no gender differences on the SCS, ECR-R or IIP-32.

Table 2: Descriptive statistics for all variables

Measure	N	Mean	SD
HADS – anxiety	74	13.07	3.92
HADS – depression	74	8.14	4.03
HADS – total	74	21.2	6.86
SCS – total score	73	2.21	.46
ECR-R – anxiety	70	4.04	1.39
ECR-R – avoidance	70	3.60	1.18
IIP-32 – total score	72	58.89	15.33

8.2. Covariate analysis

Analyses was conducted to assess whether any demographic variables related to the dependent variables (DVs), and hence should be included as covariates in the mediation analysis. Pearson correlations indicated that age was significantly correlated with HADS total ($r = .272 p = .021$) and HADS depression ($r = .385 p = .001$), but not HADS anxiety ($r = .085, ns$). Independent samples t-tests indicated there were no gender differences on the HADS. One-way ANOVAs indicated that there were no significant differences in scores on the HADS based on relationship status or employment status. Therefore, age was the only demographic variable to be controlled for in the mediation analyses involving HADS total and HADS depression as the DVs.

8.3. Bivariate correlations

Pearson's correlations were conducted to explore the relationships between attachment, self-compassion and interpersonal problems. Results are summarised in Table 3. As hypothesised, attachment avoidance and attachment anxiety were negatively correlated with

self-compassion, both with small to medium effect sizes. Attachment avoidance and attachment anxiety were also positively correlated with interpersonal problems, with a medium to large and medium effect size respectively. There was no significant relationship between interpersonal problems and self-compassion.

Table 3: Bivariate correlations between attachment style, interpersonal problems, self-compassion and emotional distress (associated *p* values)

	ECR-R (avoidance)	ECR-R (anxiety)	SCS	IIP-32	HADS – total	HADS - anxiety	HADS - depression
ECR-R (avoidance)	-	.					
ECR-R (anxiety)	.363** (.002)	-					
SCS	-.255* (.033)	-.247* (.040)	-				
IIP-32	.363** (.002)	.444** (.000)	-.192 (.107)	-			
HADS – total	.314** (.008)	.208 (.083)	-.277* (.018)	.361** (.002)	-		
HADS - anxiety	.321* (.007)	.192 (.112)	-.347** (.003)	.323** (.006)	.860** (.000)	-	
HADS - depression	.215 (.073)	.164 (.175)	-.130 (.274)	.300* (.010)	.868** (.000)	.493** (.000)	-

* $p < 0.05$; ** $p < 0.01$

8.4. Correlations between predictor variables and dependent variables

In order to be included in mediation or regression analysis, predictor variables should show a strong correlation with the DVs. In the current study, the possible predictor variables were anxious attachment, avoidant attachment, self-compassion and interpersonal problems. The DVs were overall emotional distress, anxiety symptoms and depressive symptoms. The correlations between these variables are presented in Table 3.

8.4.1. Attachment and emotional distress

Avoidant attachment had a significant positive correlation with overall emotional distress and anxiety symptoms, both of medium effect size. There was a non-significant relationship between avoidant attachment and depressive symptoms. There was a non-significant relationship between anxious attachment and overall emotional distress, anxiety symptoms, and depressive symptoms.

8.4.2. Interpersonal problems, self-compassion and emotional distress

Interpersonal problems had a significant positive correlation with overall emotional distress, anxiety symptoms, and depressive symptoms, all of medium effect size. Self-compassion had a significant negative correlation with overall emotional distress and anxiety, with small to medium and medium effect sizes respectively. There was no significant relationship between self-compassion and depressive symptoms.

8.5. Mediation analysis

It was hypothesised that self-compassion and interpersonal problems would mediate the relationship between insecure attachment and emotional distress. This model is presented in Figure 1. Multiple mediation analyses were conducted with avoidant attachment (ECR-R avoidance) entered as the independent variable (IV), and interpersonal problems (IIP-32) and self-compassion (SCS) as the mediators. Attachment anxiety (ECR-R anxiety) was not included in the mediation analysis due to a lack of relationship between this variable and the DV. As there is an overlap between anxiety and depressive symptoms, and in this study a significant correlation between the two subscales of the HADS, the total HADS score was used as a measure of overall emotional distress. Therefore the main mediation analysis included emotional distress (HADS total) as the DV. Age was entered as a covariate.

However, to examine whether direct and indirect effects differed when treating anxiety and depression as separate constructs, a further four mediation analyses were conducted, firstly with HADS anxiety the DV. This model was then repeated with depression included as a covariate of anxiety. Although there was only a significant correlation between one of the predictor variables (interpersonal problems) and HADS depression, to allow comparisons with the anxiety model, the same mediation was conducted with HADS depression the DV.

8.5.1. Mediation analysis: avoidant attachment, interpersonal problems, self-compassion and overall emotional distress

Results of the regression analysis are presented in Table 4. Both mediators were predicted by the IV: attachment avoidance significantly predicted self-compassion ($F(1, 65) = 4.53, p=0.04$), and interpersonal problems ($F(1, 65) = 11.63, p<0.001$). Attachment avoidance explained 7% of the variance in self-compassion and 15% of the variance in interpersonal problems.

Table 4: Results of regression analysis predicting self-compassion, interpersonal problems and emotional distress, controlling for age

Predictor variable	Outcome variable	Coefficient	SE	<i>t</i>	<i>p</i>
ECR-R (avoidance)	SCS	-0.10	0.05	-2.13	0.04*
ECR-R (avoidance)	IIP-32	5.16	1.51	3.41	0.00**
Dependent variable					
HADS total					
ECR-R (avoidance)		1.70	0.67	2.52	0.01*
SCS		-3.19	1.56	-2.05	0.04*
IIP-32		0.06	0.05	1.26	0.21

* $p < 0.05$; ** $p < 0.01$

When the mediators were not included in the model, attachment avoidance significantly predicted emotional distress ($b = 2.36$, $t = 3.81$, $p < 0.001$) and accounted for 27% of the variance in emotional distress. When the three predictor variables were included in the model they accounted for 34% of the variance in overall emotional distress. This model was significant ($F(4, 62) = 7.80$, $p < 0.001$). Of the individual predictors, self-compassion and avoidant attachment were significant when compared with the other predictors ($t = -2.05$, $p = 0.04$ and $t = 2.52$, $p = 0.01$ respectively).

Table 5: Bootstrapped indirect effects of potential mediators: emotional distress

Mediator	Point estimate	SE	Bootstrapping 95% BC CIs	
			Lower	Upper
Self-compassion	0.3217	0.2090	0.0219	0.8802
Interpersonal problems	0.3265	0.3309	-0.2146	1.1196
Total indirect effect	0.6482	0.4117	-0.0209	1.6395

The total indirect effect of avoidant attachment on emotional distress through the two mediators had a coefficient of 0.65, with 95% BC CIs of -0.0209 to 1.6395 (Table 5). As the BC CIs cross zero, the total indirect effect is not significant. Table 5 also shows the individual contributions of the two mediators. As the 95% BC CIs for self-compassion did not cross zero, although there was no total indirect effect, there was a significant indirect effect of avoidant attachment on emotional distress through self-compassion. Thus there was partial support for the hypothesis that self-compassion and interpersonal problems would

mediate the relationship between insecure attachment and emotional distress. This model is presented diagrammatically in Figure 1.

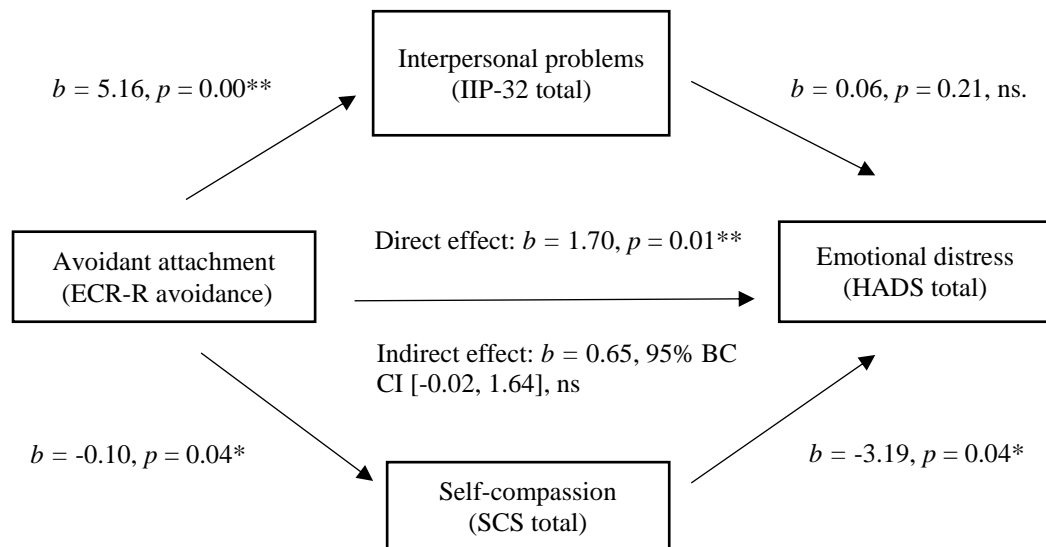


Figure 1: Mediation model – emotional distress as dependent variable

8.5.2. Mediation analysis: avoidant attachment, interpersonal problems, self-compassion and anxiety

Table 6 indicates attachment avoidance significantly predicted both interpersonal problems ($F(1, 67) = 10.18, p < 0.001$) and self-compassion ($F(1, 67) = 4.82, p = 0.03$). Attachment avoidance explained 6% of the variance in self-compassion and 13% of the variance in interpersonal problems.

Table 6: Results of regression analysis predicting self-compassion, interpersonal problems and anxiety

Predictor variable	Outcome variable	Coefficient	SE	<i>t</i>	<i>p</i>
ECR-R (avoidance)	SCS	-0.10	0.05	-2.20	0.03*
ECR-R (avoidance)	IIP-32	4.79	1.50	3.19	0.00**
Dependent variable					
HADS anxiety					
ECR-R (avoidance)		0.65	0.38	1.71	0.09
SCS		-2.06	0.93	-2.21	0.03*
IIP-32		0.05	0.03	1.75	0.09
Controlling for depression					
ECR-R (avoidance)		0.52	0.36	1.47	0.15
SCS		-1.92	0.86	-2.24	0.03*
IIP-32		0.03	0.03	0.98	0.33

* $p < 0.05$; ** $p < 0.01$

When the mediators were not included in the model, attachment avoidance significantly predicted anxiety ($b = 1.10$, $t = 3.00$, $p < .001$). Without self-compassion and interpersonal problems in the model, attachment avoidance accounted for 11% of the variance in anxiety. When all three predictors were included in the model, they accounted for 22% of the variance in anxiety. This model was significant ($F(3, 65) = 6.23$, $p = .001$). Of the individual predictors, self-compassion was significant when compared with the other predictors ($t = -2.21$, $p = .03$). As can be seen in Table 6, controlling for depression did not produce notable changes to this result.

Table 7: Bootstrapped indirect effects of mediators: anxiety

Mediator	Point estimate	SE	Bootstrapping 95% BC CIs	
			Lower	Upper
Self-compassion	0.2081	0.1160	0.0301	0.4967
Interpersonal problems	0.2382	0.1401	0.0019	0.5763
Total indirect effect	0.4463	0.1831	0.1400	0.8780
Controlling for depression				
Self-compassion	0.2081	0.1160	0.0369	0.4435
Interpersonal problems	0.2382	0.1401	-0.0916	0.3910
Total indirect effect	0.4463	0.1831	0.0614	0.7008

The total indirect effect of avoidant attachment on anxiety through the two mediators had a coefficient of 0.4463, with 95% BC CIs of 0.1400 to 0.8780 (presented in Table 7). As these BC CIs do not cross zero, the total indirect effect is significant. Table 7 also shows the individual contributions of the two mediators. As the 95% BC CIs for both mediators did not cross zero, a significant indirect effect of avoidant attachment on anxiety through self-compassion and interpersonal problems was found. This is presented diagrammatically in Figure 2. However, when depression was controlled for, interpersonal problems was no longer a significant mediator (Table 7).

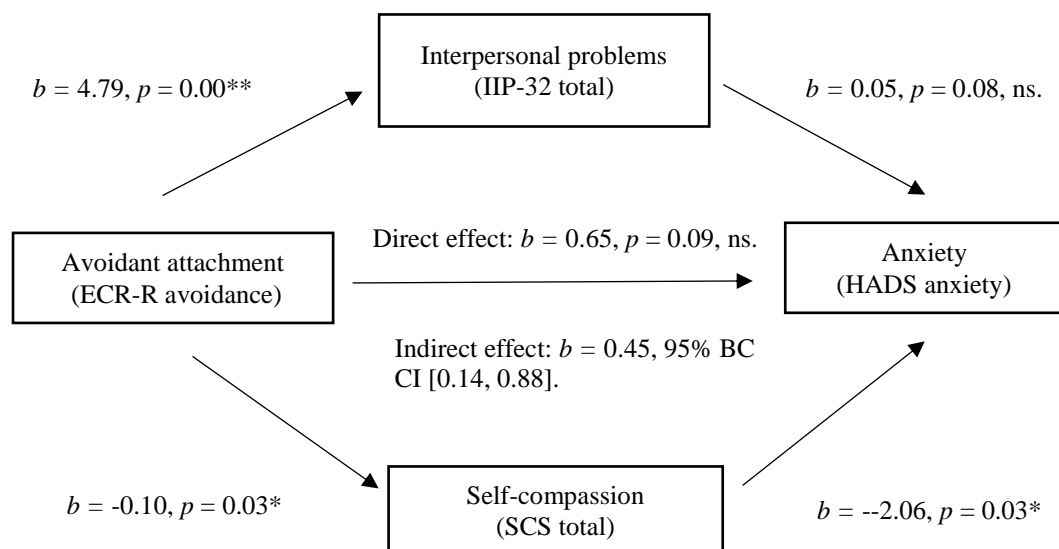


Figure 2: Mediation model – anxiety as dependent variable

When all of the above mediations were repeated as single mediation models, with self-compassion and interpersonal problems entered separately, the results did not notably change. This supports the findings that attachment avoidance is linked to emotional distress indirectly through low self-compassion, but not interpersonal problems.

8.5.3. Mediation analysis: avoidant attachment, interpersonal problems, self-compassion and depression

Results of the regression analysis when depression was included as the DV indicated that the overall model was not significant ($F(3, 65) = 2.59, p = .06, ns$). Mediation analysis indicated that there was no significant overall indirect effect ($b = 0.35, 95\% \text{ BC CIs } [-0.07, 0.95]$).

These results are presented in Appendix O.

9. Discussion

Although a strong link has been demonstrated between low self-compassion and psychopathology, the majority of research to date has been conducted in nonclinical samples. In addition, there has been no research investigating if self-compassion mediates the relationship between attachment and psychopathology in a clinical population. Therefore the main aim of this study was to address these gaps in the literature by recruiting from a clinical population.

Results of this study support the hypothesis that attachment insecurity, low self-compassion and greater interpersonal problems are associated with greater levels of emotional distress in patients with mixed anxiety and depression. More specifically, higher attachment avoidance predicted higher levels of anxiety and overall emotional distress; lower levels of self-compassion predicted higher levels of anxiety and overall emotional distress; and finally greater levels of interpersonal problems were associated with, but did not significantly predict, higher anxiety, depression and overall emotional distress. Results also indicated that the mean scores for insecure attachment, interpersonal problems and self-compassion were in line with those of previous studies conducted in clinical populations experiencing anxiety and depression (Krieger *et al.*, 2013; McEvoy *et al.*, 2013; Ravitz *et al.*, 2008).

The results also supported the hypothesis that greater levels of attachment insecurity would be associated with lower levels of self-compassion and greater levels of interpersonal problems: both attachment avoidance and attachment anxiety had a negative correlation with

self-compassion and a positive correlation with interpersonal problems. In addition, attachment avoidance significantly predicted lower levels of self-compassion and higher levels of interpersonal problems. This is in line with previous research (e.g. Haggerty *et al.*, 2009; Raque-Bogdan *et al.*, 2011). This study adds to the current literature by demonstrating these findings in a clinical population.

The main mediation model tested the relationships between attachment avoidance, interpersonal problems, self-compassion and overall emotional distress. As noted previously, Preacher and Hayes (2008) state that it is possible to have significant indirect effects, even when there is no overall indirect effect, and that this is common in multiple mediator models. In the current model, whilst there was no significant overall indirect effect observed, there was an indirect pathway of attachment avoidance on emotional distress through self-compassion. This supports and extends previous findings from nonclinical populations (Raque-Bogdan *et al.*, 2011), and suggests that one reason individuals with higher levels of attachment avoidance experience emotional distress is through being unable to be compassionate towards the self. The hypothesis that interpersonal problems would also mediate the relationship between attachment and emotional distress was not supported.

The subsequent mediation analysis exploring anxiety and depression as separate constructs provided additional support for the hypothesis that self-compassion mediates the relationship between insecure attachment and emotional distress. Both self-compassion and interpersonal problems were found to mediate the relationship between attachment avoidance and anxiety, and the total indirect effect was also significant. This remained the case when depression was controlled for, although only the pathway through self-compassion remained significant in this analysis. This is perhaps not surprising given self-compassion correlated with anxiety, but not depression, whilst interpersonal problems correlated with both constructs, suggesting that in this sample interpersonal problems had a stronger relationship with depression than self-compassion did. No significant findings were present when the mediation model with depression was tested, which was not unexpected given the lack of relationship between attachment avoidance and depression in this sample.

The findings of this study suggest that, in line with Raque-Bogdan *et al.* (2011), low self-compassion can be a pathway to overall emotional distress and anxiety for individuals with attachment avoidance. These results support the proposed theory that the development of self-compassion is rooted in early attachment experiences, with negative attachment

experiences resulting in an under-developed soothing system and therefore an inability to be compassionate towards the self (Gilbert, 2010). Given the recent findings that those with insecure attachment fear compassion from others (Gilbert *et al.*, 2014), taken collectively, this suggests that attachment experiences play a central role in the ability to be self-compassionate, along with the ability to receive compassion from others.

It has been proposed that the relationship between attachment anxiety and self-compassion may be more straight forward than the relationship between attachment avoidance and self-compassion, due to those with attachment anxiety have a negative internal working model, whilst those with attachment avoidance potentially having a positive internal working model (Wei *et al.*, 2011). Previous studies have consistently reported an association between higher levels of attachment anxiety and lower levels of self-compassion, whilst the relationship between attachment avoidance and self-compassion has produced mixed findings (Neff & McGehee, 2010; Raque-Bogdan *et al.*, 2011; Wei *et al.*, 2011). In the current study, there did not appear to be any difference in the strength of the relationship between both styles of insecure attachment and self-compassion. Thus, this suggests that even though individuals with attachment avoidance may have a positive self-image, they may still struggle to self-soothe as a result of a lack of comfort from early attachment figures (Gilbert, 2005; Gillath *et al.*, 2005).

The results of this study also indicated unexpected findings, not in line with previous literature. Firstly, although in the predicted direction, attachment anxiety was not significantly associated with overall emotional distress, anxiety or depression. Previous research has indicated that there is generally a strong association demonstrated between anxious attachment and depression and anxiety (Mikulincer & Shaver, 2010). In addition, self-compassion has been shown to be a significant mediator between attachment anxiety and mental health (Raque-Bogdan *et al.*, 2011). However, due to the non-significant findings in this study, attachment anxiety was not included in the mediation analysis, thus limiting the comparisons that can be made with previous studies. In addition, neither avoidant attachment nor self-compassion were found to be significantly associated with depression, although they correlated in the predicted direction. Again, these relationships have been demonstrated consistently in previous research (MacBeth & Gumley, 2012; Mikulincer & Shaver, 2010).

It is worth noting that the mean depression score was relatively low in this sample, just within the mild range, and was significantly lower than the mean anxiety score. Thus it could

be that the current sample was skewed towards including a greater number of participants with anxiety, and therefore underpowered for detecting a significant correlation in those with more severe symptoms of depression. In addition, despite the HADS being a widely used measure, previous literature indicates that the two subscales do not always assess for independent symptoms of anxiety and depression, with strong correlations between them often indicated (Cosco *et al.*, 2012). In the current study, although multicollinearity was not indicated, there was a significant correlation between the two subscales of the HADS. As such it may be that this measure was not sensitive enough to detect independent symptoms of anxiety and depression.

Although in the predicted direction, the hypothesised relationship between self-compassion and interpersonal problems was not supported. This relationship has not previously been explored and thus no comparisons to previous findings can be made. From a theoretical perspective it was predicted that there would be a significant negative relationship between these variables, with more interpersonal problems associated with lower levels of self-compassion. Interestingly, Baker and McNulty (2011) hypothesised that higher levels of self-compassion could potentially lead to more interpersonal problems and less satisfaction with relationships. This was based on the theory that those with high levels of self-compassion should have greater self-esteem, and therefore may feel less motivated to correct interpersonal mistakes due to feeling they should be accepted despite their flaws. On the other hand, less self-compassionate individuals will experience lower self-esteem and therefore may feel more motivated to deal with interpersonal mistakes to build social acceptance. In a series of studies, Baker and McNulty (2011) found that the implications of self-compassion differed for men and women: for women, self-compassion was positively associated with motivation to resolve interpersonal mistakes and relationship problems. However, for men, this relationship was moderated by level of conscientiousness. This suggests the relationship between self-compassion and interpersonal problems may not be straightforward, and there may be other factors to consider that mediate or moderate this relationship, such as gender, self-esteem and conscientiousness. Future research is required to explore this potentially complex relationship further.

Finally, the hypothesis that those with attachment avoidance will experience emotional distress because of increased interpersonal problems was not supported by the results of this study. This differs from previous research in a nonclinical population where a significant mediation effect of interpersonal problems has been found (Hankin *et al.*, 2005). As already

noted, it may be that interpersonal problems are more strongly related to depression, which future research could examine by recruiting a population of participants diagnosed with clinical depression. Finally, 'interpersonal problems' is a broad term, covering a range of difficulties, highlighted by the fact the IIP-32 consists of eight subscales. It may therefore be that different types of interpersonal problems have differing relationships with both attachment and mental health. Future research is therefore warranted to assess the hypothesised relationship between attachment, interpersonal problems and mental health in more detail.

Limitations

When considering the results of this study it is important to consider the limitations that exist. Firstly, it is noteworthy that this study included a sample of participants who presented with mixed anxiety and depressive symptoms. Additionally, as noted previously, the HADS does not necessarily assess for anxiety and depression as separate constructs (Cosco *et al.*, 2012). Therefore, the results of this additional mediation analysis treating anxiety and depression as separate outcomes should be interpreted with this in mind.

Secondly, as this study was cross-sectional in design, conclusions regarding causation cannot be drawn. Thus, whilst self-compassion was found to be a significant mediator, it is possible that alternative models may exist that provide a good fit to the data. For example, it may be that self-compassion is dependent on mood state, rather than being a causal trait-like factor for emotional distress. Thus, longitudinal studies are clearly required to further the understanding of the relationship between these variables, and to clarify that the direction of causation is as hypothesised in the current study.

The current study also relied on self-report measures. Although the questionnaires used were deemed valid for the population being assessed, they do have limitations. For example, the psychometric properties of the SCS have been questioned due to the inability to replicate the six-factor structure in non-student populations (Costa *et al.*, 2015; López *et al.*, 2015; Williams *et al.*, 2014). It is noteworthy that the Cronbach's alpha for the SCS in the current study was lower than has been reported in previous studies. This difference could be due to the current study involving a clinical sample, whereas the original psychometric properties of the scale were established in nonclinical samples. In addition, the SCS involves three positive and three negative subscales. Recently it has been argued that the positive and negative items are measuring different aspects of self-compassion and therefore should not

be combined to provide a total self-compassion score (López *et al.*, 2015). Future research may benefit from assessing self-compassion in alternative ways. Further research could also utilise the individual subscales of the IIP-32, rather than the total score: this was not completed in the current study as there would not have been sufficient power. The limitations of the HADS have already been discussed and future research could consider alternative methods of assessing for anxiety and depression, either through clinical interview or other measures that aim to assess anxiety and depression independently.

Finally, although a strength of this study was that the sample was recruited from within a routine clinical setting, the recruitment process may have resulted in a sample of highly motivated participants: they were required to complete the questionnaires at home and return them by post (or to their clinician). This limits the generalisability of the findings.

Clinical Implications

Despite the noted limitations, the findings here suggest that low self-compassion can be a pathway to overall emotional distress and anxiety for individuals with attachment avoidance. This finding has important clinical implications, suggesting that self-compassion may be a promising target for therapeutic intervention for those with high attachment avoidance experiencing mild to moderate emotional distress. That is, for this patient group, it may be important to assess for levels of self-compassion and incorporate strategies that foster taking a compassionate approach to the self, helping an individual learn to self-soothe and develop self-warmth, thus helping to develop effective emotion regulation. This supports the development and practice of psychotherapeutic approaches, such as Compassion-focused therapy (Gilbert, 2009), that aim to enhance self-compassion, for which there is a growing evidence base (Leaviss & Uttley, 2015).

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

References

- Baker, L.R., & McNulty, J.K. (2011). Self-compassion and relationship maintenance: the moderating roles of conscientiousness and gender. *Journal of Personality and Social Psychology, 100*(5), 853-873. doi: 10.1037/a0021884
- Barkham, M., Hardy, G.E., & Startup, M. (1996). The IIP-32: A short version of the Inventory of Interpersonal Problems. *British Journal of Clinical Psychology, 35*, 21-35.
- Bjelland, I., Dahl, A.A., Haug, T.T., & Neckelmann, D. (2002). The validity of the Hospital Anxiety and Depression Scale: an updated literature review. *Journal of Psychosomatic Research, 52*(2), 69-77.
- Cohen, J. (1988). *Statistical power analysis for the behavioural sciences* (2nd ed.). New Jersey: Lawrence Erlbaum Associates.
- Cosco, T.D., Doyle, F., Ward, M., & McGee, H. (2012). Latent structure of the Hospital Anxiety And Depression Scale: a 10-year systematic review. *Journal of Psychosomatic Research, 72*(3), 180-184.
- Costa, J., Marôco, J., Pinto-Gouveia, J., Ferreira, C., & Castilho, P. (2015). Validation of the psychometric properties of the self-compassion scale. Testing the factorial validity and factorial invariance of the measure among borderline personality disorder, anxiety disorder, eating disorder and general populations. *Clinical Psychology & Psychotherapy*. doi: 10.1002/cpp.1974.
- Crawford, J.R., Henry, J.D., Crombie, C., & Taylor, E.P. (2001). Normative data for the HADS from a large non-clinical sample. *British Journal of Clinical Psychology, 40*, 429-434.
- Depue, R.A., & Morrone-Strupinsky, J.V. (2005). A neurobehavioral model of affiliative bonding: Implications for conceptualizing a human trait of affiliation. *Behaviour and Brain Sciences, 28*, 313-395.
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics*: Sage.
- Fox-Wasylyshyn, S.M., & El-Masri, M.M. (2005). Handling missing data in self-report measures. *Research in Nursing & Health, 28*(6), 488-495.
- Fraley, R.C., Waller, N.G., & Brennan, K.A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology, 78*(2), 350-365. doi: 10.1037//0022-3514.78.2.350
- Fritz, M.S., & Mackinnon, D.P. (2007). Required sample size to detect the mediated effect. *Psychological Science, 18*(3), 233-239. doi: 10.1111/j.1467-9280.2007.01882.x

- Gilbert, P. (2005). *Compassion: Conceptualisations, research and use in psychotherapy*. New York, NY: Routledge; US.
- Gilbert, P. (2009). Introducing compassion-focused therapy. *Advances in Psychiatric Treatment*, *15*(3), 199-208. doi: <http://dx.doi.org/10.1192/apt.bp.107.005264>
- Gilbert, P. (2010). An introduction to compassion focused therapy in cognitive behavior therapy. *International Journal of Cognitive Therapy*, *3*(2), 97-112.
- Gilbert, P., McEwan, K., Catarino, F., Baião, R., & Palmeira, L. (2014). Fears of happiness and compassion in relationship with depression, alexithymia, and attachment security in a depressed sample. *British Journal of Clinical Psychology*, *53*(2), 228-244. doi: 10.1111/bjc.12037
- Gillath, O., Shaver, P.R., & Mikulincer, M. (2005). An attachment-theoretical approach to compassion and altruism. In Paul Gilbert (Ed.), *Compassion: conceptualizations, research, and use in psychotherapy*. London: Brunner-Routledge.
- Green, S.B. (1991). How many subjects does it take to do a regression analysis? *Multivariate Behavioral Research*, *26*(3), 499-510.
- Haggerty, G., Hilsenroth, M.J., & Vala-Stewart, R. (2009). Attachment and interpersonal distress: examining the relationship between attachment styles and interpersonal problems in a clinical population. *Clinical Psychology and Psychotherapy*, *16*(1), 1-9. doi: 10.1002/cpp.596
- Hankin, B.L., Kassel, J.D., & Abela, J.R. (2005). Adult attachment dimensions and specificity of emotional distress symptoms: prospective investigations of cognitive risk and interpersonal stress generation as mediating mechanisms. *Personality & Social Psychology Bulletin*, *31*(1), 136-151. doi: 10.1177/0146167204271324
- Hayes, A.F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York: Guilford Publications.
- Krieger, T., Altenstein, D., Baettig, I., Doerig, N., & Holtforth, M.G. (2013). Self-compassion in depression: associations with depressive symptoms, rumination, and avoidance in depressed outpatients. *Behavior Therapy*, *44*(3), 501-513. doi: 10.1016/j.beth.2013.04.004
- Leaviss, J., & Uttley, L. (2015). Psychotherapeutic benefits of compassion-focused therapy: An early systematic review. *Psychological Medicine*, *45*(5), 927-945. doi: <http://dx.doi.org/10.1017/S0033291714002141>

- López, A., Sanderman, R., Smink, A., Zhang, Y., van Sonderen, E., Ranchor, A., *et al.* (2015). A reconsideration of the Self-Compassion Scale's total score: self-compassion versus self-criticism. *PloS one*, *10*(7), e0132940.
- MacBeth, A., & Gumley, A. (2012). Exploring compassion: A meta-analysis of the association between self-compassion and psychopathology. *Clinical Psychology Review*, *32*(6), 545-552. doi: 10.1016/j.cpr.2012.06.003
- McEvoy, P.M., Burgess, M.M., & Nathan, P. (2014). The relationship between interpersonal problems, therapeutic alliance, and outcomes following group and individual cognitive behaviour therapy. *Journal of Affective Disorders*, *157*, 25-32. doi: 10.1016/j.jad.2013.12.038
- McEvoy, P.M., Burgess, M.M., Page, A.C., Nathan, P., & Fursland, A. (2013). Interpersonal problems across anxiety, depression, and eating disorders: a transdiagnostic examination. *British Journal of Clinical Psychology*, *52*(2), 129-147. doi: 10.1111/bjc.12005
- Mikulincer, M., & Shaver, P.R. (2005). Attachment security, compassion, and altruism. *Current Directions in Psychological Science*, *14*, 34-38.
- Mikulincer, M., & Shaver, P.R. (2010). *Attachment in adulthood: Structure, dynamics, and change*. London: Guilford Press.
- Neff, K.D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity*, *2*, 223-250. doi: 10.1080/15298860390209035
- Neff, K.D., & Beretvas, S.N. (2013). The role of self-compassion in romantic relationships. *Self and Identity*, *12*(1), 78-98. doi: 10.1080/15298868.2011.639548
- Neff, K.D., Kirkpatrick, K.L., & Rude, S.S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality*, *41*(1), 139-154. doi: 10.1016/j.jrp.2006.03.004
- Neff, K.D., & McGehee, P. (2010). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity*, *9*(3), 225-240. doi: 10.1080/15298860902979307
- Pepping, C.A., Davis, P.J., O'Donovan, A., & Pal, J. (2014). Individual differences in self-compassion: the role of attachment and experiences of parenting in childhood. *Self and Identity*, *14*(1), 104-117. doi: 10.1080/15298868.2014.955050
- Preacher, K.J., & Hayes, A.F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*(3), 879-891.

- Raque-Bogdan, T.L., Ericson, S.K., Jackson, J., Martin, H.M., & Bryan, N.A. (2011). Attachment and mental and physical health: self-compassion and mattering as mediators. *Journal of Counseling Psychology, 58*(2), 272-278. doi: 10.1037/a0023041
- Ravitz, P., Maunder, R., & McBride, C. (2008). Attachment, contemporary interpersonal theory and IPT: An integration of theoretical, clinical, and empirical perspectives. *Journal of Contemporary Psychotherapy, 38*(1), 11-21.
- Roth, P.L., Switzer, F.S., & Switzer, D.M. (1999). Missing data in multiple item scales: A Monte Carlo analysis of missing data techniques. *Organizational Research Methods, 2*(3), 211-232.
- Shrive, F.M., Stuart, H., Quan, H., & Ghali, W.A. (2006). Dealing with missing data in a multi-question depression scale: a comparison of imputation methods. *BMC Medical Research Methodology, 6*(1), 57.
- Sibley, C., G, Fischer, R., & Liu, J. (2005). Reliability and validity of the revised experiences in close relationships (ECR-R) self-report measure of adult romantic attachment. *Personality and Social Psychology Bulletin, 31*(11), 1524-1536. doi: 10.1177/0146167205276865
- Singleton, N., Bumpstead, R., O'Brien, M., Lee, A., & Meltzer, H. (2000). *Psychiatric morbidity among adults living in private households, 2000: Summary report*. London: The Stationary Office.
- Snaith, R.P., & Zigmond, A.S. (1994). *HADS: Hospital Anxiety and Depression Scale*. Windsor: NFER Nelson.
- Tanaka, M., Wekerle, C., Schmuck, M.L., & Paglia-Boak, A. (2011). The linkages among childhood maltreatment, adolescent mental health, and self-compassion in child welfare adolescents. *Child Abuse and Neglect, 35*(10), 887-898. doi: 10.1016/j.chiabu.2011.07.003
- The Scottish Government. (2012). *SIMD Scottish Index of Multiple Deprivation*. Edinburgh: A Scottish Government National Statistics Publication.
- Van Dam, N.T., Sheppard, S.C., Forsyth, J.P., & Earleywine, M. (2011). Self-compassion is a better predictor than mindfulness of symptom severity and quality of life in mixed anxiety and depression. *Journal of Anxiety Disorders, 25*(1), 123-130. doi: <http://dx.doi.org/10.1016/j.janxdis.2010.08.011>
- Vettese, L.C., Dyer, C.E., Li, W.L., & Wekerle, C. (2011). Does self-compassion mitigate the association between childhood maltreatment and later emotion regulation

- difficulties? A preliminary investigation. *International Journal of Mental Health and Addiction*, 9(5), 480-491. doi: 10.1007/s11469-011-9340-7
- Wei, M., Liao, K.Y., Ku, T.Y., & Shaffer, P.A. (2011). Attachment, self-compassion, empathy, and subjective well-being among college students and community adults. *Journal of Personality*, 79(1), 191-221. doi: 10.1111/j.1467-6494.2010.00677.x
- Werner, K.H., Jazaieri, H., Goldin, P.R., Ziv, M., Heimberg, R.G., & Gross, J.J. (2012). Self-compassion and social anxiety disorder. *Anxiety, Stress and Coping*, 25(5), 543-588.
- Williams, M.J., Dalgleish, T., Karl, A., & Kuyken, W. (2014). Examining the factor structures of the five facet mindfulness questionnaire and the self-compassion scale. *Psychological Assessment*, 26(2), 407-418. doi: <http://dx.doi.org/10.1037/a0035566>
- Yarnell, L.M., & Neff, K.D. (2013). Self-compassion, interpersonal conflict resolutions, and well-being. *Self and Identity*, 12(2), 146-159. doi: 10.1080/15298868.2011.649545
- Zigmond, A.S., & Snaith, R.P. (1983). The Hospital Anxiety and Depression Scale. *Acta Psychiatrica Scandinavica*, 67, 361-370.

References for whole thesis

- Ainsworth, M.D.S., Blehar, M.C., Waters, E., & Wall, S.N. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Lawrence Erlbaum.
- Anders, S.L., & Tucker, J.S. (2000). Adult attachment style, interpersonal communication competence, and social support. *Personal Relationships*, 7(4), 379-389. doi: 10.1111/j.1475-6811.2000.tb00023.x
- Baker, L.R., & McNulty, J.K. (2011). Self-compassion and relationship maintenance: the moderating roles of conscientiousness and gender. *Journal of Personality and Social Psychology*, 100(5), 853-873. doi: 10.1037/a0021884
- Barkham, M., Hardy, G.E., & Startup, M. (1996). The IIP-32: A short version of the Inventory of Interpersonal Problems. *British Journal of Clinical Psychology*, 35, 21-35.
- Beaumont, E., Galpin, A., & Jenkins, P. (2012). 'Being kinder to myself': A prospective comparative study, exploring post-trauma therapy outcome measures, for two groups of clients, receiving either Cognitive Behaviour Therapy or Cognitive Behaviour Therapy and Compassionate Mind Training. *Counselling Psychology Review*, 27(1), 31-43.
- Beaumont, E., & Martin, C.J. (2013). Using compassionate mind training as a resource in EMDR: A case study. *Journal of EMDR Practice and Research*, 7(4), 186-199. doi: <http://dx.doi.org/10.1891/1933-3196.7.4.186>
- Birnie, K., Speca, M., & Carlson, L.E. (2010). Exploring self-compassion and empathy in the context of mindfulness-based stress reduction (MBSR). *Stress and Health*, 26(5), 359-371. doi: <http://dx.doi.org/10.1002/smi.1305>
- Bjelland, I., Dahl, A.A., Haug, T.T., & Neckelmann, D. (2002). The validity of the Hospital Anxiety and Depression Scale: an updated literature review. *Journal of Psychosomatic Research*, 52(2), 69-77.
- Boersma, K., Hakanson, A., Salomonsson, E., & Johansson, I. (2015). Compassion focused therapy to counteract shame, self-criticism and isolation. A replicated single case experimental study for individuals with social anxiety. *Journal of Contemporary Psychotherapy*, 45(2), 89-98. doi: <http://dx.doi.org/10.1007/s10879-014-9286-8>
- Borkovec, T.D., Newman, M.G., Pincus, A.L., & Lytle, R. (2002). A component analysis of cognitive-behavioral therapy for generalized anxiety disorder and the role of interpersonal problems. *Journal of consulting and clinical psychology*, 70(2), 288.
- Bowlby, J. (1969). *Attachment and loss*. New York: Basic Books.

- Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation: Anxiety and anger*. New York: Basic Books.
- Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development*. New York: Basic Books.
- Braehler, C., Gumley, A., Harper, J., Wallace, S., Norrie, J., & Gilbert, P. (2013). Exploring change processes in compassion focused therapy in psychosis: Results of a feasibility randomized controlled trial. *British Journal of Clinical Psychology, 52*(2), 199-214 116p. doi: 10.1111/bjc.12009
- Cahill, J., Barkham, M., & Stiles, W.B. (2010). Systematic review of practice-based research on psychological therapies in routine clinic settings. *British Journal of Clinical Psychology, 49*(4), 421-453. doi: 10.1348/014466509X470789
- Cantazaro, A., & Wei, M. (2010). Adult attachment, dependence, self-Criticism, and depressive symptoms: A test of a mediational model. *Journal of Personality, 78*(4), 1135-1162.
- Cassidy, J., & Kobak, R.R. (1988). Avoidance and its relation to other defensive processes. In Jay Belsky & Teresa M Nezworski (Eds.), *Clinical implications of attachment*. New Jersey: Lawrence Erlbaum Associates.
- Centre for Reviews and Dissemination. (2009). *Systematic Reviews: CRD's guidance for undertaking reviews in healthcare*. York: CRD, University of York.
- Chiesa, A., & Serretti, A. (2009). Mindfulness-based stress reduction for stress management in healthy people: A review and meta-analysis. *Journal of Alternative and Complementary Medicine, 15*(5), 593-600. doi: <http://dx.doi.org/10.1089/acm.2008.0495>
- Cohen, J. (1988). *Statistical power analysis for the behavioural sciences* (2nd ed.). New Jersey: Lawrence Erlbaum Associates.
- Cosco, T.D., Doyle, F., Ward, M., & McGee, H. (2012). Latent structure of the Hospital Anxiety And Depression Scale: a 10-year systematic review. *Journal of Psychosomatic Research, 72*(3), 180-184.
- Costa, J., Marôco, J., Pinto-Gouveia, J., Ferreira, C., & Castilho, P. (2015). Validation of the psychometric properties of the self-compassion scale. Testing the factorial validity and factorial invariance of the measure among borderline personality disorder, anxiety disorder, eating disorder and general populations. *Clinical Psychology & Psychotherapy*. doi: 10.1002/cpp.1974.

- Crawford, J.R., Henry, J.D., Crombie, C., & Taylor, E.P. (2001). Normative data for the HADS from a large non-clinical sample. *British Journal of Clinical Psychology, 40*, 429-434.
- Dahl, J.C., Plumb, J.C., Stewart, I., & Lundgren, T. (2009). *The Art and Science of Valuing in Psychotherapy: Helping Clients Discover, Explore, and Commit to Valued Action Using Acceptance and Commitment Therapy*. Oakland, CA: New Harbinger Publications, Inc.
- Daniel, S.I. (2006). Adult attachment patterns and individual psychotherapy: a review. *Clin Psychol Rev, 26*(8), 968-984. doi: 10.1016/j.cpr.2006.02.001
- Deeks, J.J., Dinnes, J., D'amico, R., Sowden, A., Sakarovitch, C., Song, F., *et al.* (2003). Evaluating non-randomised intervention studies. *Health Technology Assessment 7*(27), 1-173.
- Depue, R.A., & Morrone-Strupinsky, J.V. (2005). A neurobehavioral model of affiliative bonding: Implications for conceptualizing a human trait of affiliation. *Behaviour and Brain Sciences, 28*, 313-395.
- Downs, S.H., & Black, N. (1998). The feasibility of creating a checklist for the assessment of the methodological quality both of randomised and non-randomised studies of health care interventions. *Journal of Epidemiology and Community Health, 52*(6), 377-384. doi: 10.1136/jech.52.6.377
- Dozier, M., Stovall-McClough, K.C., & Albus, K.E. (2008). Attachment and psychopathology in adulthood. In Jude Cassidy (Ed.), *Handbook of attachment: Theory, research, and clinical applications*. New York: Guilford Publications.
- Eng, W., & Heimberg, R.G. (2006). Interpersonal correlates of generalized anxiety disorder: Self versus other perception. *Journal of anxiety disorders, 20*(3), 380-387.
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics*: Sage.
- Forman, E.M., Herbert, J.D., Moitra, E., Yeomans, P.D., & Geller, P.A. (2007). A randomized controlled effectiveness trial of acceptance and commitment therapy and cognitive therapy for anxiety and depression. *Behavior Modification, 31*(6), 772-799.
- Fox-Wasylyshyn, S.M., & El-Masri, M.M. (2005). Handling missing data in self-report measures. *Research in Nursing & Health, 28*(6), 488-495.
- Fraley, R.C., Waller, N.G., & Brennan, K.A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology, 78*(2), 350-365. doi: 10.1037//0022-3514.78.2.350

- Fritz, M.S., & Mackinnon, D.P. (2007). Required sample size to detect the mediated effect. *Psychological Science, 18*(3), 233-239. doi: 10.1111/j.1467-9280.2007.01882.x
- Gilbert, P. (2005). *Compassion: Conceptualisations, research and use in psychotherapy*. New York, NY: Routledge; US.
- Gilbert, P. (2009). Introducing compassion-focused therapy. *Advances in Psychiatric Treatment, 15*(3), 199-208. doi: <http://dx.doi.org/10.1192/apt.bp.107.005264>
- Gilbert, P. (2010). An introduction to compassion focused therapy in cognitive behavior therapy. *International Journal of Cognitive Therapy, 3*(2), 97-112.
- Gilbert, P., & Irons, C. (2004). A pilot exploration of the use of compassionate images in a group of self-critical people. *Memory, 12*(4), 507-516.
- Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism: Overview and pilot study of a group therapy approach. *Clinical Psychology and Psychotherapy, 13*(6), 353-379. doi: <http://dx.doi.org/10.1002/cpp.507>
- Gilbert, P., McEwan, K., Catarino, F., Baiao, R., & Palmeira, L. (2014). Fears of happiness and compassion in relationship with depression, alexithymia, and attachment security in a depressed sample. *British Journal of Clinical Psychology, 53*(2), 228-244. doi: 10.1111/bjc.12037
- Gillath, O., Shaver, P.R., & Mikulincer, M. (2005). An attachment-theoretical approach to compassion and altruism. In Paul Gilbert (Ed.), *Compassion: conceptualizations, research, and use in psychotherapy*. London: Brunner-Routledge.
- Goodman, J.H., Guarino, A., Chenausky, K., Klein, L., Prager, J., Petersen, R., *et al.* (2014). CALM pregnancy: Results of a pilot study of mindfulness-based cognitive therapy for perinatal anxiety. *Archives of Women's Mental Health, 17*(5), 373-387. doi: <http://dx.doi.org/10.1007/s00737-013-0402-7>
- Green, S.B. (1991). How many subjects does it take to do a regression analysis? *Multivariate Behavioral Research, 26*(3), 499-510.
- Greenhalgh, T. (2014). *How to read a paper: The basics of evidence-based medicine*: John Wiley & Sons.
- Hacker, T., Stone, P., & MacBeth, A. (2016). Acceptance and commitment therapy – Do we know enough? Cumulative and sequential meta-analyses of randomized controlled trials. *Journal of Affective Disorders, 190*, 551-565. doi: <http://dx.doi.org/10.1016/j.jad.2015.10.053>

- Haggerty, G., Hilsenroth, M.J., & Vala-Stewart, R. (2009). Attachment and interpersonal distress: examining the relationship between attachment styles and interpersonal problems in a clinical population. *Clinical Psychology and Psychotherapy*, *16*(1), 1-9. doi: 10.1002/cpp.596
- Hankin, B.L., Kassel, J.D., & Abela, J.R. (2005). Adult attachment dimensions and specificity of emotional distress symptoms: prospective investigations of cognitive risk and interpersonal stress generation as mediating mechanisms. *Personality & Social Psychology Bulletin*, *31*(1), 136-151. doi: 10.1177/0146167204271324
- Hayes, A.F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York: Guilford Publications.
- Hayes, S.C. (2004). Acceptance and commitment therapy, relational frame theory, and the third wave of behavioral and cognitive therapies. *Behavior Therapy*, *35*(4), 639-665. doi: [http://dx.doi.org/10.1016/S0005-7894\(04\)80013-3](http://dx.doi.org/10.1016/S0005-7894(04)80013-3)
- Hayes, S.C., Strosahl, K., & Wilson, K.G. (1999). *Acceptance and Commitment Therapy: An experiential approach to behavior change*. New York: Guilford Press.
- Higgins, J.P.T., & Green, S., (Editors). (2011). *Cochrane Handbook for Systematic Reviews of Interventions Version 5.1.0 [updated March 2011]*. The Cochrane Collaboration: Available from www.cochrane-handbook.org.
- Hofmann, S.G., Sawyer, A.T., Witt, A.A., & Oh, D. The Effect of Mindfulness-Based Therapy on Anxiety and Depression: A Meta-Analytic Review.
- Hofmann, S.G., Sawyer, A.T., Witt, A.A., & Oh, D. (2010). The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. *Journal of Consulting and Clinical Psychology*, *78*(2), 169.
- Jazaieri, H., Goldin, P.R., Werner, K., Ziv, M., & Gross, J.J. (2012). A Randomized Trial of MBSR Versus Aerobic Exercise for Social Anxiety Disorder. *Journal of Clinical Psychology*, *68*(7), 715-731. doi: <http://dx.doi.org/10.1002/jclp.21863>
- Kabat-Zinn, J. (1990). *Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness*: Delta Trade Paperbacks.
- Kabat-Zinn, J. (2013). *Full catastrophe living, revised edition: how to cope with stress, pain and illness using mindfulness meditation*: Hachette UK.
- Kelly, A.C., & Carter, J.C. (2015). Self-compassion training for binge eating disorder: A pilot randomized controlled trial. *Psychology and Psychotherapy: Theory, Research and Practice*, *88*(3), 285-303. doi: <http://dx.doi.org/10.1111/papt.12044>
- Kelly, A.C., Carter, J.C., & Borairi, S. (2014). Are improvements in shame and self-compassion early in eating disorders treatment associated with better patient

- outcomes? *International Journal of Eating Disorders*, 47(1), 54-64. doi:
<http://dx.doi.org/10.1002/eat.22196>
- Kelly, A.C., Zuroff, D.C., Foa, C.L., & Gilbert, P. (2010). Who benefits from training in self-compassionate self-regulation? A study of smoking reduction. *Journal of Social and Clinical Psychology*, 29(7), 727.
- Kelly, A.C., Zuroff, D.C., & Shapira, L.B. (2009). Soothing oneself and resisting self-attacks: The treatment of two intrapersonal deficits in depression vulnerability. *Cognitive Therapy and Research*, 33(3), 301-313. doi:
<http://dx.doi.org/10.1007/s10608-008-9202-1>
- Krieger, T., Altenstein, D., Baettig, I., Doerig, N., & Holtforth, M.G. (2013). Self-compassion in depression: associations with depressive symptoms, rumination, and avoidance in depressed outpatients. *Behavior Therapy*, 44(3), 501-513. doi:
10.1016/j.beth.2013.04.004
- Kuyken, W., Byford, S., Taylor, R.S., Watkins, E., Holden, E., White, K., *et al.* (2008). Mindfulness-based cognitive therapy to prevent relapse in recurrent depression. *Journal of Consulting and Clinical Psychology*, 76(6), 966.
- Kuyken, W., Watkins, E., Holden, E., White, K., Taylor, R.S., Byford, S., *et al.* (2010). How does mindfulness-based cognitive therapy work? *Behaviour Research and Therapy*, 48(11), 1105-1112. doi: <http://dx.doi.org/10.1016/j.brat.2010.08.003>
- Laithwaite, H., O'Hanlon, M., Collins, P., Doyle, P., Abraham, L., Porter, S., *et al.* (2009). Recovery After Psychosis (RAP): a compassion focused programme for individuals residing in high security settings. *Behavioural and Cognitive Psychotherapy*, 37(5), 511-526.
- Leaviss, J., & Uttley, L. (2015). Psychotherapeutic benefits of compassion-focused therapy: An early systematic review. *Psychological Medicine*, 45(5), 927-945. doi:
<http://dx.doi.org/10.1017/S0033291714002141>
- Lee, W.K., & Bang, H.J. (2010). The effects of mindfulness-based group intervention on the mental health of middle-aged Korean women in community. *Stress and Health*, 26(4), 341-348. doi: <http://dx.doi.org/10.1002/smi.1303>
- Linehan, M.M. (1993). *Cognitive behavioral treatment of borderline personality disorder*. New York: Guilford.
- Linehan, M.M., Armstrong, H.E., Suarez, A., Allmon, D., & Heard, H.L. (1991). Cognitive-behavioral treatment of chronically parasuicidal borderline patients. *Archives of General Psychiatry*, 48(12), 1060-1064.

- Linehan, M.M., Schmidt, H., Dimeff, L.A., Craft, J.C., Kanter, J., & Comtois, K.A. (1999). Dialectical behavior therapy for patients with borderline personality disorder and drug-dependence. *The American Journal on Addictions, 8*(4), 279-292.
- López, A., Sanderman, R., Smink, A., Zhang, Y., van Sonderen, E., Ranchor, A., *et al.* (2015). A reconsideration of the Self-Compassion Scale's total score: self-compassion versus self-criticism. *PloS one, 10*(7), e0132940.
- MacBeth, A., & Gumley, A. (2012). Exploring compassion: A meta-analysis of the association between self-compassion and psychopathology. *Clinical Psychology Review, 32*(6), 545-552. doi: 10.1016/j.cpr.2012.06.003
- Mayhew, S.L., & Gilbert, P. (2008). Compassionate mind training with people who hear malevolent voices: A case series report. *Clinical Psychology and Psychotherapy, 15*(2), 113-138. doi: <http://dx.doi.org/10.1002/cpp.566>
- McEvoy, P.M., Burgess, M.M., & Nathan, P. (2014). The relationship between interpersonal problems, therapeutic alliance, and outcomes following group and individual cognitive behaviour therapy. *Journal of Affective Disorders, 157*, 25-32. doi: 10.1016/j.jad.2013.12.038
- McEvoy, P.M., Burgess, M.M., Page, A.C., Nathan, P., & Fursland, A. (2013). Interpersonal problems across anxiety, depression, and eating disorders: a transdiagnostic examination. *British Journal of Clinical Psychology, 52*(2), 129-147. doi: 10.1111/bjc.12005
- Mickelson, K.D., Kessler, R.C., & Shaver, P.R. (1997). Adult attachment in a nationally representative sample. *Journal of Personality and Social Psychology, 73*(5), 1092.
- Mikulincer, M., & Shaver, P.R. (2005). Attachment security, compassion, and altruism. *Current Directions in Psychological Science, 14*, 34-38.
- Mikulincer, M., & Shaver, P.R. (2010). *Attachment in adulthood: Structure, dynamics, and change*. London: Guilford Press.
- Neff, K.D. (2003a). The development and validation of a scale to measure self-compassion. *Self and Identity, 2*, 223-250. doi: 10.1080/15298860390209035
- Neff, K.D. (2003b). Self-compassion: an alternative conceptualization of a healthy attitude toward oneself. *Self and Identity, 2*, 85-101. doi: 10.1080/15298860390129863
- Neff, K.D. (2015). The Self-Compassion Scale is a Valid and Theoretically Coherent Measure of Self-Compassion. *Mindfulness, 7*(1), 264-274.
- Neff, K.D., & Beretvas, S.N. (2013). The role of self-compassion in romantic relationships. *Self and Identity, 12*(1), 78-98. doi: 10.1080/15298868.2011.639548

- Neff, K.D., & Germer, C.K. (2013). A pilot study and randomized controlled trial of the Mindful Self-Compassion program. *Journal of Clinical Psychology, 69*(1), 28-44. doi: <http://dx.doi.org/10.1002/jclp.21923>
- Neff, K.D., Kirkpatrick, K.L., & Rude, S.S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality, 41*(1), 139-154. doi: 10.1016/j.jrp.2006.03.004
- Neff, K.D., & McGehee, P. (2010). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity, 9*(3), 225-240. doi: 10.1080/15298860902979307
- Neff, K.D., & Tirsch, D. (2013). *Self-compassion and ACT Mindfulness, acceptance, and positive psychology: The seven foundations of well-being*. Oakland, CA: Context Press/New Harbinger Publications; US.
- Öst, L.-G. (2014). The efficacy of Acceptance and Commitment Therapy: An updated systematic review and meta-analysis. *Behaviour Research and Therapy, 61*, 105-121. doi: <http://dx.doi.org/10.1016/j.brat.2014.07.018>
- Pepping, C.A., Davis, P.J., O'Donovan, A., & Pal, J. (2014). Individual differences in self-compassion: the role of attachment and experiences of parenting in childhood. *Self and Identity, 14*(1), 104-117. doi: 10.1080/15298868.2014.955050
- Perroud, N., Nicasastro, R., Jermann, F., & Huguelet, P. (2012). Mindfulness skills in borderline personality disorder patients during dialectical behavior therapy: preliminary results. *International Journal of Psychiatry in Clinical Practice, 16*(3), 189-196.
- Petty, S.C., Sachs-Ericsson, N., & Joiner, T.E. (2004). Interpersonal functioning deficits: temporary or stable characteristics of depressed individuals? *Journal of affective disorders, 81*(2), 115-122.
- Powers, M.B., Zum Vörde Sive Vörding, M.B., & Emmelkamp, P.M. (2009). Acceptance and commitment therapy: A meta-analytic review. *Psychotherapy and Psychosomatics, 78*(2), 73-80.
- Preacher, K.J., & Hayes, A.F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*(3), 879-891.
- Radford, S.R., Crane, R.S., Eames, C., Gold, E., & Owens, G.W. (2012). The feasibility and effectiveness of mindfulness-based cognitive therapy for mixed diagnosis patients in primary care: A pilot study. *Mental Health in Family Medicine, 9*(3), 191-200.

- Raes, F. (2010). Rumination and worry as mediators of the relationship between self-compassion and depression and anxiety. *Personality and Individual Differences*, 48(6), 757-761. doi: 10.1016/j.paid.2010.01.023
- Raque-Bogdan, T.L., Ericson, S.K., Jackson, J., Martin, H.M., & Bryan, N.A. (2011). Attachment and mental and physical health: self-compassion and mattering as mediators. *Journal of Counseling Psychology*, 58(2), 272-278. doi: 10.1037/a0023041
- Ravitz, P., Maunder, R., & McBride, C. (2008). Attachment, contemporary interpersonal theory and IPT: An integration of theoretical, clinical, and empirical perspectives. *Journal of Contemporary Psychotherapy*, 38(1), 11-21.
- Roth, P.L., Switzer, F.S., & Switzer, D.M. (1999). Missing data in multiple item scales: A Monte Carlo analysis of missing data techniques. *Organizational Research Methods*, 2(3), 211-232.
- Schoenberg, P.L.A., & Speckens, A.E.M. (2014). Multi-dimensional modulations of alpha and gamma cortical dynamics following mindfulness-based cognitive therapy in Major Depressive Disorder. *Cognitive Neurodynamics*, 9(1), 13-29. doi: <http://dx.doi.org/10.1007/s11571-014-9308-y>
- Scottish Intercollegiate Guidelines Network. (2014). *SIGN 50: A guideline developer's handbook*. Edinburgh: SIGN; 2014.
- Segal, Z.V., Williams, J.M.G., & Teasdale, J.D. (2002). *Mindfulness-based cognitive therapy for depression*: Guilford Press.
- Segal, Z.V., Williams, J.M.G., & Teasdale, J.D. (2013). *Mindfulness-based cognitive therapy for depression (2nd ed.)*. New York, NY: Guilford Press; US.
- Shapira, L.B., & Mongrain, M. (2010). The benefits of self-compassion and optimism exercises for individuals vulnerable to depression. *The Journal of Positive Psychology*, 5(5), 377-389.
- Shapiro, S.L., Astin, J.A., Bishop, S.R., & Cordova, M. (2005). Mindfulness-Based Stress Reduction for Health Care Professionals: Results From a Randomized Trial. *International Journal of Stress Management*, 12(2), 164-176. doi: <http://dx.doi.org/10.1037/1072-5245.12.2.164>
- Shapiro, S.L., Brown, K.W., & Biegel, G.M. (2007). Teaching self-care to caregivers: Effects of mindfulness-based stress reduction on the mental health of therapists in training. *Training and Education in Professional Psychology*, 1(2), 105-115. doi: <http://dx.doi.org/10.1037/1931-3918.1.2.105>

- Shorey, H.S., & Snyder, C. (2006). The role of adult attachment styles in psychopathology and psychotherapy outcomes. *Review of General Psychology, 10*(1), 1-20.
- Shrive, F.M., Stuart, H., Quan, H., & Ghali, W.A. (2006). Dealing with missing data in a multi-question depression scale: a comparison of imputation methods. *BMC Medical Research Methodology, 6*(1), 57.
- Sibley, C., G, Fischer, R., & Liu, J. (2005). Reliability and validity of the revised experiences in close relationships (ECR-R) self-report measure of adult romantic attachment. *Personality and Social Psychology Bulletin, 31*(11), 1524-1536. doi: 10.1177/0146167205276865
- Singleton, N., Bumpstead, R., O'Brien, M., Lee, A., & Meltzer, H. (2000). *Psychiatric morbidity among adults living in private households, 2000: Summary report*. London: The Stationary Office.
- Snaith, R.P., & Zigmond, A.S. (1994). *HADS: Hospital Anxiety and Depression Scale*. Windsor: NFER Nelson.
- Swain, J., Hancock, K., Hainsworth, C., & Bowman, J. (2013). Acceptance and Commitment Therapy in the treatment of anxiety: A systematic review. *Clinical Psychology Review, 33*(8), 965-978. doi: <http://dx.doi.org/10.1016/j.cpr.2013.07.002>
- Tanaka, M., Wekerle, C., Schmuck, M.L., & Paglia-Boak, A. (2011). The linkages among childhood maltreatment, adolescent mental health, and self-compassion in child welfare adolescents. *Child Abuse and Neglect, 35*(10), 887-898. doi: 10.1016/j.chiabu.2011.07.003
- The Scottish Government. (2012). *SIMD Scottish Index of Multiple Deprivation*. Edinburgh: A Scottish Government National Statistics Publication.
- Valentine, S.E., Bankoff, S.M., Poulin, R.M., Reidler, E.B., & Pantalone, D.W. (2015). The use of dialectical behavior therapy skills training as stand-alone treatment: A systematic review of the treatment outcome literature. *Journal of Clinical Psychology, 71*(1), 1-20.
- Van Dam, N.T., Sheppard, S.C., Forsyth, J.P., & Earleywine, M. (2011). Self-compassion is a better predictor than mindfulness of symptom severity and quality of life in mixed anxiety and depression. *Journal of Anxiety Disorders, 25*(1), 123-130. doi: <http://dx.doi.org/10.1016/j.janxdis.2010.08.011>
- Vettese, L.C., Dyer, C.E., Li, W.L., & Wekerle, C. (2011). Does self-compassion mitigate the association between childhood maltreatment and later emotion regulation difficulties? A preliminary investigation. *International Journal of Mental Health and Addiction, 9*(5), 480-491. doi: 10.1007/s11469-011-9340-7

- Vittengl, J.R., Clark, L.A., & Jarrett, R.B. (2003). Interpersonal problems, personality pathology, and social adjustment after cognitive therapy for depression. *Psychological Assessment, 15*(1), 29.
- Wei, M., Liao, K.Y., Ku, T.Y., & Shaffer, P.A. (2011). Attachment, self-compassion, empathy, and subjective well-being among college students and community adults. *Journal of Personality, 79*(1), 191-221. doi: 10.1111/j.1467-6494.2010.00677.x
- Wei, M., Mallinckrodt, B., Larson, L.M., & Zakalik, R.A. (2005). Adult attachment, depressive symptoms, and validation from self versus others. *Journal of Counseling Psychology, 52*(3), 368-377.
- Werner, K.H., Jazaieri, H., Goldin, P.R., Ziv, M., Heimberg, R.G., & Gross, J.J. (2012). Self-compassion and social anxiety disorder. *Anxiety, Stress and Coping, 25*(5), 543-588.
- Williams, M.J., Dalgleish, T., Karl, A., & Kuyken, W. (2014). Examining the factor structures of the five facet mindfulness questionnaire and the self-compassion scale. *Psychological Assessment, 26*(2), 407-418. doi: <http://dx.doi.org/10.1037/a0035566>
- Yadavaia, J.E., Hayes, S.C., & Vilaradaga, R. (2014). Using Acceptance and Commitment Therapy to increase self-compassion: A Randomized Controlled Trial. *Journal of Contextual Behavioral Science, 3*(4), 248-257. doi: 10.1016/j.jcbs.2014.09.002
- Yarnell, L.M., & Neff, K.D. (2013). Self-compassion, interpersonal conflict resolutions, and well-being. *Self and Identity, 12*(2), 146-159. doi: 10.1080/15298868.2011.649545
- Zigmond, A.S., & Snaith, R.P. (1983). The Hospital Anxiety and Depression Scale. *Acta Psychiatrica Scandinavica, 67*, 361-370.

Table of Appendices

Appendix A	Journal of Affective Disorders Author Guidelines
Appendix B	Data extraction form
Appendix C	Quality assessment checklist
Appendix D	Reasons for excluding studies
Appendix E	List of additional outcome measures
Appendix F	Journal of Personality Author Guidelines
Appendix G	Participant Information Sheet
Appendix H	Participant Consent Form
Appendix I	Demographics form
Appendix J	Self-compassion Scale
Appendix K	Hospital Anxiety and Depression Scale
Appendix L	Inventory of Interpersonal Problems-32
Appendix M	Experiences in Close Relationships-Revised
Appendix N	East of Scotland Ethics Service Communication
Appendix O	Additional results

JOURNAL OF AFFECTIVE DISORDERS

Official Journal of the [International Society for Affective Disorders](#)

AUTHOR INFORMATION PACK

TABLE OF CONTENTS

• Description	p.1
• Audience	p.1
• Impact Factor	p.1
• Abstracting and Indexing	p.2
• Editorial Board	p.2
• Guide for Authors	p.5

DESCRIPTION

The Journal of Affective Disorders publishes papers concerned with affective disorders in the widest sense: depression, mania, mood spectrum, emotions and personality, anxiety and stress. It is interdisciplinary and aims to bring together different approaches for a diverse readership. Top quality papers will be accepted dealing with any aspect of affective disorders, including neuroimaging, cognitive neurosciences, genetics, molecular biology, experimental and clinical neurosciences, pharmacology, neuroimmunoenocrinology, intervention and treatment trials.

Benefits to authors

We also provide many author benefits, such as free PDFs, a liberal copyright policy, special discounts on Elsevier publications and much more. Please click here for more information on our [author services](#).

Please see our [Guide for Authors](#) for information on article submission. If you require any further information or help, please visit our support pages: <http://support.elsevier.com>

AUDIENCE

Journal of Affective Disorders is interdisciplinary and aims to bring together different approaches and fields including biochemistry, pharmacology, endocrinology, genetics, statistics, epidemiology, psychodynamics, classification, clinical studies and studies of all types of treatment for a diverse readership.

IMPACT FACTOR

2014: 3.383 © Thomson Reuters Journal Citation Reports 2015

ABSTRACTING AND INDEXING

BIOSIS

Current Contents/Life Sciences

MEDLINE®

Informaticus

EMBASE

Pascal et Francis (INST-CNRS)

PsycINFO Psychological Abstracts

SIIC Data Bases

Scopus

GUIDE FOR AUTHORS

Description

The Journal of Affective Disorders publishes papers concerned with **affective disorders** in the widest sense: **depression, mania, anxiety and panic**. It is interdisciplinary and aims to bring together different approaches for a diverse readership. High quality papers will be accepted dealing with any aspect of affective disorders, including biochemistry, pharmacology, endocrinology, genetics, statistics, epidemiology, psychodynamics, classification, clinical studies and studies of all types of treatment.

BEFORE YOU BEGIN

Ethics in publishing

For information on Ethics in publishing and Ethical guidelines for journal publication see <https://www.elsevier.com/publishingethics> and <https://www.elsevier.com/journal-authors/ethics>.

Ethical Considerations

Authors of reports on human studies, especially those involving placebo, symptom provocation, drug discontinuation, or patients with disorders that may impair decision-making capability, should consider the ethical issues related to the work presented and include (in the Methods and Materials section of their manuscript) detailed information on the informed consent process, including the method or methods used to assess the subject's capacity to give informed consent, and safeguards included in the study design for protection of human subjects. Specifically, authors should consider all ethical issues relevant to their research, and briefly address each of these in their reports. When relevant patient follow-up data are available, this should also be reported. Specifically, investigators reporting on research involving human subjects or animals must have prior approval from an institutional review board. This approval should be mentioned in the methods section of the manuscript. In countries where institutional review boards are not available; the authors must include a statement that research was conducted in accordance with the Helsinki Declaration as revised 1989. All studies involving animals must state that the authors followed the guidelines for the use and care of laboratory animals of the author's institution or the National Research Council or any national law pertaining to animal research care.

Conflict of interest

All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential conflicts of interest include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. If there are no conflicts of interest then please state this: 'Conflicts of interest: none'. See also <https://www.elsevier.com/conflictsofinterest>. Further information and an example of a Conflict of Interest form can be found at: http://service.elsevier.com/app/answers/detail/a_id/286/supporthub/publishing.

Contributors

Each author is required to declare his or her individual contribution to the article: all authors must have materially participated in the research and/or article preparation, so roles for all authors should be described. The statement that all authors have approved the final article should be true and included in the disclosure.

Changes to authorship

Authors are expected to consider carefully the list and order of authors **before** submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only **before** the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the **corresponding author**: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed.

Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors **after** the manuscript has been accepted. While the Editor considers the request, publication of

the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

Copyright

Upon acceptance of an article, authors will be asked to complete a 'Journal Publishing Agreement' (for more information on this and copyright, see <https://www.elsevier.com/copyright>). An e-mail will be sent to the corresponding author confirming receipt of the manuscript together with a 'Journal Publishing Agreement' form or a link to the online version of this agreement.

Subscribers may reproduce tables of contents or prepare lists of articles including abstracts for internal circulation within their institutions. Permission of the Publisher is required for resale or distribution outside the institution and for all other derivative works, including compilations and translations (please consult <https://www.elsevier.com/permissions>). If excerpts from other copyrighted works are included, the author(s) must obtain written permission from the copyright owners and credit the source(s) in the article. Elsevier has preprinted forms for use by authors in these cases: please consult <https://www.elsevier.com/permissions>.

For open access articles: Upon acceptance of an article, authors will be asked to complete an 'Exclusive

License Agreement' (for more information see <https://www.elsevier.com/OAauthoragreement>).

Permitted third party reuse of open access articles is determined by the author's choice of user license (see <https://www.elsevier.com/openaccesslicenses>).

Author rights

As an author you (or your employer or institution) have certain rights to reuse your work. For more information see <https://www.elsevier.com/copyright>.

Role of the funding source

You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement then this should be stated.

Funding body agreements and policies

Elsevier has established a number of agreements with funding bodies which allow authors to comply with their funder's open access policies. Some authors may also be reimbursed for associated publication fees. To learn more about existing agreements please visit <https://www.elsevier.com/fundingbodies>.

After acceptance, open access papers will be published under a noncommercial license. For authors requiring a commercial CC BY license, you can apply after your manuscript is accepted for publication.

Open access

This journal offers authors a choice in publishing their research:

Open access

- Articles are freely available to both subscribers and the wider public with permitted reuse.
- An open access publication fee is payable by authors or on their behalf (e.g. by their research funder or institution).

Subscription

- Articles are made available to subscribers as well as developing countries and patient groups through our universal access programs (<https://www.elsevier.com/access>).
- No open access publication fee payable by authors.

Regardless of how you choose to publish your article, the journal will apply the same peer review criteria and acceptance standards.

For open access articles, permitted third party (re)use is defined by the following Creative Commons user licenses:

Creative Commons Attribution-NonCommercial-NoDerivs (CC BY-NC-ND)

For non-commercial purposes, lets others distribute and copy the article, and to include in a collective work (such as an anthology), as long as they credit the author(s) and provided they do not alter or modify the article.

The open access publication fee for this journal is **USD 3000**, excluding taxes. Learn more about Elsevier's pricing policy: <https://www.elsevier.com/openaccesspricing>.

Green open access

Authors can share their research in a variety of different ways and Elsevier has a number of green open access options available. We recommend authors see our green open access page for further information (<http://elsevier.com/greenopenaccess>). Authors can also self-archive their manuscripts immediately and enable public access from their institution's repository after an embargo period. This is the version that has been accepted for publication and which typically includes author-incorporated changes suggested during submission, peer review and in editor-author communications. Embargo period: For subscription articles, an appropriate amount of time is needed for journals to deliver value to subscribing customers before an article becomes freely available to the public. This is the embargo period and it begins from the date the article is formally published online in its final and fully citable form. This journal has an embargo period of 12 months.

Elsevier Publishing Campus

The Elsevier Publishing Campus (www.publishingcampus.com) is an online platform offering free lectures, interactive training and professional advice to support you in publishing your research. The College of Skills training offers modules on how to prepare, write and structure your article and explains how editors will look at your paper when it is submitted for publication. Use these resources, and more, to ensure that your submission will be the best that you can make it.

Language (usage and editing services)

Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific

English may wish to use the English Language Editing service available from Elsevier's WebShop (<http://webshop.elsevier.com/languageediting/>) or visit our customer support site (<http://support.elsevier.com>) for more information.

Submission

Our online submission system guides you stepwise through the process of entering your article details and uploading your files. The system converts your article files to a single PDF file used in the peer-review process. Editable files (e.g., Word, LaTeX) are required to typeset your article for final publication. All correspondence, including notification of the Editor's decision and requests for revision, is sent by e-mail.

Manuscript Submission

The *Journal of Affective Disorders* now proceeds totally online via an electronic submission system. Mail submissions will no longer be accepted. By accessing the online submission system, http://www.evise.com/evise/faces/pages/navigation/NavController.jsp?JRNL_ACR=JAD, you will be guided stepwise through the creation and uploading of the various files. When submitting a manuscript online, authors need to provide an electronic version of their manuscript and any accompanying figures and tables.

The author should select from a list of scientific classifications, which will be used to help the editors select reviewers with appropriate expertise, and an article type for their manuscript. Once the uploading is done, the system automatically generates an electronic (PDF) proof, which is then used for reviewing. All correspondence, including the Editor's decision and request for revisions, will be processed through the system and will reach the corresponding author by e-mail.

Once a manuscript has successfully been submitted via the online submission system authors may track the status of their manuscript using the online submission system (details will be provided by e-mail). If your manuscript is accepted by the journal, subsequent tracking facilities are available on Elsevier's Author Gateway, using the unique reference number provided by Elsevier and corresponding author name (details will be provided by e-mail).

Authors may send queries concerning the submission process or journal procedures to our Editors in-Chief **Paolo Brambilla: paolo.brambilla1@unimi.it** or **Jair Soares: Jair.C.Souares@uth.tmc.edu**.

Please submit your article via

http://www.eviser.com/eviser/faces/pages/navigation/NavController.jspx?JRNL_ACR=JAD

Types of Papers

The Journal primarily publishes:

Full-Length Research Papers (up to 5000 words, excluding references and up to 6 tables/figures)

Review Articles and Meta-analyses (up to 8000 words, excluding references and up to 10 tables/figures)

Short Communications (up to 2000 words, 20 references, 2 tables/figures)

Correspondence (up to 1000 words, 10 references, 1 table/figure).

At the discretion of the accepting Editor-in-Chief, and/or based on reviewer feedback, authors may be allowed fewer or more than these guidelines.

Retraction Policy

It is a general principle of scholarly communication that the editor of a learned journal is solely and independently responsible for deciding which articles submitted to the journal shall be published. In making this decision the editor is guided by policies of the journal's editorial board and constrained by such legal requirements in force regarding libel, copyright infringement and plagiarism. Although electronic methods are available to detect plagiarism and duplicate publications, editors nonetheless rely in large part on the integrity of authors to fulfil their responsibilities within the requirements of publication ethics and only submit work to which they can rightfully claim authorship and which has not previously been published.

An outcome of this principle is the importance of the scholarly archive as a permanent, historic record of the transactions of scholarship. Articles that have been published shall remain extant, exact and unaltered as far as is possible. However, very occasionally circumstances may arise where an article is published that must later be retracted or even removed. Such actions must not be undertaken lightly and can only occur under exceptional circumstances, such as:

- Article Withdrawal: Only used for Articles in Press which represent early versions of articles and sometimes contain errors, or may have been accidentally submitted twice. Occasionally, but less frequently, the articles may represent infringements of professional ethical codes, such as multiple submission, bogus claims of authorship, plagiarism, fraudulent use of data or the like.
- Article Retraction: Infringements of professional ethical codes, such as multiple submission, bogus claims of authorship, plagiarism, fraudulent use of data or the like. Occasionally a retraction will be used to correct errors in submission or publication.
- Article Removal: Legal limitations upon the publisher, copyright holder or author(s).
- Article Replacement: Identification of false or inaccurate data that, if acted upon, would pose a serious health risk. For the full policy and further details, please refer <http://www.elsevier.com/about/publishing-guidelines/policies/article-withdrawal>

Referees

Please submit the names and institutional e-mail addresses of several potential referees. For more details, visit our [Support site](#). Note that the editor retains the sole right to decide whether or not the suggested reviewers are used.

Preparation of Manuscripts

Articles should be in English. The title page should appear as a separate sheet bearing title (without article type), author names and affiliations, and a footnote with the corresponding author's full contact information, including address, telephone and fax numbers, and e-mail address (failure to include an e-mail address can delay processing of the manuscript).

Papers should be divided into sections headed by a caption (e.g., Introduction, Methods, Results, Discussion).

A structured abstract of no more than 250 words should appear on a separate page with the following headings and order: Background, Methods, Results, Limitations, Conclusions (which should contain a statement about the clinical relevance of the research). A list of three to six key words should appear under the abstract. **Authors should note that the 'limitations' section both in the discussion of the paper AND IN A STRUCTURED ABSTRACT are essential. Failure to include it may delay in processing the paper, decision making and final publication.**

Figures and Photographs

Figures and Photographs of good quality should be submitted online as a separate file. Please use a lettering that remains clearly readable even after reduction to about 66%. For every figure or photograph, a legend should be provided. All authors wishing to use illustrations already published must first obtain the permission of the author and publisher and/or copyright holders and give precise reference to the original work. This permission must include the right to publish in electronic media.

Tables

Tables should be numbered consecutively with Arabic numerals and must be cited in the text in sequence. Each table, with an appropriate brief legend, comprehensible without reference to the text, should be typed on a separate page and uploaded online. Tables should be kept as simple as possible and wherever possible a graphical representation used instead. Table titles should be complete but brief. Information other than that defining the data should be presented as footnotes.

Please refer to the generic Elsevier artwork instructions: <http://authors.elsevier.com/artwork/jad>.

Preparation of supplementary data

Elsevier accepts electronic supplementary material to support and enhance your scientific research. Supplementary files offer the author additional possibilities to publish supporting applications, movies, animation sequences, high-resolution images, background datasets, sound clips and more. Supplementary files supplied will be published online alongside the electronic version of your article in Elsevier web products, including ScienceDirect: <http://www.sciencedirect.com>. In order to ensure that your submitted material is directly usable, please ensure that data is provided in one of our recommended file formats. Authors should submit the material in electronic format together with the article and supply a concise and descriptive caption for each file. For more detailed instructions please visit our Author Gateway at: <http://www.elsevier.com/authors>

AudioSlides

The journal encourages authors to create an AudioSlides presentation with their published article. AudioSlides are brief, webinar-style presentations that are shown next to the online article on ScienceDirect. This gives authors the opportunity to summarize their research in their own words and to help readers understand what the paper is about. More information and examples are available at <http://www.elsevier.com/audioslides>. Authors of this journal will automatically receive an invitation e-mail to create an AudioSlides presentation after acceptance of their paper.

Colour reproduction

The Journal of Affective Disorders is now also included in a new initiative from Elsevier: 'Colourful e-Products'. Through this initiative, figures that appear in black & white in print can appear in colour, online, in ScienceDirect at <http://www.sciencedirect.com>. There is no extra charge for authors who participate.

For colour reproduction in print, you will receive information regarding the costs from Elsevier after receipt of your accepted article. Please indicate your preference for colour in print or on the Web only. Because of technical complications which can arise by converting colour figures to "grey scale" (for the printed version should you not opt for colour in print) please submit in addition usable black and white versions of all the colour illustrations. For further information on the preparation of electronic artwork, please see <http://authors.elsevier.com/artwork/jad>.

Use of word processing software

It is important that the file be saved in the native format of the word processor used. The text should be in single-column format. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. In particular, do not use the word processor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. When preparing tables, if you are using a table grid, use only one grid for each individual table and not a grid for each row. If no grid is used, use tabs, not spaces, to align columns. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier: <https://www.elsevier.com/guidepublication>). Note that source files of figures, tables and text graphics will be required whether or not you embed your figures in the text. See also the section on Electronic artwork.

To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

Abstract

A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

Graphical abstract

Although a graphical abstract is optional, its use is encouraged as it draws more attention to the online article. The graphical abstract should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership. Graphical abstracts should be submitted as a separate file in the online submission system. Image size: Please provide an image with a minimum of 531 × 1328 pixels (h × w) or proportionally more. The image should be readable at a size of 5 × 13 cm using a regular screen resolution of 96 dpi. Preferred file types: TIFF, EPS, PDF or MS Office files. See <https://www.elsevier.com/graphicalabstracts> for examples.

Authors can make use of Elsevier's Illustration and Enhancement service to ensure the best presentation of their images and in accordance with all technical requirements: [Illustration Service](#).

Highlights

Highlights are mandatory for this journal. They consist of a short collection of bullet points that convey the core findings of the article and should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point). See <https://www.elsevier.com/highlights> for examples.

Keywords

Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

Abbreviations

Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

Acknowledgements

Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

Formatting of funding sources

List funding sources in this standard way to facilitate compliance to funder's requirements:
Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, please include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Nomenclature and units

Follow internationally accepted rules and conventions: use the international system of units (SI). If other quantities are mentioned, give their equivalent in SI. You are urged to consult IUPAC: Nomenclature of Organic Chemistry: <http://www.iupac.org/> for further information.

Math formulae

Please submit math equations as editable text and not as images. Present simple formulae in line with normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).

Footnotes

Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors can build footnotes into the text, and this feature may be used. Otherwise, please indicate the position of footnotes in the text and list the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

Artwork

Electronic artwork

General points

- Make sure you use uniform lettering and sizing of your original artwork.
- Embed the used fonts if the application provides that option.
- Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use fonts that look similar.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Provide captions to illustrations separately.
- Size the illustrations close to the desired dimensions of the published version.
- Submit each illustration as a separate file.

A detailed guide on electronic artwork is available on our website:

<https://www.elsevier.com/artworkinstructions>.

You are urged to visit this site; some excerpts from the detailed information are given here.

Formats

If your electronic artwork is created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is' in the native document format.

Regardless of the application used other than Microsoft Office, when your electronic artwork is finalized, please 'Save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):

EPS (or PDF): Vector drawings, embed all used fonts.

TIFF (or JPEG): Color or grayscale photographs (halftones), keep to a minimum of 300 dpi.

TIFF (or JPEG): Bitmapped (pure black & white pixels) line drawings, keep to a minimum of 1000 dpi.

TIFF (or JPEG): Combinations bitmapped line/half-tone (color or grayscale), keep to a minimum of 500 dpi.

Please do not:

- Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); these typically have a low number of pixels and limited set of colors;
- Supply files that are too low in resolution;
- Submit graphics that are disproportionately large for the content.

Color artwork

Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF), or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear in color online (e.g., ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in color in the printed version. **For color reproduction in print, you will receive**

information regarding the costs from Elsevier after receipt of your accepted article. Please indicate your preference for color: in print or online only. For further information on the preparation of electronic artwork, please see <https://www.elsevier.com/artworkinstructions>.

Illustration services

Elsevier's WebShop (<http://webshop.elsevier.com/illustrationservices>) offers Illustration Services to authors preparing to submit a manuscript but concerned about the quality of the images accompanying their article. Elsevier's expert illustrators can produce scientific, technical and medical style images, as well as a full range of charts, tables and graphs. Image 'polishing' is also available, where our illustrators take your image(s) and improve them to a professional standard. Please visit the website to find out more.

Tables

Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules.

References

Citation in text

Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

Reference management software

Most Elsevier journals have their reference template available in many of the most popular reference management software products. These include all products that support Citation Style Language styles (<http://citationstyles.org>), such as Mendeley (<http://www.mendeley.com/features/reference-manager>) and Zotero (<https://www.zotero.org/>), as well as EndNote (<http://endnote.com/downloads/styles>). Using the word processor plug-ins from these products, authors only need to select the appropriate journal template when preparing their article, after which citations and bibliographies will be automatically formatted in the journal's style.

If no template is yet available for this journal, please follow the format of the sample references and citations as shown in this Guide.

Users of Mendeley Desktop can easily install the reference style for this journal by clicking the following link: <http://open.mendeley.com/use-citation-style/journal-of-affective-disorders>

When preparing your manuscript, you will then be able to select this style using the Mendeley plugins for Microsoft Word or LibreOffice.

Reference style

Text: All citations in the text should refer to:

1. *Single author:* the author's name (without initials, unless there is ambiguity) and the year of publication;
2. *Two authors:* both authors' names and the year of publication;
3. *Three or more authors:* first author's name followed by 'et al.' and the year of publication.

Citations may be made directly (or parenthetically). Groups of references should be listed first alphabetically, then chronologically.

Examples: 'as demonstrated (Allan, 2000a, 2000b, 1999; Allan and Jones, 1999). Kramer et al. (2010) have recently shown'

List: References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters 'a', 'b', 'c', etc., placed after the year of publication.

Examples:

Reference to a journal publication:

Van der Geer, J., Hanraads, J.A.J., Lupton, R.A., 2010. The art of writing a scientific article. *J. Sci. Commun.* 163, 51–59.

Reference to a book:

Strunk Jr., W., White, E.B., 2000. *The Elements of Style*, fourth ed. Longman, New York.

Reference to a chapter in an edited book:

Mettam, G.R., Adams, L.B., 2009. How to prepare an electronic version of your article, in: Jones, B.S., Smith, R.Z. (Eds.), *Introduction to the Electronic Age*. E-Publishing Inc., New York, pp. 281–304.

Reference to a website:

Cancer Research UK, 1975. Cancer statistics reports for the UK. <http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/> (accessed 13.03.03).

Video data

Elsevier accepts video material and animation sequences to support and enhance your scientific research. Authors who have video or animation files that they wish to submit with their article are strongly encouraged to include links to these within the body of the article. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted files should be properly labeled so that they directly relate to the video file's content. In order to ensure that your video or animation material is directly usable, please provide the files in one of our recommended file formats with a preferred maximum size of 150 MB. Video and animation files supplied will be published online in the electronic version of your article in Elsevier Web products, including ScienceDirect: <http://www.sciencedirect.com>. Please supply 'stills' with your files: you can choose any frame from the video or animation or make a separate image. These will be used instead of standard icons and will personalize the link to your video data. For more detailed instructions please visit our video instruction pages at <https://www.elsevier.com/artworkinstructions>. Note: since video and animation cannot be embedded in the print version of the journal, please provide text for both the electronic and the print version for the portions of the article that refer to this content.

Supplementary material

Supplementary material can support and enhance your scientific research. Supplementary files offer the author additional possibilities to publish supporting applications, high-resolution images, background datasets, sound clips and more. Please note that such items are published online exactly as they are submitted; there is no typesetting involved (supplementary data supplied as an Excel file or as a PowerPoint slide will appear as such online). Please submit the material together with the article and supply a concise and descriptive caption for each file. If you wish to make any changes to supplementary data during any stage of the process, then please make sure to provide an updated file, and do not annotate any corrections on a previous version. Please also make sure to switch off the 'Track Changes' option in any Microsoft Office files as these will appear in the published supplementary file(s). For more detailed instructions please visit our artwork instruction pages at <https://www.elsevier.com/artworkinstructions>.

AudioSlides

The journal encourages authors to create an AudioSlides presentation with their published article. AudioSlides are brief, webinar-style presentations that are shown next to the online article on ScienceDirect. This gives authors the opportunity to summarize their research in their own words and to help readers understand what the paper is about. More information and examples are available at <https://www.elsevier.com/audioslides>. Authors of this journal will automatically receive an invitation e-mail to create an AudioSlides presentation after acceptance of their paper.

3D neuroimaging

You can enrich your online articles by providing 3D neuroimaging data in NIfTI format. This will be visualized for readers using the interactive viewer embedded within your article, and will enable them to: browse through available neuroimaging datasets; zoom, rotate and pan the 3D brain reconstruction; cut through the volume; change opacity and color mapping; switch between 3D and 2D projected views; and download the data. The viewer supports both single (.nii) and dual (.hdr and .img) NIfTI file formats. Recommended size of a single uncompressed dataset is maximum 150 MB. Multiple datasets can be submitted. Each dataset will have to be zipped and uploaded to the system via the '3D

neuroimaging data' submission category. Please provide a short informative description for each dataset by filling in the 'Description' field when uploading a dataset.

Note: all datasets will be available for downloading from the online article on ScienceDirect. If you have concerns about your data being downloadable, please provide a video instead. For more information see: <https://www.elsevier.com/3DNeuroimaging>.

Submission checklist

The following list will be useful during the final checking of an article prior to sending it to the journal for review. Please consult this Guide for Authors for further details of any item.

Ensure that the following items are present:

One author has been designated as the corresponding author with contact details:

- E-mail address
- Full postal address

All necessary files have been uploaded, and contain:

- Keywords
- All figure captions
- All tables (including title, description, footnotes)

Further considerations

- Manuscript has been 'spell-checked' and 'grammar-checked'
- References are in the correct format for this journal
- All references mentioned in the Reference list are cited in the text, and vice versa
- Permission has been obtained for use of copyrighted material from other sources (including the Internet)

Printed version of figures (if applicable) in color or black-and-white

- Indicate clearly whether or not color or black-and-white in print is required.

For any further information please visit our customer support site at <http://support.elsevier.com>.

AFTER ACCEPTANCE

Author disclosure

Funding body agreements and policies Elsevier has established agreements and developed policies to allow authors whose articles appear in journals published by Elsevier, to comply with potential manuscript archiving requirements as specified as conditions of their grant awards. To learn more about existing agreements and policies please visit <http://www.elsevier.com/fundingbodies>

The second aspect of the Journal's new policy concerns the Conflict of Interest. ALL authors are requested to disclose any actual or potential conflict of interest including any financial, personal or other relationships with other people or organizations within three (3) years of beginning the work submitted that could inappropriately influence, or be perceived to influence, their work.

Examples of potential conflicts of interest which should be disclosed include employment, consultancies, stock ownership (except for personal investment purposes equal to the lesser of one percent (1%) or USD 5000), honoraria, paid expert testimony, patent applications, registrations, and grants. If there are no conflicts of interest, authors should state that there are none. eg, Author Y owns shares in pharma company A. Author X and Z have consulted for pharma company B. All other authors declare that they have no conflicts of interest.

Finally, before the references, the Journal will publish Acknowledgements, in a separate section, and not as a footnote on the title page. eg, We thank Mr A, who kindly provided the data necessary for our analysis, and Miss B, who assisted with the preparation and proof-reading of the manuscript.

The submitting author is also required to make a brief statement concerning each named author's contributions to the paper under the heading Contributors. This statement is for editorial purposes only and will not be published with the article. eg, Author X designed the study and wrote the protocol. Author Y managed the literature searches and analyses. Authors X and Z undertook the statistical analysis, and author W wrote the first draft of the manuscript. All authors contributed to and have approved the final manuscript.

NB. During the online submission process the author will be prompted to upload these four mandatory author disclosures as separate items. They will be automatically incorporated in the PDF builder of the online submission system. Please do not include in the main manuscripts.

Copyright Transfer

Upon acceptance of an article, you will be asked to transfer copyright (for more information on copyright see <http://authors.elsevier.com/journal/jad>). This transfer will ensure the widest possible dissemination of information. If excerpts from other copyrighted works are included in the submission, the author(s) must obtain written permission from the copyright owners and credit the source(s) in the article. Elsevier has preprinted forms for use by authors in these cases: contact Elsevier's

Rights Department, Philadelphia, PA, USA: phone (+1) 215 238 7869, fax (+1) 215 238 2239, email: healthpermissions@elsevier.com.

Requests for materials from other Elsevier publications may also be completed on-line via the Elsevier homepage <http://www.elsevier.com/locate/permissions>

Proofs

One set of page proofs (as PDF files) will be sent by e-mail to the corresponding author (if we do not have an e-mail address then paper proofs will be sent by post) or, a link will be provided in the e-mail so that authors can download the files themselves. Elsevier now provides authors with PDF proofs which can be annotated; for this you will need to download Adobe Reader version 9 (or higher) available free from <http://get.adobe.com/reader>. Instructions on how to annotate PDF files will accompany the proofs (also given online). The exact system requirements are given at the Adobe site: <http://www.adobe.com/products/reader/tech-specs.html>.

If you do not wish to use the PDF annotations function, you may list the corrections (including replies to the Query Form) and return them to Elsevier in an e-mail. Please list your corrections quoting line number. If, for any reason, this is not possible, then mark the corrections and any other comments (including replies to the Query Form) on a printout of your proof and scan the pages and return via email.

Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. We will do everything possible to get your article published quickly and accurately. It is important to ensure that all corrections are sent back to us in one communication: please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.

Reprints

The corresponding author, at no cost, will be provided with a PDF file of the article via e-mail. The PDF file is a watermarked version of the published article and includes a cover sheet with the journal cover image and a disclaimer outlining the terms and conditions of use. There are no page charges. Author enquiries: For enquiries relating to the submission of articles please visit Elsevier's Author Gateway at <http://authors.elsevier.com/journal/jad>. The Author Gateway also provides the facility to track accepted articles and set up e-mail alerts to inform you of when an article's status has changed, as well as detailed artwork guidelines, copyright information, frequently asked questions and more. Contact details for questions arising after acceptance of an article, especially those relating to proofs, are provided after registration of an article for publication.

Offprints

The corresponding author will, at no cost, receive a customized [Share Link](#) providing 50 days free access to the final published version of the article on [ScienceDirect](#). The Share Link can be used for sharing the article via any communication channel, including email and social media. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication. Both corresponding and co-authors may order offprints at any time via Elsevier's [Webshop](#). Corresponding authors who have published their article open access do not receive a Share Link as their final published version of the article is available open access on ScienceDirect and can be shared through the article DOI link.

AUTHOR INQUIRIES

You can track your submitted article at <https://www.elsevier.com/track-submission>. You can track your accepted article at <https://www.elsevier.com/trackarticle>. You are also welcome to contact Customer Support via <http://support.elsevier.com>.

© Copyright 2014 Elsevier | <http://www.elsevier.com>

Appendix B: Data extraction form

General information	
Author	
Article title	
Type of publication	
Participant characteristics	
Age range	
Gender	
Disorder being treated and how diagnosed	
Number of participants - total - intervention - control group(s)	
Group similarity	
Population recruited from	
Study characteristics	
Aim/objectives of the study	
Study design	
Study inclusion and exclusion criteria	
Recruitment procedures used (e.g. details of randomisation, blinding)	
Intervention and setting	

Setting in which the intervention is delivered	
Description of the intervention(s) and control(s)	
Adherence to intervention	
Description of co-interventions	
Follow-up period	
Outcome data/results	
Self-compassion measure used	
Summary of main outcome data	
Other measures used	
Statistical techniques used	
Number of participants included in analysis	
Number of withdrawals, exclusions, lost to follow-up	
Type of analysis used in study (e.g. intention to treat, per protocol)	
Summary of additional outcomes	

Appendix C: Quality assessment checklist

Study authors:

Item	Criteria	Information to consider	Rating Yes = 1 No = 0 Unable to determine = 0
Reporting			
1	Is the hypothesis/aim/objectives of the study clearly described?		
2	Are the main outcomes to be measured clearly described in the introduction or methods section?	If the main outcomes are first mentioned in the results section, the question should be answered 'no'	
3	Are the characteristics of the participants included in the study clearly described?	Inclusion and/or exclusion criteria should be given. Emphasis on inclusion and exclusion criteria, other characteristics are age/gender/morbidity	
4	Are the interventions/treatments of interest clearly described?	Treatments and placebo (where relevant) that are to be compared should be clearly described	
5	Are the distributions of principal confounders in each group of clients to be compared (or within a single group) clearly described?	A list of principal confounders is provided. Morbidity, comorbidity, age, gender, previous history. Good quality will include adjustment regression or matching	
6	Are the main findings of the study clearly described?	Simple outcome data (including denominators and numerators) should be reported for all major findings so that the reader can check the major analyses and conclusions. This question does not cover statistical tests which are considered below	
7	Does the study provide estimates of the random variability in the data for the main outcomes?	In non-normally distributed data the inter-quartile range of results should be reported. In normally distributed data the standard error, standard deviation, or confidence intervals should be reported. If the distribution of the data is not described, it must be assumed that the estimates used were appropriate and the question should be answered 'yes'	
8	Have all the important adverse events that may be a consequence of the intervention/ treatment been reported?	This should be answered 'yes' if the study demonstrates that there was a comprehensive attempt to measure adverse events (a list of adverse events is provided) e.g. early discontinuation of therapy	
9	Have the characteristics of clients lost to follow-up been described?	This should be answered 'yes' where there were no losses to follow-up or where losses to follow-up were so small	

		that findings would be unaffected by their inclusion. This should be answered 'no' where a study does not report the number of patients lost to follow-up. Follow up = post-therapy, or loss from study at baseline.	
10	Have actual probability values been reported (e.g. 0.035 rather than 0.05) for the main outcomes except where the probability value is less than 0.01?		
11	Have sufficient data been provided to enable calculation of outcomes such as pre-post effect sizes, estimates of reliable and clinically significant change?	If data are provided to enable calculation of any one of these outcomes score the question 'yes'	
External validity/clinical representativeness			
12	Were the clients asked to participate in the study representative of the entire population from which they were recruited?	The study must identify the source population for clients and describe how the patients were selected. Clients would be representative if they comprised the entire source population, an unselected sample of consecutive clients, or a random sample. Random sampling is only feasible where a list of all members of the relevant population exists. Where a study does not report the proportion of the source population from which the patients are derived the question should be answered as 'unable to determine'	
13	Were those clients who were prepared to participate representative of the entire population from which they were recruited?	The proportion of those asked who agreed should be stated. Validation that the sample was representative would include demonstrating that the distribution of the main confounding factors was the same in the study sample and the source population	
14	Were therapists experienced professionals trained to deliver the intervention?		
15	Are the findings generalisable?	Is the intervention evaluated for an appropriate duration and within a clinically-relevant setting?	
Internal reliability: bias (measurement and treatment)			
16	If any of the results of the study were based on 'data dredging' was this made clear	Any analysis that had not been planned at the outset of the study should be clearly indicated. If no retrospective unplanned subgroup analysis were reported, then answer 'yes'.	
17	Were the statistical tests used to assess the main outcomes appropriate?	The statistical techniques used must be appropriate to the data. For example, non-parametric methods should be used for	

		small sample sizes. Where little statistical analysis has been undertaken, but where there is no evidence of bias, the question should be answered 'yes'. If the distribution of the data (normal or not) is not described it must be assumed that the estimates used were appropriate and the question should be answered 'yes'	
18	Was compliance with the intervention/treatment reliable?	Where there was non-compliance with the allocated treatment the question should be answered 'no'	
19	Were the main outcome measures used accurate (valid and reliable)?	For studies where the outcome measures are clearly described, the question should be answered 'yes'. For studies which refer to other work or that demonstrates the outcome measures are accurate, the question should be answered 'yes'.	
20	Do the analyses adjust for different lengths of follow-up of patients in different treatment groups?	Where no comparison group score 0. Where lengths of follow-up the same score 1	
Internal reliability: confounding variables/selection bias			
21	Was there an adequate control or comparison group?		
22	Were the clients in different intervention/treatment groups recruited from the same population?	For example, clients for all comparison groups should be selected from the same source population. The question should be answered 'unable to determine' where there is no information concerning the source of patients included in the study. Where no comparison group score 0	
23	Were the clients in different intervention/treatment groups recruited over the same period of time?	For a study which does not specify the time period over which clients were recruited, the question should be answered 'unable to determine'. Where no comparison group score 0	
24	Were the clients randomised to intervention groups?	Studies which state that participants were randomised should be answered yes except where method of randomisation would not ensure random allocation.	
25	Was there adequate adjustment for confounding in the analysis from which the main findings were drawn?	This question should be answered 'no' if the main conclusions of the study were based on analyses of treatment rather than intention to treat; the distribution of known confounders was not described; or the distribution of confounders differed between the treatment groups but was not taken into account in the analyses. If the effect of the main confounders was not investigated or confounding was demonstrated but no adjustment was made in the final analyses, the question should be answered 'no'	

26	Were losses of clients to follow-up taken into account?	If the numbers of clients lost to follow-up are not reported, the question should be answered as 'unable to determine'. If the proportion of lost to follow-up was too small to affect the main findings, the question should be answered 'yes'	
27	Did the study have sufficient power to detect a clinically important effect where the probability value for a difference being due to chance is less than 5%?	Sample sizes have been calculated to detect a difference of x and y%. Has power analysis been performed?	

Appendix D: Reasons for excluding studies

Authors	Reason
Ashworth <i>et al.</i> (2015)	No self-compassion outcome measure
Bartels-Velthuis <i>et al.</i> (2015)	Not an intervention study
Braehler <i>et al.</i> (2013)	No standardised measure of self-compassion
Cree (2010)	Not an intervention study
Eisendrath <i>et al.</i> (2011)	No self-compassion outcome measure
Gale <i>et al.</i> (2014)	No self-compassion outcome measure
Germer and Neff (2013)	No self-compassion outcome measure
Gilbert and Procter (2006)	No self-compassion outcome measure
Heriot-Maitland <i>et al.</i> (2014)	No self-compassion outcome measure
Judge <i>et al.</i> (2012)	No self-compassion outcome measure
Kelly <i>et al.</i> (2014)	Not an intervention study
Keng <i>et al.</i> (2012)	No clinical symptoms
Lowens (2010)	Not an intervention study
Lucre and Corten (2013)	No self-compassion outcome measure
Markanday <i>et al.</i> (2012)	Letter to the editor: not peer-reviewed
Melyani <i>et al.</i> (2015)	Not published in English
Neff and Germer (2013)	No clinical symptoms
Noorbala <i>et al.</i> (2013)	No self-compassion outcome measure
Robins <i>et al.</i> (2012)	No clinical symptoms
Schroevers and Brandsma (2010)	No clinical symptoms and no self-compassion outcome measure
Shapiro <i>et al.</i> (2011)	No clinical symptoms
Welford (2010)	Not an intervention study

Appendix E: List of additional outcome measures

Authors, year	Outcome measures
Beaumont <i>et al.</i> (2012)	HADS, IES-R
Beaumont and Martin (2013)	HADS, IES-R, DES-II, VOC, SUD
Boersma <i>et al.</i> (2015)	SPSQ, SAIS, MADRS-S
Goodman <i>et al.</i> (2014)	PSWQ, GAD-7, PHQ-9, MINI, BAI, BDI-II, MAAS
Jazaieri <i>et al.</i> (2012)	LSAS-SR, SIAS-S, BDI-II, PSS-4, RSES, SWLS, ULS-8
Kelly and Carter (2015)	EDE-Q, CES-D, FCS, CEQ, HRS
Kuyken <i>et al.</i> (2010)	HRSD, KIMS, DAS
Laithwaite <i>et al.</i> (2009)	BDI-II, SoCS, RSES, SIP-AD, OAS
Mayhew and Gilbert (2008)	BAVQ, FSCS, FSCRS, SCL-90, VRS
Radford <i>et al.</i> (2012)	RRS, HADS, WBI-5
Schoenberg and Speckens (2014)	IDS, RRS, FFMQ, STAI, CDS
Yadavaia <i>et al.</i> (2014)	DASS-21, GHQ, AAQ-II,

AAQ-II: Acceptance and Action Questionnaire
 BAVQ: Beliefs about Voices Questionnaire
 BAI: Beck Anxiety Inventory
 BDI-II: Beck Depression Inventory
 CDS: Cambridge Depersonalisation Scale
 CEQ: Credibility/Expectancy Questionnaire
 CES-D: The Centre for Epidemiological Studies for Depression
 DAS: Dysfunctional Attitude Scale
 DASS-21: Depression Anxiety and Stress Scale
 DES-II: Dissociative Experiences Scale
 EDE-Q: Eating Disorder Examination Scale
 FCS: Fears of Self-Compassion Scale
 FFMQ: Five Facet Mindfulness Questionnaire
 FSCS: Functions of the Self-Criticising/Attacking Scale
 FSCRS: Forms of the Self-Criticising/Attacking Scale and Self-Reassuring Scale
 GHQ: General Health Questionnaire
 HRS: Homework Rating Scale
 HRSD: Hamilton Rating Scale
 IDS: Inventory of Depressive Symptomology
 IES-R: Impact of events scale – revised
 KIMS: Kentucky Inventory of Mindfulness Skills
 LSAS-SR: Liebowitz Social Anxiety Scale – self-report
 MAAS: Mindfulness Attention Awareness Scale
 MADRS-S: Montgomery Asberg Depression Rating Scale
 MINI: Mini International Neuropsychiatric Interview
 OAS: Other as shamer scale
 PHQ-9: Patient Health Questionnaire-9
 PSS-4: Perceived Stress Scale
 PSWQ: Penn State Worry Questionnaire
 RRS: Ruminative Response Scale
 RSES: Rosenberg Self-esteem Scale
 SCL-90: Symptom Checklist-90
 SIAS-S: Social Interaction Anxiety Scale Straightforward Scale
 SIP-AD: Self-image profile for adults
 SoCS: Social Comparison Scale

SPSQ: Social Phobia Screening Questionnaire
STAI: State-Trait Anxiety Inventory
SUD: Subjective Units of Disturbance
SWLS: Satisfaction with Life Scale
ULS-8: UCLA-8 Loneliness Scale
VOC: Validity of Cognition Scale
VRS: Voice Rank Scale
WBI-5: WHO Well-being Index-5

Journal of Personality

Author Guidelines

The *Journal* is devoted to scientific investigations in the field of personality. We welcome studies of personality and behavior dynamics, personality development, and individual differences in the cognitive, affective, and interpersonal domains. The scope of the *Journal* is not fixed, however, and it is intended to reflect all areas of significant current research. Articles ought to make a substantial empirical contribution. Literature reviews, theoretical papers, and articles concerned exclusively with test construction or validation will ordinarily not be considered. In style, particularly in respect to citations, form of bibliographies, preparation of tables and figures, etc., manuscripts submitted should conform to the conventions adopted for periodicals published by the American Psychological Association (see the Publication Manual, sixth edition).

All papers published in *Journal of Personality* are eligible for Panel A: Psychology, Psychiatry and Neuroscience in the Research Excellence Framework (REF).

Manuscripts typically should not exceed 36 pages (including cover page, abstract, text, conflict of interest and funding statements, references, tables, and figures), in APA (6th ed.) style, with 1 inch margins on all sides and a standard 12 point font. The entire paper (text, references, tables, etc.) must be double spaced. Submissions that exceed 36 pages must be accompanied by a justification (e.g., multiple experiments; multifaceted longitudinal studies; studies that are unusually complex in terms of methods and/or analytic strategy), which will be evaluated by the editor. In no case should the manuscript exceed 46 pages. Papers that do not follow these requirements will be returned without review.

An abstract of up to 200 words must include the following sections and headings: Objective: a brief statement of the purpose of the study; Method: a summary of study participants (sample size, age, gender, ethnicity), and descriptions of the study design and procedures; Results: a summary of the primary findings; Conclusions: a statement regarding the implications of the findings for personality psychology. Below the abstract, supply up to five keywords or short phrases.

Authors are now required to include a declaration of conflicting interests and a statement of funding for the research described in the manuscript. Both the declaration of conflicting interests and the funding statement should appear on a separate page just before References. Under the heading "Declaration of Conflicting Interests," specify any potential conflicting interests. If there is no conflicting interest, include the following text: The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article. Directly following the Declaration of Conflicting Interests, authors must list, under the heading "Funding," all funding sources. If the research was funded, the statement should read:

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Preparation of this manuscript was supported by Grant xxxxxx from xxxxxx.

If the work described in the manuscript received no financial support, include the statement: The author(s) received no financial support for the research, authorship, and/or publication of this article.

Other sources of support should be clearly identified in the Acknowledgments section of the manuscript. For example, these might include funding for open access publication, or funding for writing or editorial assistance, or provision of experimental materials.

Authors should submit manuscripts online at <http://mc.manuscriptcentral.com/jopy>. Full instructions and support are available on the site and a user ID and password can be obtained on the first visit. Support can be contacted by phone (+1 434 817 2040 ext. 167), or at <http://mcv3support.custhelp.com>. If you cannot submit online, please contact the editorial office.

Journal of Personality is covered by the following Wiley Blackwell Publishing services:

Accepted Articles

Accepted Articles that have been accepted for publication and undergone full peer review but have not been through the copyediting, typesetting, pagination and proofreading process. Accepted Articles are published online a few days after final acceptance, appear in PDF format only (without the accompanying full-text HTML) and are given a Digital Object Identifier (DOI), which allows them to be cited and tracked. The DOI remains unique to a given article in perpetuity. More information about DOIs can be found online at <http://www.doi.org/faq.html>. Given that Accepted Articles are not considered to be final, please note that changes will be made to an article after Accepted Article online publication, which may lead to differences between this version and the Version of Record. The Accepted Articles service has been designed to ensure the earliest possible circulation of research papers after acceptance. Accepted articles will be indexed by PubMed; therefore the submitting author must carefully check the names and affiliations of all authors provided in the cover page of the manuscript, as it will not be possible to alter these once a paper is made available online in Accepted Article format. Subsequently the final copyedited and proofed articles will appear either as Early View articles in a matter of weeks or in an issue on Wiley Online Library.

Early View

Early View articles are complete full-text articles published online in advance of their publication in a printed issue. Articles are therefore available as soon as they are ready, rather than having to wait for the next scheduled print issue. Early View articles are complete and final. They have been fully reviewed, revised, and edited for publication, and the authors' final corrections have been incorporated. Because they are in final form, no changes can be made after online publication. The nature of Early View articles means that they do not yet have volume, issue, or page numbers, so Early View articles cannot be cited in the traditional way. They are therefore given a Digital Object Identifier (DOI), which allows the article to be cited and tracked before it is allocated to an issue. After print publication, the DOI remains valid and can continue to be used to cite an access the article.

Instructions for ordering offprints from the printer will be provided with page proofs.

Author Services

Author Services enables authors to track their article – once it has been accepted – through the production process to publication online and in print. Authors can check the status of their articles online and choose to receive automated e-mails at key stages of production. The

author will receive an e-mail with a unique link that enables them to register and have their article automatically added to the system. Please ensure that a complete e-mail address is provided when submitting the manuscript. Visit <http://authorservices.wiley.com/> for more details on online production tracking and for a wealth of resources including FAQs and tips on article preparation, submission and more.

Copyright

If your paper is accepted, the author identified as the formal corresponding author for the paper will receive an email prompting them to login into Author Services; where via the Wiley Author Licensing Service (WALS) they will be able to complete the license agreement on behalf of all authors on the paper.

For authors signing the copyright transfer agreement

If the OnlineOpen option is not selected the corresponding author will be presented with the copyright transfer agreement (CTA) to sign. The terms and conditions of the CTA can be previewed in the samples associated with the Copyright FAQs below: [CTA Terms and Conditions](#).

For authors choosing OnlineOpen

If the OnlineOpen option is selected the corresponding author will have a choice of the following Creative Commons License Open Access Agreements (OAA):

Creative Commons Attribution License OAA

Creative Commons Attribution Non-Commercial License OAA

Creative Commons Attribution Non-Commercial -NoDerivs License OAA

To preview the terms and conditions of these open access agreements please visit the [Copyright FAQs](#) hosted on Wiley Author Services and visit <http://www.wileyopenaccess.com/details/content/12f25db4c87/Copyright--License.html>.

If you select the OnlineOpen option and your research is funded by certain funders [e.g. The Wellcome Trust and members of the Research Councils UK (RCUK) or the Austrian Science Fund (FWF)] you will be given the opportunity to publish your article under a CC-BY license supporting you in complying with your Funder requirements. For more information on this policy and the Journal's compliant self-archiving policy please visit:

<http://www.wiley.com/go/funderstatement>.

Wiley's Self-Archiving Policy

Authors of articles published in Wiley journals are permitted to self-archive the submitted (preprint) version of the article at any time, and may self-archive the accepted (peer-reviewed) version after an embargo period. Use the following link for more information, and to view the policy for *Journal of Personality*:

<http://olabout.wiley.com/WileyCDA/Section/id-820227.html>

Appendix G: Participant Information Sheet

Self-compassion, interpersonal problems and attachment, Version 2, 01/04/15



Participant Information Sheet

Research study: Attachment, self-compassion and interpersonal problems in common mental health problems

Thank you for taking the time to read about this study.

You are invited to take part in a research study that is being completed as part of an educational qualification. Before you decide if you would like to participate, it is important that you understand why the research is being done and what it would involve for you. Please take the time to read the following information carefully and discuss it with others if you wish. This will explain what the research is about and what it involves. Please ask questions if anything you read is not clear or if you would like more information.

What is the purpose of this study?

The study aims to understand the relationship between how individuals experience close relationships, how they relate to others and themselves, and the experience of mental health problems such as anxiety and depression. It is hoped that a greater understanding of these relationships will eventually help us develop better treatments for common mental health problems. This research is being conducted as part of a Doctoral training in Clinical Psychology.

Why have I been invited to take part?

You have been invited to take part because you are currently attending for psychological therapy for anxiety and/or depression.

What would I have to do?

Your clinician will provide you with the questionnaire pack containing a consent form and four questionnaires to be completed. These questionnaires are designed to assess how you relate to others and yourself, and your current mood and stress levels. There is an additional form to be completed that asks for some basic information about you, such as your age and gender. In total it should take about 35 minutes to complete these questionnaires. Once you have completed the questionnaires and consent form (at home), you should seal them in the envelope provided and return them to your clinician, or, if you prefer, you can post them directly to me with a stamped addressed envelope. Your clinician will not look at your responses to the questionnaires.

Do I have to take part?

No. Participation in this study is entirely voluntary. Participation or non-participation in this study will in no way affect the treatment you receive. If you decide to take part, you are still free to withdraw at any time and you do not have to give a reason.

What are the possible disadvantages of taking part?

It is unlikely that there would be any disadvantages or risks to you if you choose to take part. However, it is possible that some of the questions in the questionnaires may identify areas of difficulty or feelings that you had not considered before. If you require any extra support after taking part in the research, you should speak to your clinician or contact your GP.

What are the possible benefits of taking part?

It is hoped that the results of this study will contribute to the understanding of what makes someone vulnerable to experiencing mental health problems, and influence the development of more effective psychological treatments in the future.

What will happen to the information I give?

The information you give will be treated confidentially. Your name will not appear on the questionnaires, and instead your information will be assigned a code number to ensure that it remains anonymous. Information will be kept in a locked filing cabinet on NHS premises and the only people who will have access to this will be me and my research supervisors (named below). If during the study you inform me of anything that indicates that there may be a serious risk to you or to someone else, I may have to discuss this with the clinician involved in your care.

What will happen to the results of this study and will I be informed of the results?

The anonymised results of this research study will be written up and submitted as a Doctoral thesis in Clinical Psychology at the University of Edinburgh. A summary of the main results of the research will also be disseminated to the Psychological Therapies Teams where recruitment takes place. It may also be published in a scientific journal so that other professionals can read about the results. Individuals who participate in the study will never be identified in any way in any publication arising from this research. If you are interested in obtaining a summary of the results you can contact me with the details below.

Who has reviewed this study?

The East of Scotland Research Ethics Service (EoSRES) REC 2, which has responsibility for scrutinising proposals for medical research on humans, has examined the proposal and has raised no objections from the point of view of medical ethics. It is a requirement that your records in this research, together with any relevant medical records, be made available for scrutiny by monitors from the University of Edinburgh and NHS Tayside, whose role is to check that research is properly conducted and the interests of those taking part are adequately protected.

What can I do if I am concerned about this research?

If you have any questions or concerns about any aspect of this research, please contact me, Kate Mackintosh, using the contact details below. Alternatively, you can contact any of the supervisors using the details below. If you would like to discuss this study with someone independent of the study team, please contact: Linda Graham on 01382 306150 or linda.graham@nhs.net.

Should you wish to complain about any aspect of the way you have been approached or treated during the course of the study, you can do so by using the following contact details:

Patient Liaison Manager, Complaints Office, Ninewells Hospital, Dundee, DD1 9SY.

Freephone 0800 027 5507.

Contact details:

Researcher:

Kate Mackintosh
Trainee Clinical Psychologist
Psychological Therapies Service
Stracathro Hospital
Brechin, DD9 7QA
01356 692865, katemackintosh@nhs.net

Clinical supervisor:

Prof. Kevin Power
Head of Service
NHS Tayside Psychological Therapies
Service
7 Dudhope Terrace
Dundee, DD3 6HG
01382 306156, kevin.power@nhs.net

Academic supervisors:

Dr Stella Chan
Chancellor's Fellow, Clinical Psychology
School of Health in Social Sciences
The University of Edinburgh
Medical School
Teviot Place, EH8 9AG
0131 65139735, stella.chan@ed.ac.uk

Prof. Matthias Schwannauer
Consultant Clinical Psychologist/Programme
Director
School of Health in Social Sciences
The University of Edinburgh
Medical School
Teviot Place, EH8 9AG
0131 6513972, m.schwannauer@ed.ac.uk

Appendix H: Participant Consent Form

Self-compassion, interpersonal problems and attachment
Version 2
01/04/15



Participant Consent Form

Research study: Attachment, self-compassion and interpersonal problems in common mental health problems

Researcher: Kate Mackintosh, Trainee Clinical Psychologist

Please put your initials in the box

1. I confirm that I have read and understood the information sheet (*version 2, 01/04/15*) for the above study. I have had the opportunity to consider the information, to ask questions and I have had these answered satisfactorily.

2. I understand that participation in the study is entirely voluntary and that I am free to withdraw at any time, without giving a reason, and without my health care or legal rights being affected.

3. I understand that I will not be identifiable on any reports of the findings and my participation is confidential and anonymous.

4. I understand that relevant sections of data collected during the study may be looked at by individuals from the Sponsor, University of Edinburgh, or from NHS Tayside where it is relevant to my taking part in this research. I give permission for those individuals to have access to my records

5. I agree to take part in the above study

Name of participant

Date

Signature

Name of person taking consent

Date

Signature

Original (x1) to be retained in site file. Copy (x1) to be retained by participant

Appendix I: Demographics form



Additional Information Sheet – please complete

Age: _____

Gender: *(please circle)* Male / Female

What is your relationship status? *(please circle)*

Single / Married / In a relationship / Divorced / Widowed / Other *(please state)*

Please provide the first part plus one digit of your postcode:
(e.g. if your postcode was DD9 7QA, you would put DD9 7)

What is your ethnic group? Please tick the box most relevant to you

<input type="checkbox"/>	White British
<input type="checkbox"/>	White other
<input type="checkbox"/>	Asian British
<input type="checkbox"/>	Asian other

<input type="checkbox"/>	Black British
<input type="checkbox"/>	Black other
<input type="checkbox"/>	Any other (please specify) _____

Employment status: *(please circle)*

Employed / Unemployed / Student / Retired /

Unable to work (please specify reason) _____

Thank you for taking the time to complete

Appendix J: Self-compassion Scale

Self-compassion Scale

HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

- | Almost
never | | | | | Almost
always |
|-------------------------|---|----------|----------|----------|--------------------------|
| 1 | | 2 | 3 | 4 | 5 |
| _____ | 1. I'm disapproving and judgmental about my own flaws and inadequacies. | | | | |
| _____ | 2. When I'm feeling down I tend to obsess and fixate on everything that's wrong. | | | | |
| _____ | 3. When things are going badly for me, I see the difficulties as part of life that everyone goes through. | | | | |
| _____ | 4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world. | | | | |
| _____ | 5. I try to be loving towards myself when I'm feeling emotional pain. | | | | |
| _____ | 6. When I fail at something important to me I become consumed by feelings of inadequacy. | | | | |
| _____ | 7. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am. | | | | |
| _____ | 8. When times are really difficult, I tend to be tough on myself. | | | | |
| _____ | 9. When something upsets me I try to keep my emotions in balance. | | | | |
| _____ | 10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people. | | | | |
| _____ | 11. I'm intolerant and impatient towards those aspects of my personality I don't like. | | | | |
| _____ | 12. When I'm going through a very hard time, I give myself the caring and tenderness I need. | | | | |
| _____ | 13. When I'm feeling down, I tend to feel like most other people are probably happier than I am. | | | | |
| _____ | 14. When something painful happens I try to take a balanced view of the situation. | | | | |

Please Turn Over

- _____ 15. I try to see my failings as part of the human condition.
- _____ 16. When I see aspects of myself that I don't like, I give myself a hard time.
- _____ 17. When I fail at something important to me I try to keep things in perspective.
- _____ 18. When I'm really struggling, I tend to feel like other people must be having an easier time of it.
- _____ 19. I'm kind to myself when I'm experiencing suffering.
- _____ 20. When something upsets me I get carried away with my feelings.
- _____ 21. I can be a bit cold-hearted towards myself when I'm experiencing suffering.
- _____ 22. When I'm feeling down I try to approach my feelings with curiosity and openness.
- _____ 23. I'm tolerant of my own flaws and inadequacies.
- _____ 24. When something painful happens I tend to blow the incident out of proportion.
- _____ 25. When I fail at something that's important to me, I tend to feel alone in my failure.
- _____ 26. I try to be understanding and patient towards those aspects of my personality I don't like.

Hospital Anxiety and Depression Scale (HADS)

Please read each item below and **underline the reply** which comes closest to how you have been feeling in the past week. Ignore the numbers printed at the edge of the questionnaire.

Don't take too long over your replies, your immediate reaction to each item will probably be more accurate than a long, thought-out response.

A	D			A	D
		I feel tense or 'wound up'	I feel as if I am slowed down		
3		Most of the time	Nearly all the time		3
2		A lot of the time	Very often		2
1		From time to time, occasionally	Sometimes		1
0		Not at all	Not at all		0
		I still enjoy the things I used to enjoy	I get a sort of frightened feeling like 'butterflies' in the stomach		
	0	Definitely as much	Not at all		0
	1	Not quite so much	Occasionally		1
	2	Only a little	Quite often		2
	3	Hardly at all	Very often		3
		I get a sort of frightened feeling as if something awful is about to happen	I have lost interest in my appearance		
3		Very definitely and quite badly	Definitely		3
2		Yes, but not too badly	I don't take as much care as I should		2
1		A little, but it doesn't worry me	I may not take quite as much care		1
0		Not at all	I take just as much care as ever		0
		I can laugh and see the funny side of things	I feel restless as if I have to be on the move		
	0	As much as I always could	Very much indeed		3
	1	Not quite so much now	Quite a lot		2
	2	Definitely not so much now	Not very much		1
	3	Not at all	Not at all		0
		Worrying thoughts go through my mind	I look forward with enjoyment to things		
3		A great deal of the time	As much as I ever did		0
2		A lot of the time	Rather less than I used to		1
1		Not too often	Definitely less than I used to		2
0		Very little	Hardly at all		3

	I feel cheerful		I get sudden feelings of panic	
	3 Never		Very often indeed	3
	2 Not often		Quite often	2
	1 Sometimes		Not very often	1
	0 Most of the time		Not at all	0
	I can sit at ease and feel relaxed		I can enjoy a good book or radio or television programme	
0	Definitely		Often	0
1	Usually		Sometimes	1
2	Not often		Not often	2
3	Not at all		Very seldom	3
Now check that you have answered all the questions				
	TOTAL		A	D

Appendix L: Inventory of Interpersonal Problems-32

IIP-32 Question/Scoring Sheet

Case ID:

Date:

Sex: M / F

People have reported having the following problems in relating to other people. Please read the list below, and for each item, consider it has been a problem for you with respect to any significant person in your life. Then fill the numbered circle that describes how distressing that problem has been.

	Not at all	A little bit	Moderately	Quite a bit	Extremely
The following are things you find hard to do with other people.					
It is hard for me to:					
1. Say "no" to other people	0	1	2	3	4
2. Join in on groups	0	1	2	3	4
3. Keep things private from other people	0	1	2	3	4
4. Tell a person to stop bothering me	0	1	2	3	4
5. Introduce myself to new people	0	1	2	3	4
6. Confront people with problems that come up	0	1	2	3	4
7. Be assertive with another person	0	1	2	3	4
8. Let other people know when I am angry	0	1	2	3	4
9. Socialise with other people	0	1	2	3	4
10. Show affection to people	0	1	2	3	4
11. Get along with people	0	1	2	3	4
12. Be firm when I need to be	0	1	2	3	4
13. Experience a feeling of love for another person	0	1	2	3	4
14. Be supportive of another person's goals in life	0	1	2	3	4
15. Feel close to other people	0	1	2	3	4
16. Really care about other people's problems	0	1	2	3	4
17. Put somebody else's needs before my own	0	1	2	3	4
18. Feel good about another person's happiness	0	1	2	3	4
19. Ask other people to get together socially with me	0	1	2	3	4
20. Be assertive without worrying about hurting the other person's feelings	0	1	2	3	4
The following are things that you do too much.					
21. I open up to people too much	0	1	2	3	4
22. I am too aggressive toward other people	0	1	2	3	4
23. I try to please other people too much	0	1	2	3	4
24. I want to be noticed too much	0	1	2	3	4
25. I try to control other people too much	0	1	2	3	4
26. I put other people's needs before my own too much	0	1	2	3	4
27. I am overly generous to other people	0	1	2	3	4
28. I manipulate other people too much to get what I want	0	1	2	3	4
29. I tell personal things to other people too much	0	1	2	3	4
30. I argue with other people too much	0	1	2	3	4
31. I let other people take advantage of me too much	0	1	2	3	4
32. I am affected by another person's misery too much	0	1	2	3	4

Appendix M: Experiences in Close Relationships-Revised

Experiences in Close Relationships-Revised

The statements below concern how you feel in emotionally intimate relationships. We are interested in how you *generally* experience relationships, not just in what is happening in a current relationship. Respond to each statement by circling a number to indicate how much you agree or disagree with the statement.

Question	1= Strongly Disagree.....7= Strongly Agree						
1. I'm afraid that I will lose my partner's love.	1	2	3	4	5	6	7
2. I often worry that my partner will not want to stay with me.	1	2	3	4	5	6	7
3. I often worry that my partner doesn't really love me.	1	2	3	4	5	6	7
4. I worry that romantic partners won't care about me as much as I care about them.	1	2	3	4	5	6	7
5. I often wish that my partner's feelings for me were as strong as my feelings for him or her.	1	2	3	4	5	6	7
6. I worry a lot about my relationships.	1	2	3	4	5	6	7
7. When my partner is out of sight, I worry that he or she might become interested in someone else.	1	2	3	4	5	6	7
8. When I show my feelings for romantic partners, I'm afraid they will not feel the same about me.	1	2	3	4	5	6	7
9. I rarely worry about my partner leaving me.	1	2	3	4	5	6	7
10. My romantic partner makes me doubt myself.	1	2	3	4	5	6	7
11. I do not often worry about being abandoned.	1	2	3	4	5	6	7
12. I find that my partner(s) don't want to get as close as I would like.	1	2	3	4	5	6	7
13. Sometimes romantic partners change their feelings about me for no apparent reason.	1	2	3	4	5	6	7
14. My desire to be very close sometimes scares people away.	1	2	3	4	5	6	7
15. I'm afraid that once a romantic partner gets to know me, he or she won't like who I really am.	1	2	3	4	5	6	7

16. It makes me mad that I don't get the affection and support I need from my partner.	1	2	3	4	5	6	7
17. I worry that I won't measure up to other people.	1	2	3	4	5	6	7
18. My partner only seems to notice me when I'm angry.	1	2	3	4	5	6	7
19. I prefer not to show a partner how I feel deep down.	1	2	3	4	5	6	7
Please Turn Over							
20. I feel comfortable sharing my private thoughts and feelings with my partner.	1	2	3	4	5	6	7
21. I find it difficult to allow myself to depend on romantic partners.	1	2	3	4	5	6	7
22. I am very comfortable being close to romantic partners.	1	2	3	4	5	6	7
23. I don't feel comfortable opening up to romantic partners.	1	2	3	4	5	6	7
24. I prefer not to be too close to romantic partners.	1	2	3	4	5	6	7
25. I get uncomfortable when a romantic partner wants to be very close.	1	2	3	4	5	6	7
26. I find it relatively easy to get close to my partner.	1	2	3	4	5	6	7
27. It's not difficult for me to get close to my partner.	1	2	3	4	5	6	7
28. I usually discuss my problems and concerns with my partner.	1	2	3	4	5	6	7
29. It helps to turn to my romantic partner in times of need.	1	2	3	4	5	6	7
30. I tell my partner just about everything.	1	2	3	4	5	6	7
31. I talk things over with my partner.	1	2	3	4	5	6	7
32. I am nervous when partners get too close to me.	1	2	3	4	5	6	7
33. I feel comfortable depending on romantic partners.	1	2	3	4	5	6	7
34. I find it easy to depend on romantic partners.	1	2	3	4	5	6	7
35. It's easy for me to be affectionate with my partner.	1	2	3	4	5	6	7
36. My partner really understands me and my needs.	1	2	3	4	5	6	7



East of Scotland Research Ethics Service (EoSRES)

Research Ethics Service

Tayside medical Science Centre
Residency Block Level 3
George Pirie Way
Ninewells Hospital and Medical School
Dundee DD1 9SY

Ms Kate Mackintosh
Trainee Clinical Psychologist
NHS Tayside
Adult Psychological Therapies Service
Learning and Development Centre
Stracathro Hospital
BRECHIN DD9 7QA

Date: 10 April 2015
Your Ref:
Our Ref: LR/15/ES/0028
Enquiries to: Mrs Lorraine Reilly
Direct Line: 01382 383878
Email: eosres.tayside@nhs.net

Dear Ms Mackintosh

Study Title: The relationships between self-compassion, attachment and interpersonal problems in patients attending an adult psychological therapies service
REC reference: 15/ES/0028
IRAS project ID: 161760

Thank you for your letter of 01 April 2015, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair and designated Committee members.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this favourable opinion letter. The expectation is that this information will be published for all studies that receive an ethical opinion but should you wish to provide a substitute contact point, wish to make a request to defer, or require further information, please contact the REC Manager, Mrs Lorraine Reilly, eosres.tayside@nhs.net. Under very limited circumstances (e.g. for student research which has received an unfavourable opinion), it may be possible to grant an exemption to the publication of the study.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.



Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at <http://www.rdforum.nhs.uk>.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations

Registration of Clinical Trials

All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publically accessible database. This should be before the first participant is recruited but no later than 6 weeks after recruitment of the first participant.

There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g. when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non-clinical trials this is not currently mandatory.

If a sponsor wishes to request a deferral for study registration within the required timeframe, they should contact hra.studyregistration@nhs.net. The expectation is that all clinical trials will be registered, however, in exceptional circumstances non registration may be permissible with prior agreement from NRES. Guidance on where to register is provided on the HRA website.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Ethical review of research sites

NHS sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:



Document	Version	Date
Covering letter on headed paper [Cover letter to REC]		01 April 2015
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only) [certificate of insurance]		08 August 2014
GP/consultant information sheets or letters [GP letter]	version 1	30 January 2015
IRAS Checklist XML [Checklist_03042015]		03 April 2015
Letter from sponsor [PL confirmation]		16 June 2014
Non-validated questionnaire [demographics form]	v2	01 April 2015
Participant consent form	v2	01 April 2015
Participant information sheet (PIS) [highlighted changes]	v2	01 April 2015
REC Application Form [REC_Form_11022015]		11 February 2015
Research protocol or project proposal [research protocol]	v2	01 April 2015
Summary CV for Chief Investigator (CI) [Kate Mackintosh CV]		
Summary CV for supervisor (student research) [Stella Chan CV]		06 January 2015
Validated questionnaire [SCS]		
Validated questionnaire [ECR-R]		
Validated questionnaire [HADS]		
Validated questionnaire		

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document "*After ethical review – guidance for researchers*" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The HRA website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website: <http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/>



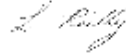
HRA Training

We are pleased to welcome researchers and R&D staff at our training days – see details at <http://www.hra.nhs.uk/hra-training/>

15/ES/0028

Please quote this number on all correspondence

Yours sincerely



pp
Ms Tara Graham
Chair

Email: eosres.tayside@nhs.net

Enclosures: "After ethical review – guidance for researchers"

Copy to: Ms Jo-Anne Robertson
NHS Tayside R&D office



Appendix O: Additional results

Table 8: Skewness and kurtosis values, SE and z-scores

Variable	Skewness value	Skewness SE	z-score skewness	Kurtosis value	Kurtosis SE	z-score kurtosis
HADS – anxiety	-.538	.279	-1.928	.490	.552	.888
HADS – depression	-.138	.279	-.495	-.540	.552	-.978
HADS – total	-.242	.279	-.867	-.096	.552	-.174
SCS	.460	.281	1.637	.084	.555	.151
IIP-32	.102	.283	0.360	.664	.559	1.188
ECR-R – anxiety	-.267	.287	-.930	-.982	.566	-1.735
ECR-R – avoidance	-.190	.287	-.662	-.817	.566	-1.443

Table 9: Variance inflation factor (VIF) and tolerance statistics

	Tolerance	VIF
ECR-R (avoidance)	.740	1.352
ECR-R (anxiety)	.791	1.264
IIP-32	.755	1.324
SCS	.906	1.104
Average VIF		1.261

Table 10: Results of regression analysis with depression as DV, controlling for anxiety

Predictor variable	Outcome variable	Coefficient	SE	<i>t</i>	<i>p</i>
ECR-R (avoidance)	SCS	-0.10	0.05	-2.20	0.03*
ECR-R (avoidance)	IIP-32	4.79	1.50	3.19	0.00**
Dependent variable					
HADS depression					
ECR-R (avoidance)		0.38	0.43	0.87	0.39
SCS		-0.39	1.05	-0.37	0.72
IIP-32		0.07	0.03	2.01	0.05
(Controlling for anxiety)					
ECR-R (avoidance)		0.08	0.41	0.19	0.85
SCS		0.55	1.00	0.55	0.58
IIP-32		0.04	0.03	1.39	0.17

* $p < 0.05$; ** $p < 0.01$

Table 11: Bootstrapped indirect effects of mediators: depression

Mediator	Point estimate	SE	Bootstrapping BC 95% CI	
			Lower	Upper
Self-compassion	0.0390	0.1390	-0.1976	0.3859
Interpersonal problems	0.3110	0.2032	0.0151	0.8208
Total indirect effect	0.3500	0.2578	-0.0665	0.9521
Controlling for anxiety				
Self-compassion	-0.0559	0.1256	-0.3494	0.1857
Interpersonal problems	0.2024	0.1830	-0.0409	0.6681
Total indirect effect	0.1465	0.2344	-0.2313	0.7101